Common Response 1.3
Revised Proposed Plan Amendments

Introduction

This introduction provides important context to this common response. A similar introduction is provided in each common response to ensure that the reader has the appropriate context when reviewing common responses. For ease of reference, a table of contents is included after this introduction to guide readers to specific subject areas.

Protecting the San Francisco Bay/Sacramento-San Joaquin Delta (Bay-Delta) watershed and its many beneficial uses of water is one of the State Water Board's primary responsibilities and top priorities. In response to declines of several native aquatic species since the Water Quality Control Plan for the San Francisco Bay/Sacramento-San Joaquin Delta Watershed (Bay-Delta Plan or Plan) was last comprehensively updated, the State Water Board commenced a process to update the Bay-Delta Plan for the Sacramento River and its tributaries, Delta eastside tributaries (including the Calaveras, Cosumnes, and Mokelumne Rivers), and Delta for the reasonable protection of fish and wildlife beneficial uses, referred to as the Sacramento/Delta Update to the Bay-Delta Plan. The Bay-Delta Plan identifies beneficial uses of water to be protected in the Bay-Delta watershed, water quality objectives and program of implementation to achieve the reasonable protection of those beneficial uses, monitoring, evaluation, and special study provisions. The State Water Board's proposed action to update the Bay-Delta Plan is supported by a Staff Report/Substitute Environmental Document (Staff Report), which provides an evaluation of the environmental impacts and economic effects in support of consideration of different alternatives to update the Bay-Delta Plan to achieve reasonable protection of fish and wildlife beneficial uses in the Sacramento/Delta. The Staff Report is functionally equivalent to an Environmental Impact Report under the California Environmental Quality Act (CEQA) but also provides the additional analyses that support the State Water Board's consideration of the action under the Clean Water Act and Porter-Cologne Water Quality Control Act (Porter-Cologne Act or Porter-Cologne).

Development of the final Staff Report and final draft Bay-Delta Plan were informed by several opportunities for public comment over multiple years. This common response may address issues that were raised during any of those public comment periods. In September 2023, the State Water Board released the 2023 draft Staff Report evaluating different alternatives for the Sacramento/Delta Update to the Bay-Delta Plan for public review and comment. The 2023 draft Staff Report evaluated the following: proposed Plan amendments that were based on the 2018 Framework for a possible Sacramento/Delta update to the Bay-Delta Plan (2018 Framework); proposed Voluntary Agreements (VAs), referred to as the Healthy Rivers and Landscapes (HRL) proposal; as well as Low Flow and High Flow alternatives and several modular alternatives that would modify the other alternatives. After the VA Memorandum of Understanding (MOU) was submitted and during the development of the 2023 draft Staff Report, the proposed VAs were renamed "Healthy Rivers and Landscapes" or "HRL" by the VA proponents, also referred to as the "HRL participants." The term "VA pathway" is used to refer to the regulatory provisions in the Bay-Delta Plan that would allow for implementation of the HRL commitments.

The State Water Board released draft amendments to the Bay-Delta Plan in October 2024 (2024 draft Plan) for public review and comment that incorporated alternatives identified in the 2023 draft Staff Report with revisions based on public comments. The State Water Board released revised draft Plan updates in July 2025 (July 2025 revised draft Plan), but delayed public comment on that version of the Plan pending further updates, though some parties did submit public comments on the July 2025 draft that are part of the State Water Board's response to comments. In December 2025, the State Water Board released Chapter 13, *Revised Proposed Plan Amendments*, as a limited recirculation of the 2023 draft Staff Report (2025 partially recirculated draft Staff Report) together with the December 2025 revised draft Plan for public review and comment. These documents reflect the updated proposed project, referred to as the revised proposed Plan amendments, which brings together in the Bay-Delta Plan program of implementation a VA pathway that incorporates commitments identified in the HRL proposal and would apply to specified HRL water rights, and a regulatory pathway based on the proposed Plan amendments that would apply to other water rights and to any HRL water rights no longer covered under the VA pathway. In August 2026, the State Water Board released a final draft Bay-Delta Plan that included refinements to the revised proposed Plan amendments based on public comments received on the December 2025 revised draft Plan. At the same time, the State Water Board released this final Staff Report, including responses to comments previously received on the draft Staff Report. The final Staff Report informs the State Water Board's consideration of adoption of the Sacramento/Delta updates to the Bay-Delta Plan.

The State Water Board reviewed and considered all comments and developed common responses to address recurring comments and common themes.

This common response addresses comments raised regarding the description and components of the project. This includes description of the proposed Plan amendments in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, description of the proposed VAs in Chapter 9, *Proposed Voluntary Agreements*, description of the revised proposed Plan amendments in Chapter 13, *Revised Proposed Plan Amendments*, and the draft regulatory text contained in the December 2025 revised draft Bay-Delta Plan. Comments on the description of other alternatives are responded to individually or in Common Response 7.24, *Alternatives Analysis*.

The State Water Board reviewed and considered all comments on the 2023 draft Staff Report and 2025 partially recirculated draft Staff Report for the proposed Sacramento/Delta update to the Bay-Delta Plan and comments on the December 2025 revised draft Bay-Delta Plan and developed this common response to provide a description of the project and address recurring comments and common themes. This common response references related sections of the draft Staff Report and other common responses, as appropriate, where recurring comments and common themes overlap with other subject matter areas. This common response is organized to generally correspond with the structure of the revised proposed Plan amendments and addresses, but is not limited to, the following topics:

- The project description
- Water quality objectives for fish and wildlife uses
- The regulatory pathway
- The VA pathway
- The implementation methodology
- Interior Delta flows provisions

- General provisions
- Monitoring and evaluation
- State Water Board oversight
- Interaction with other projects and regulatory processes

This common response references related common responses as appropriate where recurring comments and common comment themes overlap with other subject matter areas. For information on the State Water Board's authorities and legal requirements related to water quality control planning, see Common Response 1.2, *Water Quality Control Planning Process*. For responses to comments on the CEQA analysis, see Common Response 7.1, *General CEQA and Approach to the Analysis*. For information on Tribal Beneficial Uses and responses to comments regarding Tribal Beneficial Uses and other concerns from California Native American Tribes, see Common Response 11.1, *Tribal Engagement and Tribal Beneficial Uses*.

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Revised Proposed Plan Amendments

Project Description

The revised proposed Plan amendments are described in Chapter 13, *Revised Proposed Plan Amendments*, of the Staff Report and include new narrative objectives for tributary inflows, Delta outflows, cold water habitat, interior Delta flows, and fish viability, as well as an inflow-based Delta outflow objective for the protection of fish and wildlife to the Bay-Delta Plan and a program of implementation to achieve those objectives. The program of implementation includes a regulatory pathway that would apply to water rights that are not included in the list of HRL water rights identified in Appendix B.1. The regulatory pathway could also apply to rights identified in Appendix B.1 for which the VA pathway is discontinued. The regulatory pathway is based on the proposed Plan amendments described in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, and analyzed in Chapter 6, *Changes in Hydrology and Water Supply*; Chapter 7, *Environmental Analysis*; and Chapter 8, *Economic Analysis and Other Considerations*, with changes, including incorporation of flows identified in the Low Flow Alternative (35 and 45 percent of unimpaired flow). The VA pathway is based on the proposed VAs analyzed in Chapter 9, *Proposed Voluntary Agreements*, with revisions, including changes to the water quality objectives that the VA pathway would implement, the addition of new HRL participants and associated commitments, and other refinements. Both the regulatory and VA pathway would have regulatory effect upon implementation. The revised proposed Plan amendments would also designate Tribal Tradition and Culture (CUL) beneficial uses throughout the Bay-Delta watershed and the program of implementation would include general provisions that apply regardless of the regulatory or VA pathway, including an implementation methodology, monitoring and evaluation, and other provisions.

The section below on *Water Quality Objectives for Fish and Wildlife Uses* describes the proposed new objectives of the revised proposed Plan amendments. The objectives are based on the proposed new water quality objectives described in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, and Chapter 9, *Proposed Voluntary Agreements*, with refinements based on public comments received throughout the planning process described in Chapter 13, *Revised Proposed Plan Amendments*.

The regulatory pathway of the revised proposed Plan amendments is described in the section below for the *Regulatory Pathway*. The regulatory pathway is the implementation pathway for water rights not covered by the VA pathway for the narrative inflow and cold water habitat objectives and the inflow-based Delta outflow objective. In response to public comments expressing concerns that the inflow requirements of the proposed Plan amendments would have significant water supply impacts and could result in drawing down reservoir storage, with associated temperature impacts, modifications to the starting point for the inflows under the regulatory pathway were incorporated into the revised proposed Plan amendments that reduce water supply impacts and allow more water to be stored in reservoirs at the outset of Plan implementation. These modifications are referred to as water supply adjustments and provide for lowering the required percent of unimpaired flow during all but the wettest hydrologic conditions down to 45 or 35 percent of unimpaired flow, with additional tributary specific water supply adjustments for three rainfall and municipal supply dominated tributaries (the Mokelumne and Calaveras Rivers and Putah Creek).

The VA pathway of the revised proposed Plan amendments is described in the section below for the *Voluntary Agreement Pathway*. The VA pathway is the alternative implementation pathway for HRL commitments that apply to the HRL water rights identified in Appendix B.1 of the revised proposed Plan amendments. The revised proposed Plan amendments include modifications to the VA pathway from the VA proposal described in Chapter 9, *Proposed Voluntary Agreements*, of the 2023 draft Staff Report, including updates to the water quality objectives they would implement, additional HRL commitments and participants, a provision for protection of the base flows to which HRL flows are intended to be additive that replaces options under consideration as part of Alternative 6a of the 2023 draft Staff Report, flow and habitat accounting, changes to the description of HRL flow and habitat commitments based on accounting provisions, and updates to provisions for science and monitoring, reporting, and governance under the VA pathway.

In addition to the regulatory and VA pathways, the revised proposed Plan amendments include provisions that would apply regardless of pathway. These include provisions for an implementation methodology; interior Delta flows; monitoring, evaluation, reporting, and special studies; biological goals; annual and periodic review; and other general provisions, based on the provisions described in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, of the 2023 draft Staff Report, with modifications based on public comments received during the planning process described in Chapter 13, *Revised Proposed Plan Amendments*, and below.

In response to significant feedback received throughout the Sacramento/Delta Update process from tribal representatives, leaders, and tribal organizations (see Chapter 11, *Tribal Engagement, Traditional Ecological Knowledge and Tribal Beneficial Uses*, of the Staff Report), the revised proposed Plan amendments incorporate Tribal Beneficial Uses (TBUs) and the designation of CUL beneficial uses for the Bay-Delta watershed, as well as provisions for a Tribal Advisory Group and other measures to facilitate tribal participation and feedback in the State Water Board's Bay-Delta planning and implementation efforts. The incorporation of TBUs and provisions for tribal outreach and engagement are described in Common Response 11.1, *Tribal Engagement and Tribal Beneficial Uses*.

The revised proposed Plan amendments also include non-substantive changes to the Bay-Delta Plan to improve readability and clarity. Tables 1, 2, 3, and 4, which include the water quality objectives, were revised and reformatted to remove footnotes and incorporate the substance of those footnotes into the table or into the program of implementation. No existing objectives were changed; however, some minor non-substantive edits were made to implementation measures to update those measures and better integrate them with other processes as appropriate. In addition, the title of the Bay-Delta Plan was updated to replace "Estuary" with "Watershed" and minor editorial changes are made to clarify language, remove outdated language, and reflect actions that have been completed.

Responses to Comments

The 2023 draft Staff Report included a detailed description of the proposed Plan amendments and proposed VAs in Chapters 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, and 9, *Proposed Voluntary Agreements*, respectively. However, a number of commenters argued that the project was not adequately described in the 2023 draft Staff Report since it did not contain the specific draft regulatory text. Some of these comments stated that the lack of a program of implementation in the 2023 draft Staff Report made the Staff Report inadequate as a Substitute Environmental Document (SED) or as a planning document that complies with California and federal law. Similarly, commenters argued that the description of the program of implementation did not

contain sufficient detail such that the impacts associated with implementation could not be fully analyzed. Some commenters further suggested that the absence of the draft regulatory text in the 2023 draft Staff Report resulted in piecemealing or that the Staff Report should be recirculated with the draft regulatory text for the program of implementation. The California Code of Regulations requires that an Environmental Impact Report (EIR) have "sufficient degree of analysis to provide decisionmakers with information which enables them to make a decision which intelligently takes account of several environmental consequences." (Cal. Code Regs., tit. 14, § 15151.) CEQA guidelines require that an EIR must describe the main features of the project sufficient to foster a complete and informative evaluation of the project's environmental impacts. (Cal. Code Regs., tit. 14, § 15124.) As described in more detail in the sections below, the 2023 draft Staff Report included a sufficiently detailed description of the proposed contents of the draft regulatory text for the purposes of the analysis. The proposed water quality objectives and program of implementation were described and analyzed together in the Staff Report and the environmental impacts and economic effects of the project are fully analyzed in the Staff Report. Please see Common Response 7.1, *General CEQA and Approach to the Analysis*, for more information on the CEQA analysis. In addition, in December 2025, Chapter 13, *Revised Proposed Plan Amendments*, was released for a limited recirculation of the Staff Report alongside the December 2025 revised draft Bay-Delta Plan, providing commenters an opportunity to comment on the recirculated portions of the Staff Report and the specific draft regulatory text in the revised draft Bay-Delta Plan.

Multiple commenters requested additional detail or edits to the revised proposed Plan amendments to provide additional clarity on implementation. The revised proposed Plan amendments have the appropriate level of detail to balance clarity with flexibility. Although many of the commenters requesting additional detail were entities that would be regulated by the Bay-Delta Plan, incorporation of their edits would reduce their operational flexibility in meeting the requirements in the Plan. In addition, some commenters requested changes that would reduce clarity in the Plan language, for example by reducing specificity in the Plan language. For these reasons, some of these suggestions were not incorporated. However, where additional detail or clarifying edits were necessary to increase clarity, revisions were made.

Some of the additional details requested were from HRL participants for requirements to coordinate among themselves. The HRL has been proposed as an integrated and coordinated set of actions by water users and agencies under a common accounting, governance, and science and monitoring framework. Accordingly, it is the expectation of the State Water Board that HRL participants will cooperate and coordinate among themselves to ensure compliance with the VA pathway. However, in the event that this does not occur, the Plan includes provisions for HRL participants to request to remove water rights from the VA pathway after a public review and comment period and provisions indicating that HRL participants are not expected to backstop commitments of other HRL participants. In the event that any HRL participants do not meet their obligations under the VA pathway or HRL water rights are otherwise removed from the VA pathway, the associated water rights would be subject to the regulatory pathway. Further, the Plan includes provisions requiring that any proposals to add new HRL water rights or new water supply projects to the VA pathway must coordinate with the existing HRL participants in advance of submittal of any proposal to the State Water Board for consideration.

Several commenters requested changes to portions of the Bay-Delta Plan that are not proposed to be changed in this update process. Some commenters requested relaxations to objectives or other provisions included in the 1995 Bay-Delta Plan and State Water Board Revised Decision 1641 (D-1641). Most of these suggestions were received only recently after much of the planning process had

occurred, including development and peer review of the Scientific Basis Report and Scientific Basis Report Supplement and the scoping process, and to consider them would cause significant delay in updating the Bay-Delta Plan and implementing measures to provide for the reasonable protection of beneficial uses. Further, no relaxations are proposed to existing Bay-Delta Plan requirements for the protection of fish and wildlife beneficial uses because, as discussed throughout the Staff Report, implementation of the current Sacramento/Delta provisions of the Bay-Delta Plan has not been adequate to protect fish and wildlife throughout the watershed and throughout the year and restoration of more natural flow functions is needed to address species declines in an integrated fashion with physical habitat improvements. Relaxations to requirements not currently considered sufficiently protective are therefore not under consideration for the current update to the Bay-Delta Plan since they would not fulfill the purpose and goals of this project. However, the Board will have the opportunity to review the Bay-Delta Plan and consider other possible changes to the Plan during periodic reviews.

While some changes were made to update existing provisions in the Plan to remove outdated decision-making groups and processes and ensure that the State Water Board maintains an appropriate level of oversight over implementation actions, these updates did not substantively change the requirements. Commenters also requested changes to portions of the Plan that are not within the scope of the current update process, including requests to change portions of the Plan related to water quality objectives for municipal, industrial, and agricultural beneficial uses or related to the lower San Joaquin River. As described in Section 7.1.3, *Purpose and Goals of the Sacramento/Delta Update to the Bay-Delta Plan*, of the Staff Report, the current update is, and always has been, focused on updates to the Plan (including water quality objectives, a program of implementation, and monitoring and special study measures) for the reasonable protection of fish and wildlife in the Sacramento/Delta watershed due to the significant concerns with protection of fish and wildlife within the Sacramento/Delta watershed extensively documented throughout the planning process. A similar level of concern and associated supporting science that beneficial uses are not being reasonably protected has not been identified supporting the need to update water quality objectives for the reasonable protection of agricultural and municipal and industrial uses in the Plan. Updates related to the lower San Joaquin River portions of the Plan for the reasonable protection of fish and wildlife beneficial uses were approved in 2018. However, again, during the periodic review process the Board will consider other possible changes to the Plan that are needed to provide for the reasonable protection of beneficial uses, including consideration of comments from the public.

Some commenters requested edits to require water rights proceedings for various components of the program of implementation. The State Water Board implements the Bay-Delta Plan objectives using its quasi-legislative or adjudicative authorities involving water rights and water quality. The State Water Board may implement the objectives by adopting regulations, conducting adjudicative proceedings, or both, that take into consideration the requirements of the public trust doctrine and the California Constitution, article X, section 2. For more information on the State Water Board's authorities, see Common Response 1.2, *Water Quality Control Planning Process*.

A number of comments were received on the treatment of new water supply projects, including water right applications and change petitions approved after December 31, 2025. Commenters argued that the revised proposed Plan amendments should impose restrictions on new water supply projects instead of leaving that decision to the individual water right proceedings. Other commenters requested flexibility for new water supply projects to be added to the VA pathway or receive water supply adjustments. Commenters also requested clarification on the process for

adding new water supply projects, including new water rights and changes to existing rights, to the VA pathway. Substantive modifications to the list of HRL water rights or the application of water supply adjustments to new supply projects could be considered for approval by the Board as part of the annual or periodic review process, along with any necessary supporting environmental and scientific documentation pursuant to CEQA, Porter Cologne, the Clean Water Act, and Health and Safety Code requirements. In addition, the revised proposed Plan amendments direct the State Water Board to consider imposing requirements on new water supply projects to ensure that future authorizations for the diversion and use of water are consistent with and support the salmon protection, fish viability, inflow, inflow-based Delta outflow, and interior Delta flow objectives of the Bay Delta Plan. For further discussion of the new water supply projects, see the section below on the interaction with other projects and regulatory processes.

Several commenters, including California Department of Water Resources (DWR), U.S. Bureau of Reclamation (Reclamation), and their contractors, explained that the Projects (the collective term for the Central Valley Project [CVP] and State Water Project [SWP]) have significant existing responsibility for implementing the Bay-Delta Plan through D-1641. They requested that aspects of this responsibility, including interior Delta flows and monitoring requirements, be broadened to all water users in the watershed. Other commenters requested that the Projects remain responsible for meeting all Bay-Delta Plan requirements and that they be required to exhaust the use of all facilities to carry out these responsibilities before the Board requires any other water users to contribute to Bay-Delta Plan requirements.

D-1641, issued in March 2000, accepted the proposed contributions of certain water right holders toward meeting water quality objectives included in the 1995 Bay-Delta Plan, including agreement by Reclamation and DWR to primary responsibility for meeting and backstopping the objectives. Phase 8 of the Water Rights hearing associated with allocating responsibility for the 1995 Bay-Delta Plan, which would have allocated responsibility to additional water users, was stayed and eventually dismissed based on an independent commitment from the DWR and Reclamation to meet the flow-dependent objectives unless and until DWR or Reclamation requested that the State Water Board convene a hearing to consider allocating responsibilities to meet the flow-dependent objectives to other parties. (State Water Board Order WR 2001-05.) While the Staff Report evaluates Modular Drought Alternatives (Alternatives 5a and 5b), which would have broadened the obligations to meet the 1995 Bay-Delta Plan objectives to other diverters in the watershed, based on public comments, including from the Projects and their contractors, the revised proposed Plan amendments do not contain provisions to implement modular alternatives 5a or 5b. However, the State Water Board could consider those or similar alternatives in a future Bay-Delta Plan update. In addition, the Sacramento/Delta update to the Bay-Delta Plan broadens responsibility for Bay-Delta Plan implementation to all water right holders in the watershed who will need to comply with either the voluntary agreement or regulatory pathway. Once the comprehensive Bay-Delta Monitoring and Evaluation Program (BDMEP) is established, water rights holders throughout the watershed will also be required to contribute to monitoring and evaluation activities.

Some commenters argued that the VA pathway, the regulatory pathway, or the full revised proposed Plan amendments would not provide reasonable protection of beneficial uses. For responses to those comments, see Common Response 1.2, *Water Quality Control Planning Process*, regarding the reasonable protection of fish and wildlife and consideration of other beneficial uses.

Water Quality Objectives for Fish and Wildlife Uses

Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, of the Staff Report includes a description of the proposed Plan amendments, including water quality objectives and a description of the program of implementation designed to meet the objectives. Several objectives have been revised from the draft objectives included in Chapter 5 of the 2023 draft Staff Report. In addition, a fish viability objective that was described in Chapter 9, *Proposed Voluntary Agreements*, of the 2023 draft Staff Report is explicitly incorporated, with revisions, in the revised proposed Plan amendments. The updated objectives are described in Chapter 13, *Revised Proposed Plan Amendments*, of the Staff Report and below.

The revised proposed Plan amendments include new objectives for Sacramento/Delta inflow, cold water habitat, Delta outflow, interior Delta flows, and fish viability. In addition, the revised proposed Plan amendments are intended to contribute to implementing the existing salmon protection objective. Under the regulatory pathway, these objectives would be implemented by flow, cold water habitat, and related requirements included in the program of implementation. Under the VA pathway, the objectives would be implemented by the flow, habitat, and other required and enforceable HRL commitments included in the program of implementation. The water quality objectives are included in Table 3 of the revised proposed Plan amendments.

Responses to Comments

Some commenters stated that the proposed new narrative objectives are unclear (e.g., due to the lack of a definition of viability or numeric standards), overly broad, or inconsistent. Some commenters also suggested text revisions to the objectives to remedy the alleged issues. However, some of these text revisions removed details (such as the indicators of viability) that address the issue raised by the commenter. Water quality objectives (or standards under the Clean Water Act) express or establish the desired conditions or instream level of protection (USEPA 2012). The proposed new objectives comply with all applicable requirements and, as described further below, are sufficiently detailed and clear. However, the Board can consider any needed changes to the Bay-Delta Plan or its implementation through the annual and periodic review processes. Some commenters argued that the new narrative objectives are defined solely with respect to achieving the fish viability objective or that some objectives would not contribute to the salmon protection objectives. All of the objectives have equal force and effect and there is no hierarchy among the objectives. For more information on water quality objectives, please see Common Response 1.2, *Water Quality Control Planning Process*.

Multiple commenters asserted that “viability” should be defined for the narrative objectives. The term “viability” is defined sufficiently for this project and is defined within the text of the proposed narrative objectives as: “Indicators of viability include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity.” Viability will be assessed through biological goals, which will be developed to assess the health of the ecosystem for representative anadromous and estuarine fish species, including measures to assess the abundance, productivity, genetic and life history diversity; and the population spatial extent, distribution, and structure for native species. For anadromous salmonids, the biological goals will be based on the viable salmonid population (VSP) parameters including abundance, life history and genetic diversity, productivity, and spatial structure. In addition, a scientific definition of viability is provided in the Scientific Basis Report Supplement (Appendix G2, *Final Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and*

Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan, to the Staff Report). Some commenters contended that the State Water Board is defining viability to mean the minimum population necessary to avoid extinction. Although viability is often defined in terms of its relationship to extinction risk and reducing such risk, it is not defined as the "minimum value necessary to avoid extinction" in the revised proposed Plan amendments or in the Scientific Basis Report Supplement. Commenters also suggested that viability should be defined with numeric values for each indicator. See Common Response 1.2, *Water Quality Control Planning Process*, for a discussion of narrative and numeric water quality objectives.

Commenters suggested that the proposed objectives should be modified to protect estuarine habitat beneficial uses. As described in Staff Report Section 7.1.3, *Purpose and Goals of the Sacramento/Delta Update to the Bay-Delta Plan*, the underlying fundamental purpose of the project is to establish water quality objectives, a program of implementation, and monitoring and special study measures for the reasonable protection of fish and wildlife beneficial uses in the Sacramento/Delta. The Bay-Delta Plan defines the fish and wildlife beneficial uses as including Estuarine Habitat (EST), Cold Freshwater Habitat (COLD), Warm Freshwater Habitat (WARM), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), Wildlife Habitat (WILD), and Rare, Threatened, or Endangered Species (RARE). In addition, the objectives are also intended to protect the conditions supporting those beneficial uses, for example the necessary food and habitat on which native fish populations depend. Therefore, adopting objectives and a program of implementation for the reasonable protection of fish and wildlife beneficial uses would include protection of estuarine habitat. Furthermore, the benefit analyses in the Scientific Basis Report, Scientific Basis Report Supplement, Staff Report Chapter 3, *Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations*, and Staff Report Section 13.5, *Beneficial Environmental Effects*, provide evidence for the expected benefits of the revised proposed Plan amendments for estuarine habitat and species.

Commenters asserted that the Board's obligations to protect fish and wildlife beneficial uses must also extend to maintaining viable commercial fisheries to protect the commercial fishing beneficial use. The revised proposed Plan amendments are expected to also result in benefits to native commercial fish populations in the Sacramento/Delta watershed, including fall-run Chinook salmon, and associated economic benefits to commercial fishing. In response to comments received, Chapter 8, *Economic Analysis and Other Considerations*, of the Staff Report has been updated to include a new Section 8.6, *Fisheries Economic Analysis*, that addresses potential economic benefits from implementation of the flow scenarios and subsequent aquatic ecosystem improvements and benefits for native fish species, including subsistence fishing and tribal uses of fish. This new section also provides a discussion on economic losses resulting from recent ocean salmon fishery closures and the benefits of increased instream flow. This new section provides additional context and information concerning beneficial fisheries and ecosystem economic effects, but does not change the conclusions of the Staff Report's economic analysis. In addition, Section 13.8.4, *Fisheries Economic Effects*, summarizes previous economic analyses described in Chapters 8 and 9, *Proposed Voluntary Agreements*, of the 2023 draft Staff Report as well as discusses differences in the potential effects under the regulatory pathway or VA pathway. As mentioned in Section 13.8, *Economic Analysis and Other Considerations*, the starting point for the regulatory pathway (55 w/WSAs) would have similar economic effects as those evaluated in Chapter 8. Therefore, adopting objectives and a program of implementation for the reasonable protection of fish and wildlife beneficial uses would help address commercial fishing needs.

Reclamation argued that the objectives in the Bay-Delta Plan do not account for water shortages in dry and critically dry years, which has resulted in temporary urgency change petitions (TUCPs). In contrast, other commenters argued that the Plan does not consider the effects of historic and future TUCPs, does not address problems with their use, and does not demonstrate that objectives will be achieved in light of the use of TUCPs. Implementation of the revised proposed Plan amendments would be expected to reduce TUCPs for meeting current water quality objectives. The provisions in the Plan for implementing the water right priority system through the implementation methodology would be expected to reduce the need for TUCPs, which in part are associated with water diverters taking water at times when it is not available under their right. Other than standard water right Term 91 that only affects a small group of junior water right holders, there is not currently a long term system for determining when water is not available under specific rights in the Bay-Delta watershed leading to diverters taking water at times that is not available under their rights. When diverters take water that is not available under their right, it increases the need for the Projects to release previously stored water to meet existing Bay-Delta Plan objectives, depleting storage available for meeting these objectives in the future. Under the revised proposed Plan amendments, the Board will be developing regulations and an implementation methodology to determine when water is not available for water rights at different priorities that would apply under both the regulatory and VA pathways. Under the regulatory pathway the methodology would be used to determine when water is not available under water rights based on water right priority after accounting for regulatory pathway inflow and inflow-based Delta outflow requirements. Under the HRL pathway, the methodology would be used to determine when no water is available under HRL water rights without the regulatory pathway flows assuming all flows in the system are allocated, similar to curtailments that occurred in the most recent drought. Further, HRL flow commitments were proposed by HRL participants to add flows to D-1641 requirements. In addition, the revised proposed Plan amendments specify that actions to avoid TUCPs could be evaluated in periodic review. For more information on TUCPs, please see the section below, *Interaction with Other Projects and Regulatory Processes*.

Some commenters expressed concern with the movement of footnotes to Tables 1 through 4 of the 2018 Bay-Delta Plan into the tables or into the program of implementation. These edits were intended to improve readability of the tables and did not result in any changes to the objectives. In some cases, outdated decision-making processes and related issues were updated, but otherwise the footnotes were substantively unchanged. The relocation of the text of footnotes within the text of the objective has no effect on the objective since the footnotes were already cited and thus included within the objective. Similarly, moving footnotes to the program of implementation has no effect since their inclusion has equal force and effect in either location, as further discussed in Common Response 1.2, *Water Quality Control Planning Process*.

One commenter suggested that the definition of Sacramento Valley Water Year types should clarify that the reference to “normal precipitation for the remainder of the water year” is referring to the 50% exceedance forecast. They state that this clarification would be helpful since the 50% exceedance forecast has been used for implementation of the Bay-Delta Plan. The commenter’s suggestion was accepted, and Figure 2 of the revised proposed Plan amendments was updated to reference the 50% exceedance forecast.

A commenter suggested adding exceedance levels to some D-1641 objectives that rely on indicators of prior hydrological conditions. All requirements in D-1641 would continue to apply. In addition, exceedance levels are not necessary for prior hydrological conditions since those conditions are known.

Sacramento River/Delta Tributary Flows

To improve ecosystem functions on tributaries, and to connect flows from throughout the watershed with the Delta to support native estuarine species, the revised proposed Plan amendments include a narrative inflow objective. There are salmonid species in the Sacramento/Delta year-round as well as other aquatic species that require adequate flows from the tributaries for their protection (see Staff Report Chapter 3, *Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations*). As such, the inflow objective is proposed to be year-round. The proposed narrative inflow objective is as follows:

> *Maintain water quality conditions including inflow conditions from the Sacramento River/Delta tributaries, together with other measures in the watershed, sufficient to support and maintain the natural production of viable native fish populations. Conditions and measures that reasonably contribute toward maintaining viable native fish populations include the relative magnitude, duration, timing, quality and spatial extent of flows as they would naturally occur.*

The numeric portion of the inflow objective was modified from the draft objective included in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, of the Staff Report and was relocated to the revised proposed program of implementation in Section 4.4 of the revised proposed Plan amendments.

Sacramento River/Delta Cold Water Habitat

The narrative cold water habitat objective of the revised proposed Plan amendments is intended to minimize potential temperature-related impacts of the flow objectives and to address other existing and potential future temperature management concerns on the tributaries for the protection of salmonids and other native species. As a complementary measure to the inflow objective to protect salmonids and other native species in the tributaries, the narrative cold water habitat objective is proposed to be year-round. The proposed narrative cold water habitat objective is as follows:

> *Maintain streamflows and reservoir storage conditions on Sacramento/River Delta tributaries to protect cold water habitat for sensitive native fish species, including Chinook salmon, steelhead, and other native cold water fish species. Cold water habitat conditions to be protected include maintaining sufficient quantities of habitat with suitable temperatures on streams to support passage, holding, spawning, incubation, and rearing while preventing stranding and dewatering due to flow fluctuations.*

Responses to Comments

Some commenters argued that the cold water habitat objective and its implementation are unlawful because the objective is vague and lacks clear numeric criteria such as protective water temperatures. The specific definitions of protective water temperature would be considered during the process to review and consider for approval long-term temperature management strategies. In addition, those long-term temperature management strategies are required to include carryover storage requirements to protect cold water habitat. For more information on numeric vs. narrative water quality objectives, please see Common Response 1.2, *Water Quality Control Planning Process*.

Commenters alleged that the program of implementation would not achieve the cold water habitat objective because the HRL water rights would be exempted from contributing to the regulatory pathway cold water habitat requirements. As described in further detail in the section below, *Voluntary Agreement Pathway*, the HRL participants will be required to implement their flow commitments in a manner to improve temperatures to the extent possible and avoid redirected impacts to water temperatures. In addition, the VA pathway is being implemented in an

experimental framework for a period of eight years, unless the VA pathway is terminated before eight years or extended beyond eight years as discussed in more detail below under *Continuation, Modification, or Termination of the VA Pathway*. If the VA pathway remains in effect at the end of the 8-year period, the Board will undertake a review under the process for continuation, modification, or termination of the VA pathway to determine if the VA pathway is meeting its objectives and providing for meaningful progress toward achieving the narrative objectives. If not, the VA pathway may be modified or discontinued.

Delta Outflow

The revised proposed Plan amendments include a narrative Delta outflow objective and an inflow-based Delta outflow objective. The narrative Delta outflow objective describes the outflow conditions that protect native fish and aquatic species populations and provides a description of the conditions the inflow-based Delta outflow and other outflows are intended to produce, along with other measures in the watershed. In recognition that outflows are largely a product of inflows and that inflows from tributaries are necessary to provide both the quantities of needed outflows as well as functioning migratory corridors, the proposed inflow-based Delta outflow objective would link the inflow and outflow objectives.

The narrative Delta outflow objective has been revised and is as follows:

> *Maintain water quality conditions including Delta outflows, together with other measures in the watershed, sufficient to support and maintain the natural production of viable fish populations. Conditions and measures that reasonably contribute toward maintaining viable native fish populations include, but may not be limited to, flows that support fish species, including the relative magnitude, duration, timing, quality and spatial extent of flows. Indicators of viability include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity.*

The inflow-based Delta outflow objective is as follows:

> *The inflows required for the Sacramento/Delta tributaries and San Joaquin River tributaries are required as outflows with adjustments for downstream natural depletions and accretions.*

The proposed Plan amendments described in the 2023 draft Staff Report originally included a fall Delta outflow objective (see Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*). Consistent with Alternative 4a, an objective for fall Delta outflow is not included in the revised proposed Plan amendments.

Responses to Comments

Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, of the 2023 draft Staff Report identified the possible inclusion of a fall Delta outflow objective. Some comments supported or opposed the fall Delta outflow objectives. Consistent with Alternative 4a, an objective for fall Delta outflow is not included in the revised proposed Plan amendments. However, as part of the periodic review process, the Board may consider such a requirement in the future if information indicates that such a requirement is needed to provide for the reasonable protection of fish and wildlife beneficial uses.

Interior Delta Flows

Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, of the 2023 draft Staff Report identified the possible inclusion of new narrative and numeric interior Delta flow objectives,

including provisions based on constraints included in biological opinions (BiOp) and incidental take permits (ITPs) including: expansion of numeric SWP and CVP export constraints based on San Joaquin River flows (referred to as the San Joaquin River I:E); new limitations on Old and Middle River reverse flows; and modification of Delta Cross Channel Gate closure requirements. Consistent with Alternative 4a, the expansion of the San Joaquin River I:E and new Old and Middle River reverse flow limitations have been removed from the revised proposed Plan amendments as explicit interior Delta flows objectives. In addition, the proposed changes to the closure periods for the Delta Cross Channel Gates objective have been removed from the revised proposed Plan amendments. However, updates are retained to the Delta Cross Channel decision-making. The narrative interior Delta flows objective and the minor modifications to the Delta Cross Channel Gates objective are incorporated in the revised proposed Plan amendments. The narrative interior Delta flows objective would apply year-round and is as follows:

> *Maintain water quality conditions, including flow conditions in the interior Delta, together with other measures in the watershed, sufficient to support and maintain the natural production of viable native fish populations. Conditions and measures that reasonably contribute toward maintaining viable native fish populations include the relative magnitude, duration, timing, quality, and spatial extent of flows. Indicators of viability include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity.*

Responses to Comments

Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, of the 2023 draft Staff Report identified the possible inclusion of new narrative and numeric interior Delta flow objectives, including provisions based on BiOp and ITP constraints including: expansion of numeric SWP and CVP export constraints based on San Joaquin River flows (referred to as the San Joaquin River I:E); new limitations on Old and Middle River reverse flows; and modification of Delta Cross Channel Gate closure requirements. It also included modifications to the Delta Cross Channel objective for consistency with current ESA requirements. Some comments supported or opposed the new proposed numeric interior Delta flows objectives. Commenters also requested that the requirements for the Delta Cross Channel objective revert to those included in D-1641 or questioned the inclusion of the Delta Cross Channel objective in the Bay-Delta Plan altogether. Other commenters supported the proposed additional flexibility in Delta Cross Channel management. Consistent with alternative 4a, the expansion of the San Joaquin River I:E and new Old and Middle River reverse flow limitations have been removed from the revised proposed Plan amendments as explicit interior Delta flows objectives. In addition, the proposed changes to the closure periods for the Delta Cross Channel objective have been removed from the revised proposed Plan amendments. However, updates are retained to the Delta Cross Channel decision-making process. In addition, the narrative interior Delta flows objective was retained.

Some commenters argued that the narrative interior Delta flows objective is unlawful because it does not identify limits or levels of flow conditions in the interior Delta necessary to support viable fish populations. As described in the program of implementation of the revised proposed Plan amendments, the narrative objective is implemented through compliance by the SWP and CVP with the numeric interior Delta flow objectives and implementation measures and ESA and CESA requirements for the operations of the CVP and SWP export facilities. Numeric limits and levels are defined in the numeric objectives for interior Delta flows. In addition, for more information on numeric vs. narrative water quality objectives, please see Common Response 1.2, *Water Quality Control Planning Process*. Also see further discussion in the implementation section below, *Interior Delta Flows*.

Suisun Marsh

As described in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, there are no proposed revisions to the text of the Brackish Tidal Marshes of Suisun Bay narrative objective and the Eastern Suisun Marsh Salinity numeric objective but there are minor proposed revisions to the compliance locations. The revised proposed Plan amendments remove stations S-35 "Goodyear Slough at Morrow Island Clubhouse," S-97 "Cordelia Slough at Ibis Club," and "Water supply intakes for waterfowl management areas on Van Sickle and Chipps islands" as compliance locations for the Western Suisun Marsh Salinity objective. These stations continue to be required monitoring locations. The monitoring location for "Water supply intakes for waterfowl management areas on Van Sickle and Chipps islands" is identified in the revised proposed Plan amendments as station S71 and renamed "Montezuma Slough at Roaring River."

Fish Viability

The revised proposed Plan amendments incorporate the fish viability objective that was described in Staff Report Chapter 9, *Proposed Voluntary Agreements*, for supporting and maintaining the natural production of viable native fish populations. The narrative fish viability objective applies year-round and is as follows:

> *Maintain water quality conditions, including flow conditions in and from tributaries and into and out of the Delta, together with other measures in the watershed, sufficient to support and maintain the natural production of viable native fish populations. Conditions and measures that reasonably contribute toward maintaining viable native fish populations include, but may not be limited to (1) flows that support native fish species, including the relative magnitude, duration, timing, temperature, and spatial extent of flows; and (2) conditions within water bodies that enhance spawning, rearing, growth, and migration in order to contribute to improved viability. Indicators of viability include population abundance, spatial extent, distribution, structure, genetic and life history diversity, and productivity. Flows provided to meet this objective shall be managed in a manner to avoid causing significant adverse impacts to fish and wildlife beneficial uses at other times of the year.*

Salmon Protection

The revised proposed Plan amendments retain the existing salmon protection objective unchanged from the 1995 Bay-Delta Plan. However, additional implementation measures for the objective are added as described in the sections below. The salmon protection objective is as follows:

> *Water quality conditions shall be maintained, together with other measures in the watershed, sufficient to achieve a doubling of natural production of Chinook salmon from the average production of 1967–1991, consistent with the provisions of State and federal law.*

Responses to Comments

Some commenters contended that the VA pathway would extend the deadline for the salmon protection objective to 2050. The revised proposed Plan amendments do not change the salmon protection objective and do not set or change a deadline for achieving the objective. Some commenters argued that the program of implementation does not identify the actions necessary to achieve the objective. All existing implementation measures for the salmon protection objective from the 2018 Bay-Delta Plan will remain in the Plan. The revised proposed Plan amendments would only add additional implementation measures for the salmon protection objective, from the HRL commitments applicable to HRL water rights, regulatory pathway requirements applicable to the remainder of water rights, and additional general provisions. While the HRL participants have

proposed that their commitments would constitute their contribution to achieving the salmon protection objective by 2050, this would only be considered in assessing the effectiveness of the VA pathway and would not set a deadline for achieving the salmon protection objective. More information on the decision process for continuing, modifying, or terminating the VA pathway can be found below under *Continuation, Modification, or Termination of the VA pathway*.

Some commenters questioned why the VA pathway would only be required to contribute to achieving 25 percent of the salmon protection objective. They contend that it is arbitrary and capricious to assign 75 percent of the responsibility to other water right holders. The HRL proposal includes the commitment to contribute to achieving 25 percent of the salmon protection objective is for the initial 8-year period. If the Board decides to extend the VA pathway, it is presumed that the HRL participants would be required to further contribute beyond that initial 25 percent. The remaining 75 percent responsibility is not assigned to other water right holders in either case though. In addition, the VA pathway is being implemented in an experimental framework for a period of 8 years. At the end of this 8-year period, the Board will undertake a review under the default process for continuation, modification, or termination of the VA pathway to determine if the VA pathway is meeting its objectives and providing for meaningful progress toward achieving the narrative objectives. If not, the VA pathway may be modified or discontinued.

Regulatory Pathway

The requirements under the regulatory pathway are based on the proposed Plan amendments described in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, of the 2023 draft Staff Report with refinements described in Chapter 13, Revised Proposed Plan Amendments, and further below.

Responses to Comments

Some commenters argued that flow requirements should be managed with non-flow habitat restoration to maximize benefits and that the regulatory pathway inflow requirements would hamper local watershed coordination at the expense of water users and the environment. Several commenters also suggested that the regulatory pathway includes only flow measures and does not include any non-flow measures. The regulatory pathway does include non-flow measures and encourages local watershed coordination. The regulatory pathway includes adaptive implementation and local cooperative solutions provisions that enable tailoring implementation of the flow requirements to individual tributaries, including the ability for watersheds to self-organize, propose habitat restoration and other non-flow measures for compliance with the inflow and cold water habitat requirements, and manage flow requirements and habitat restoration in concert to maximize benefits. In addition, complementary measures including habitat restoration are included as general provisions in the revised proposed Plan amendments and described in further detail below under *General Provisions*.

A few commenters suggested revisions or alternative approaches to the regulatory pathway requirements, including alternative water year type definitions. These changes would require an analysis of their feasibility and effects on resulting flows, which were generally not provided by commenters. They may also require an analysis of the scientific basis along with peer review, additional public process, and refinement. However, other alternatives could be considered in future periodic reviews. As discussed in Common Response 7.24, *Alternatives Analysis*, the Staff Report appropriately analyzed a range of reasonable alternatives.

A commenter requested clarification about how the incremental implementation of the regulatory pathway would occur. In response to this comment, clarity was added that the inflow requirements could be implemented incrementally by tributary or reach and the inflow-based Delta outflow requirements could be implemented incrementally consistent with the inflow requirements.

Several commenters expressed concern about the water supply impacts of the regulatory pathway, particularly for municipal uses. As described above, the regulatory pathway includes water supply adjustments to help to moderate water supply impacts upon initial implementation, including more significant adjustments for the Mokelumne and Calaveras River and Putah Creek, in part due to municipal water supply concerns. The revised proposed Plan amendments also provide for exceptions to curtailment for human health and safety needs. In addition, the regulatory pathway includes significant flexibility through adaptive implementation measures that could be used to improve conditions for fish and wildlife with reduced water supply costs. Some commenters presented alternative modeling results to support claims of unreasonably high water supply impacts. For a response to these claims, please see Common Response 6.1, *Sacramento Water Allocation Model and Changes in Hydrology and Water Supply*, for the discussion of urban water supply impacts.

Rationale for the Regulatory Pathway Requirements

Several commenters argued that ongoing actions in some tributaries are already providing favorable conditions for fish in those tributaries and thus additional inflow, cold water habitat, and outflow requirements are unnecessary for those tributaries. However, the existence of ongoing actions to improve fish and wildlife conditions does not necessarily mean that additional actions are unnecessary. As indicated in other comments and documented in the Staff Report and Scientific Basis Report, although actions have been ongoing in many tributaries to improve conditions for salmon, populations have continued to decline making it clear that there is still substantial additional progress that is needed to meet the salmon protection objective calling for the doubling of salmon populations from 1967-1991. Other anadromous and estuarine species have also continued to decline and have generally not shown signs of significant sustained recovery of natural populations. These conditions indicate that current efforts are generally not adequate to meet the Bay-Delta Plan's existing and proposed narrative objectives, including on tributaries where restoration efforts have been ongoing for many years where commenters argued that additional measures are not needed.

Commenters also requested exemptions for tributaries from the inflow requirements for various reasons. Tributary flows are needed to support a number of ecological processes and species, including salmonids as well as other native species within the tributaries and downstream through the estuary. Inflows are needed to protect native fish and wildlife species that inhabit the Sacramento/Delta tributaries throughout the year as juveniles or adults. Inflows are needed to provide, for example, continuity of flows from tributaries to the Delta and to protect anadromous (primarily Chinook salmon and steelhead) and other fish and wildlife species that inhabit the Bay-Delta and its tributaries throughout the year as juveniles or adults. Inflows are needed to provide suitable habitat conditions for migration and rearing of anadromous fish species like salmonids, with runs that inhabit the Delta and its tributaries all year. Those flows also are needed to contribute to Delta outflows to support migrating, spawning, and rearing estuarine species. Preservation of higher flows already being provided in some less impaired tributaries also is needed to maintain existing protective conditions where existing flows are providing important functions to ensure that those flows are not reduced.

Specifically, flows that more closely mimic the conditions to which native fish species have adapted, including the frequency, quality, timing, magnitude, and duration of flows, as well as the proportionality of flows from tributaries, would be expected to improve protection of native species. These flow attributes would support key functions, including floodplain inundation, temperature control, migratory cues, reduced stranding and straying, and other functions. Providing appropriate flow conditions throughout the watershed and throughout the year also would support genetic and life history diversity that allows native species to distribute the risks that disturbances from droughts, fires, disease, food availability, and other natural and anthropogenic stressors present to populations.

Existing outflow requirements in the current Bay-Delta Plan result in inflows; however, only DWR and Reclamation are responsible for those requirements, which can affect DWR and Reclamation's ability to retain storage for cold water and instream flows throughout the year. There are some flow requirements for other tributaries, but those requirements are not consistent between tributaries or coordinated with Bay-Delta Plan Delta outflow requirements. Some tributaries also have no flow requirements at all. While conditions may currently be protective of fish and wildlife in some of these tributaries, flow requirements are needed to prevent future impacts on fish and wildlife and to provide outflow for protection of estuarine species. In addition, some of these tributaries may dry up at times of year, affecting native fish and wildlife due to the lack of flow requirements; and other tributaries may have inadequate flow and water quality conditions to protect fisheries resources. The regulatory pathway addresses the above issues by providing comprehensive year-round minimum instream flow and cold water habitat provisions and distributing the responsibilities more broadly across the watershed in a way that adjusts to available supplies and provides for flexibility.

Sacramento/Delta Tributary Inflows

The inflow objective is proposed to apply throughout the watershed on all Sacramento/Delta tributaries that support or contribute to the protection of anadromous fish species. These include tributaries in the Sacramento River watershed (i.e., the mainstem Sacramento River, Clear Creek, Cow Creek, Bear Creek, Cottonwood Creek, Battle Creek, Paynes Creek, Antelope Creek, Mill Creek, Elder Creek, Deer Creek, Thomes Creek, Big Chico Creek, Stony Creek, Feather River, Butte Creek, Yuba River, Bear River, Cache Creek, Putah Creek, the American River) and Delta eastside tributaries (i.e., the Cosumnes River, Mokelumne River, Calaveras River). The narrative inflow objective would be implemented through the numeric requirements described below in this section under the regulatory pathway and the requirements described under the VA pathway, as well as other complementary actions.

Under the regulatory pathway, the numeric inflow requirements would apply to all water rights on these tributaries, except those with a *de minimis* effect on flows (i.e., diversions of 10 acre-feet per year [AF/yr] or less), other approved exceptions, or those water rights listed in Appendix B.1 as part of the VA pathway. Those numeric requirements include bypass flow requirements based on a percentage of unimpaired flow. The revised proposed Plan amendments retain the required unimpaired flow levels from prior drafts of the Plan of 55 percent of unimpaired flow year-round on a 7-day running average within an adaptive range of 45 to 65 percent. However, upon initial implementation, water supply adjustments would apply to water rights obtained before the end of 2025 requiring lower unimpaired flow levels during all but the wettest conditions that would reduce water supply impacts and reservoir storage and associated temperature impacts. The Board could modify these water supply adjustments in the future within the 45 to 65 percent of unimpaired flow range and the applicable water supply adjustments. Two types of water supply adjustments would

apply during initial implementation based on hydrological conditions, including watershed-wide adjustments that apply to the entire watershed and tributary-specific adjustments that apply to rainfall-dominated tributaries and tributaries that primarily supply municipalities, including Putah Creek and the Mokelumne and Calaveras Rivers. Water supply adjustments would not apply for new water supply projects,[1] although they could be considered during annual or periodic review based on any necessary scientific and environmental documentation pursuant to CEQA, Porter Cologne, the Clean Water Act, and the Health and Safety Code.

For the watershed-wide water supply adjustments, the required percent of unimpaired flow would be based on the best available estimate of the cumulative sum of the prior 12 months of the Sacramento Valley Four River Index (four river index).[2] At the outset of implementation, the watershed-wide inflow requirement would be 55 percent of unimpaired flow during the wettest third of conditions, 45 percent of unimpaired flow during the intermediate third of hydrologic conditions, and 35 percent of unimpaired flow in the driest third of conditions, based on specified thresholds (rounded as appropriate) for the last 30 years of the four river index.

Additional off-ramps to the unimpaired flow requirements would apply in the tributary-specific water supply adjustments based on the fraction of the maximum allowable storage capacity, which is defined as the allowable flood control storage level as specified by the U.S. Army Corps of Engineers (USACE) or other agency with jurisdiction over flood control. If the storage drops below the specified fraction of maximum allowable storage capacity, the flow requirement would be reduced to 35 percent of unimpaired flow or off-ramped accordingly.

The numeric inflow requirements for the Sacramento/Delta tributaries would primarily be implemented through bypass flow requirements that limit diversions to ensure that the applicable flow requirements remain instream. In order to implement the numeric inflow requirements in accordance with water right priorities, demands for water that exceed the available supplies while preserving the instream flows at each compliance location and the amounts needed to serve senior water right demands would be subject to curtailment in order of water right priority unless an exception to curtailment applies. As discussed below in the *Implementation Methodology* section, an implementation methodology will be developed to determine when water is not available under specific water rights. The required percentage of unimpaired flow would not apply to an individual tributary during periods when flows from that tributary could cause or contribute to flooding or other related public safety concerns.

Initial compliance points where the numeric inflow requirements would apply include the confluence of Sacramento/Delta tributaries with the Sacramento River; at the confluence with the Legal Delta for the Cosumnes, Calaveras, and Mokelumne Rivers; on the mainstem of the Sacramento River at the confluence with the Delta; and at upstream locations on Sacramento/Delta tributaries at the confluence of every major fork, branch, and tributary of the tributaries subject to the inflow requirements unless determined through the implementation process that they are not needed or appropriate. Compliance points are the locations that will be used to define the percent of

[1] New water supply projects are defined as 1) water rights obtained after December 31, 2025, including any permits issued after that date pursuant to applications filed by the State under Water Code section 10500, and 2) water right change petitions that would increase diversions from the Delta watershed and decrease Delta outflows compared to conditions existing as of December 31, 2025.

[2] The four river index refers to the sum of the unimpaired runoff for the following locations: Sacramento River flow at Bend Bridge, near Red Bluff; Feather River, total inflow to Oroville Reservoir; Yuba River flow at Smartville; American River, total inflow to Folsom Reservoir.

unimpaired flow, inform assessment of compliance with the instream flow requirement, and determine whether any refinements to implementation of the inflow requirements are needed, including refinements to the implementation methodology. Updates to these compliance locations may be approved as part of the process to develop and update the implementation methodology after opportunity for public review and comment or through the Bay-Delta Plan annual and periodic review processes.

The revised proposed Plan amendments would also continue to provide for adaptive implementation of the inflow requirements in coordination with implementation of the cold water habitat and inflow-based Delta outflow requirements, to optimize benefits to fish and wildlife while minimizing water supply impacts. Adaptive implementation includes the ability to manage the numeric flow requirements as a total volume of water on a water year basis to shape flows (e.g., providing pulse flows to cue migration) for the benefit of fish and wildlife. The total volume of water provided within a water year would be required to be no lower than the volume of water that would have resulted from meeting the applicable unimpaired flow percentage on a 7-day running average, including applicable water supply adjustments. Flows for flood control purposes, hydropower releases, or other uncontrolled flows in excess of the applicable unimpaired flow percentage on a 7-day running average that were not documented to provide for the purpose of protecting fish and wildlife and Delta outflow could not reduce overall required inflow levels. The shaping of flows would be required to specifically ensure that flows are maintained year-round to support temperature maintenance, passage, and rearing; avoid stranding and dewatering of salmonids; and provide appropriately timed contributions to Delta outflows to protect estuarine species.

In addition, the required percent of unimpaired flow could be adjusted within the range from 45 to 65 percent of unimpaired flow, inclusive. Adjustments to the required percent of unimpaired flow between 45 and 65 percent of unimpaired flow may incorporate applicable water supply adjustments, provided that flows during January through June are no lower than what would be provided by the inflow requirements with the water supply adjustments or 45 percent of unimpaired flow without water supply adjustments, whichever is lower. Flows may be lower in the range if lower flows provide for the reasonable protection of fish and wildlife or to help meet the cold water habitat objective or if local cooperative solutions demonstrate that they achieve the inflow and cold water habitat objective through a combination of flow and other measures that are comparable to default implementation of the numeric flow requirements. Flows may only be required to be higher in the range, including possible removal of water supply adjustments for existing water rights, if flows in a tributary are already higher than the required numeric levels, or it is demonstrated that higher flows are needed to reasonably protect fish and wildlife. For more information about the regulatory pathway implementation of the inflow objective, see Section 4.4.2.2 of the revised proposed Plan amendments.

Responses to Comments

Some commenters requested additional information on the compliance locations for the inflow objective or requested the addition or removal of specific compliance locations. The revised proposed Plan amendments identify the general locations of compliance locations but also provide for adjusting those locations through the process to develop the implementation methodology or through annual or periodic reviews. Comments on specific compliance locations can be submitted and considered through those subsequent processes.

Commenters questioned the need for compliance points upstream of rim dams and the need for water users upstream of rim dams to contribute to the inflow objective. Compliance points upstream of rim dams are intended to meet the objectives in each individual reach while also contributing to Delta outflow to ensure reasonable protection of fish and wildlife throughout the watershed. The inflow requirements will be implemented in order of water right priority in each tributary and thus all water rights on the tributaries identified as subject to the Sacramento/Delta inflow requirement will be required to contribute, unless covered under the VA pathway. Upstream water users can contribute flows that would be bypassed by rim dams and benefit anadromous and other native species downstream of the rim dams. In addition, upstream tributaries provide high-quality, cold water habitat for several native species that depend on instream flows (Quinones et al. 2015). Isolated populations of native species above rim dams include but are not limited to rainbow trout (*Oncorhynchus mykiss*), Sacramento pikeminnow (*Ptychocheilus grandis*), Sacramento suckers (*Catostomus occidentalis*), sculpin (*Cottus spp.*), and foothill yellow-legged frogs (*Rana boylii*) (Baumsteiger and Aguilar 2014; Hayes et al. 2016; ^Moyle 2002). Native species in upstream tributaries have adapted to natural flow regimes, which support life history characteristics including seasonal migration, spawning cues linked to flow timing, and conditions necessary for juvenile growth and survival (^Bunn and Arthington 2002; ^King et al. 2003; King et al. 2016; ^Lytle and Poff 2004).

Some commenters requested that the exceptions for de minimis diversions be expanded to allow exceptions for diversions up to 1,000 AF instead of 10 AF. Other commenters requested removal of this exception. The de minimis exception for water diversions of 10 AF or less is consistent with the small domestic registration limitation of 10 AF, which has a simplified process for obtaining and administering water rights due to the small size of those rights and limited purposes of use of those rights for domestic purposes. While the de minimis exception to curtailments in the Plan is not only for small domestic registrations, it generally covers those types of water rights that are for small, limited uses where health and safety exceptions may also apply and the administrative and other burdens of implementing curtailments for such rights (including processing health and safety exceptions) would be significant compared to the limited benefit in achieving instream flows of curtailing those diversions. Further, on smaller tributaries at certain times, diversions of 1,000 AF can have a significant effect. Accordingly, excepting these rights from curtailments as a class is not clearly supported. For this reason, the default value of 10 AF for de minimis exceptions was retained. However, as appropriate, the State Water Board may adjust the *de minimis* exception limit through the periodic review process in the future.

Commenters expressed concern about conflicts between the inflow requirements and other State Water Board regulatory requirements, including water quality certifications and water right orders. In response to these concerns, the Plan amendments were revised to clarify that the Board may use adaptive implementation provisions to integrate the inflow requirements with requirements in other water right orders or water quality certifications to avoid impacts to aquatic species and increased water supply costs due to the interaction of those requirements.

A commenter suggested that the discussion of curtailment exceptions, including those for human health and safety, should be relocated to make it clear that they apply more broadly than the regulatory pathway implementation of the narrative inflow objective. These provisions were relocated to the section for the implementation methodology.

Water Supply Adjustments

A commenter requested flexibility for water supply adjustments to be applied to new water rights and new water supply projects during annual or periodic reviews. Other commenters expressed concern about the application of limitations on new water supply projects through the water right process instead of through the Bay-Delta Plan. In response to these comments, the applicability of water supply adjustments to new water supply projects has been revised to clarify that on a default basis they do not apply. The Plan has been further updated to identify that water supply adjustments could be considered during annual or periodic review of the Bay-Delta Plan (rather than as part of the water right process) to ensure that the scientific, environmental, and policy considerations regarding adding water supply adjustments to new projects can be considered in the context of the Bay-Delta Plan.

Commenters requested that the water supply adjustments be temporary and have clear expiration dates aligned with performance measures. Biological goals will provide performance measures that the Board will consider, along with other relevant information, during annual and periodic reviews. The Board would have the ability to adjust or discontinue the water supply adjustments during periodic review processes based on information regarding progress toward achieving biological goals and other relevant information.

Some commenters questioned the rationale for the three tributaries that received tributary-specific water supply adjustments or requested tributary-specific water supply adjustments for additional tributaries. As described above, the tributary-specific water supply adjustments were provided for three specific tributaries that have unique circumstances associated with primarily supplying municipalities and due to being rainfall-dominated. Modeling and other information indicates that for these three specific tributaries achieving new inflow requirements and providing cold water habitat protections could be significantly more complex and require more time due to the unique circumstances of those tributaries. As such, the inflow requirements of the regulatory pathway for those tributaries include additional water supply adjustments upon initial implementation to provide time to adjust water supply management actions on these tributaries. As part of the periodic review process, the State Water Board will evaluate the appropriateness of both the system-wide and tributary specific water supply adjustments to determine whether they should be modified or discontinued.

Commenters also questioned why these water supply adjustments appear to extend a preference to municipal uses and whether they follow water right priorities. People depend on municipal water supply for drinking and basic domestic uses. Water Code Section 106 establishes the policy of the State to prioritize municipal supply over agricultural water supply. The Board also has authorities under the public trust doctrine and article X, section 2 of the California Constitution to prevent the waste and unreasonable use of water. Such authority may be used alongside water right priorities to implement the Bay-Delta Plan. Further, the tributary specific water supply adjustments do not violate water right priorities because they do not change the obligations of or otherwise affect other water right holders outside of the three tributaries. Under existing conditions without new Bay-Delta Plan instream flow requirements, different tributaries already have different instream flow requirements due to Federal Energy Regulation Commission (FERC) licenses, agreements, BiOps, and other reasons.

Some commenters questioned the storage levels that trigger the tributary-specific water supply adjustments. Commenters expressed concern that water users would be able to reduce storage in order to trigger a reduced flow requirement or requested information on how these storage levels

were determined. These storage levels were developed through an iterative modeling process to identify storage levels that result in meeting carryover storage targets while reducing water supply costs. Because the storage conditions that trigger a reduced flow requirement also correspond to limited supplies for consumptive use, the Board does not expect water users to operate their reservoirs to trigger reduced instream flow requirements due to the tributary specific water supply adjustments. However, the Board will assess the effectiveness of the tributary specific water supply adjustments during the annual and periodic review processes and will consider whether any modifications to the water supply adjustments should be made or whether they should be discontinued.

Commenters argued that the water supply adjustments could result in abrupt shifts in the required percent of unimpaired flow. To address such possible concerns, provisions have been added to the implementation methodology to consider operational rules for reservoir management (e.g., ramping rates), including integration of adaptive implementation provisions to smooth changes in the flow requirements.

Commenters expressed concern that the water supply adjustments would allow flows to drop so low during dry years that native fish species would be negatively impacted and specifically that out-migrating salmon would experience high mortality. These commenters recommended adding year-round minimum flow requirements. The new instream flow requirements included in the Plan amendments are generally additive to other tributary specific instream flow requirements, including requirements included in FERC licenses, water right permits and licenses, BiOps, ITPs, streambed alteration agreements, and other requirements. Accordingly, the new inflow and outflow requirements would generally improve conditions for native fish species by increasing instream fisheries flow requirements. The adaptive implementation provisions could also be used to ensure that increases in flows are timed to further maximize benefits for native fish. The benefits and impacts of the 55 w/WSAs scenario were evaluated in Chapter 13, *Revised Proposed Plan Amendments*, of the Staff Report. See Common Response 1.2, *Water Quality Control Planning Process*, regarding the reasonable protection of fish and wildlife. In addition, the State Water Board would evaluate the effectiveness of the Plan, including water supply adjustments, during annual and periodic reviews and would have the ability to remove or modify the water supply adjustments based on that evaluation, or otherwise consider updates to the Bay-Delta Plan objectives and program of implementation.

Some commenters requested modifications to the water supply adjustments. These requests included the use of tributary-specific hydrological indicators instead of the four river index, applying a forecast to the four river index, changing the flow requirement in increments of 5 percent of unimpaired flow instead of the current use of increments of 10 percent of unimpaired flow, making minor modifications to the tributary-specific water supply adjustment for the Mokelumne River, and dedicating a block of water over a defined period for the tributary-specific water supply adjustments. The Plan amendments already allow for the required inflows to be managed as a total volume of water on a water year basis and released on an adaptive schedule. Since the requested minor modifications to the Mokelumne River water supply adjustment would not affect the resulting flow, they were incorporated into the Plan amendments. Proposals for other modifications to the water supply adjustments would require an analysis of their feasibility and effects on resulting flows, which were not provided by commenters. The water supply adjustments were carefully formulated to provide watershed-wide relaxations during the dryer two thirds of conditions and more frequent tributary-specific relaxations for specific tributaries that are rainfall-dominated and primarily supply municipalities. However, these, and other suggestions could be analyzed and

considered during periodic reviews. In addition, as discussed in Common Response 7.24, *Alternatives Analysis*, the Staff Report appropriately analyzed a range of reasonable alternatives.

Adaptive Implementation

Some commenters suggested that the adaptive implementation provisions were not described in adequate detail in the Staff Report or requested more information on the flow shaping adaptive implementation measures. The adaptive implementation provisions were described in Sections 5.4.2.4, *Implementation*, and 13.3.3.2, *Sacramento/Delta Tributary Inflows*, of the Staff Report in adequate detail for the purposes of the analysis, including the criteria for flow shaping and moving within the unimpaired flow range. Further details, including refined criteria, were provided in the proposed regulatory text of the December 2025 revised draft Bay-Delta Plan, which was released alongside the 2025 partially recirculated draft Staff Report Chapter 13, *Revised Proposed Plan Amendments*. The full range of impacts that could result from the adaptive implementation provisions was analyzed in the Staff Report and reflected in the impact conclusions. The flow shaping provisions would allow for flows that are provided for the numeric inflow requirement to be managed as a total volume of water on a water year basis and released on an adaptive schedule. This shaping must be for the benefit of native fish and wildlife. Because flows may be tailored to the needs of each tributary, every exact permutation of flow shaping is not known; however, for the purpose of the environmental analysis, it was assumed that each tributary provides its proportional share of the numeric inflow requirement so that the range of flow scenarios is sufficient to illustrate the potential changes that may result from the flow scenarios. The analyses also included flow scenarios for 45, 55, and 65 percent of unimpaired flow, as well as the 55 w/WSAs scenario, which would encompass the range of flows that could result from moving within the unimpaired flow range. Please see Common Response 7.1, *General CEQA and Approach to the Analysis*, for more information on the adequacy of the project description. Some commenters alleged that the Plan amendments cannot be adopted without monitoring criteria for adaptive implementation. The State Water Board will evaluate the needs for and requirements for any additional monitoring when it considers whether to approve or require adaptive implementation actions, including as part of local cooperative solutions. The BDMEP is also expected to provide the necessary monitoring for adaptive implementation. Biological goals would also be used to inform adaptive implementation. See the discussion below on the BDMEP and biological goals.

Commenters questioned whether flows provided pursuant to D-1641 or the BiOps could be shaped through these provisions. Other than minor changes to update consultation and decision-making processes, the Sacramento/Delta updates to the Bay-Delta Plan do not modify the existing provisions of the 2018 Bay-Delta Plan and do not add new flexibilities to those provisions nor do they modify the BiOps or add new flexibilities to those requirements or other requirements outside of the updates to the Bay-Delta Plan. All other existing requirements must continue to be met, including the specific flow objectives in D-1641 and any applicable requirements from other agencies such as those in BiOps. However, the adaptive implementation provisions may be used to integrate these requirements with requirements in other water right orders or water quality certifications to avoid impacts to aquatic species and increased water supply costs due to the interaction of those requirements.

Several commenters expressed confusion about the flow shaping provisions, and specifically the provision requiring that the total volume of water provided within a water year be no lower than the volume of water that would have resulted from meeting the applicable unimpaired flow percentage on a 7-day running average, including applicable water supply adjustments.

Commenters were also confused about the subsequent sentence specifying that flows that would have occurred absent flow shaping (releases for water diversions, flood control purposes, hydropower releases, or other uncontrolled flows in excess of the applicable unimpaired flow percentage) do not reduce overall required inflow levels. Commenters were concerned that any water released for hydropower, flood control, or other listed reasons would be ineligible for use in flow shaping. The provision referred to by the commenters would only preclude hydropower and flood flows from reducing the overall flow requirement but would not preclude them from using these flows for flow shaping.

For example, there could be a situation in which a reservoir was operating to 55 percent of unimpaired flow on a 7-day running average during a full water year. Hydropower was generated during this time period and multiple storm events occurred that necessitated flood control releases totaling 100 thousand acre-feet (TAF). The total volume of water bypassed or released by the reservoir in the water year, including the flood control releases, totaled 600 TAF. Because some of the uncontrolled flood releases resulted in exceeding the required 55 percent of unimpaired flow, this 600 TAF equated to 60 percent of unimpaired flow over the water year. If the tributary water users had proposed a local cooperative solution to use flow shaping, they would have been required to provide the full 600 TAF over the water year and would not be allowed to reduce that amount to 550 TAF (55 percent of unimpaired flow) by taking credit for the portion of the uncontrollable flood releases that would have exceeded the required percent of unimpaired flow if they had operated to 55 percent of unimpaired flow on a 7-day running average. However, to address commenters' concerns, these provisions were modified to allow these flows to reduce the required inflow levels if they were documented to have been provided for the purpose of protecting fish and wildlife and Delta outflow.

Commenters requested modifications to the adaptive implementation provisions, including allowing flow shaping to extend into the next water year. These proposals would require an analysis of their feasibility and effects on resulting flows, which were not provided by commenters. For example, flow shaping into the next water year could reduce flows in the current years to less than protective levels.

A number of commenters recommended a functional flows approach to ensure environmental flows have the greatest benefits for fish and wildlife. The adaptive implementation provisions would allow flows to be shaped for the benefit of fish and wildlife, which could be conducted with a functional flows approach. This flow shaping could be conducted at the direction of the State Water Board or through an approved local cooperative solution proposed by water users.

Cold Water Habitat

The narrative cold water habitat objective would apply on all of the Sacramento/Delta tributaries subject to the inflow objective described above and would be implemented through the requirements described below in this section under the regulatory pathway and the VA pathway, as well as other complementary actions described in the revised program of implementation.

Under the regulatory pathway, the cold water habitat objective would be implemented through requirements for management of cold water storage and releases and/or alternative protection measures to ensure that fish below dams are kept in good condition consistent with Fish and Game Code section 5937 and the narrative objective. The cold water habitat implementation actions described in this section would be integrated with the inflow implementation actions described

above, including the water supply adjustments and adaptive implementation actions. The cold water habitat requirements would apply to all water rights not listed in Appendix B.1 that affect temperature management. Reservoir owners/operators identified in the revised program of implementation would be required to undertake specific implementation actions.

The owners and operators of reservoirs identified in the revised proposed Plan amendments that are not part of the VA pathway would be required to develop long-term temperature management strategies identifying how rim reservoirs and associated facilities will be operated to meet the cold water habitat requirements, based on an assessment of the effectiveness of cold water habitat protection measures on their tributaries and needed improvements to those measures for the purpose of complying with the cold water habitat objective. The long-term temperature management strategies would be required to identify temperature targets and locations where those targets will be measured. The strategies would also be required to evaluate other available measures to improve temperature management, including passage, temperature control device (TCD) measures, riparian habitat improvements, and other measures that would be implemented to contribute to meeting the narrative cold water habitat objective and a timeline for implementing those measures. In addition to the strategies, annual temperature management plans would be required to be developed each year, in coordination with the State Water Board and fisheries agencies, identifying how temperature protection and related operations for the protection of salmonids and other native species would be achieved each year.

The long-term temperature management strategies would be required to identify proposed end-of-September reservoir carryover storage requirements. Owners and operators of rim reservoirs not covered by the VA pathway would be required to propose a carryover storage target within the range identified in the revised proposed Plan amendments for Executive Director approval. The established range is intended to provide for a cold water supply in the fall and into the subsequent water year, while also maintaining supplies for other beneficial uses and human health and safety. Reservoir operators may also propose an alternative carryover storage requirement outside of the range for consideration by the State Water Board, if they provide sufficient documentation and evidence that their proposed carryover storage requirement will provide adequate protection of cold water habitat, and other critical purposes, including human health and safety supplies. In the event that water right holders do not develop proposed carryover storage levels, the State Water Board would undertake a public process to develop those requirements. The annual temperature management plans would include, at a minimum, a description of how the end-of-September carryover storage levels, or alternate approved measures, would be implemented in combination with the inflow requirements.

The Executive Director of the State Water Board could require long-term temperature management strategies and annual temperature management plans on additional Sacramento/Delta tributaries or stream segments as part of the periodic review process based on information indicating that water diversion and use practices are causing elevated water temperatures that negatively affect the aquatic ecosystem. For more information about the regulatory pathway implementation of the cold water habitat objective, see Section 4.4.2.3 of the revised proposed Plan amendments.

Responses to Comments

Commenters, particularly on the 2023 draft Staff Report, contended that the Staff Report did not contain sufficient detail on implementation of the cold water habitat objective, that the cold water habitat objective must include specific performance criteria, or that the environmental impacts of

the cold water habitat objective were not evaluated. Staff Report Sections 5.4.3, *Cold Water Habitat*, and 13.3, *Revised Proposed Plan Amendments*, include a sufficiently detailed description of the cold water habitat objective and implementation to inform analyses and implementation measures. Section 5.4.3.4, *Implementation*, of the Staff Report includes details on the specific implementation measures for the cold water habitat objective, including the specific requirements of the long-term temperature management strategies and annual temperature management plans. These would include provisions for reservoir carryover storage levels; minimum and maximum flow releases and ramping rates to provide appropriate temperature protection, preserve cold water supplies, and avoid stranding and dewatering concerns; reservoir TCD installation, improvements, and operations; adaptive management; cold water bypasses; passage; riparian reforestation; operational changes; and other relevant provisions. The performance standards for the cold water habitat objective are included in the text of the narrative cold water habitat objective and would be further evaluated through biological goals. The proposed cold water habitat protection measures would be required to result in compliance with the cold water habitat objective.

Further detail was provided in the proposed regulatory text of the December 2025 revised draft Bay-Delta Plan, which was released alongside the 2025 partially recirculated draft Staff Report Chapter 13, *Revised Proposed Plan Amendments*. In addition, as described in Sections 6.2.2, *Unimpaired Flow Scenario Assumptions*, 6.3.2.1, *Sacramento River Watershed and Delta Eastside Tributaries Rim Reservoirs*, and A1.3, *Reservoir Carryover Storage Targets*, of the Staff Report, specific end-of-September carryover storage targets were modeled together with the inflow requirements. These carryover storage targets were updated for the 55 w/WSAs scenario as described in Appendix H1, *Sacramento Water Allocation Model Methods and Results for the Revised Proposed Plan Amendments*. Thus, impact analyses include the impacts of these carryover storage targets in combination with the inflow requirements. The carryover storage targets were implemented in the modeling by adjusting carryover storage targets and allocations with the goal that the resulting end-of-September storage levels in the scenarios were above the carryover target as frequently as or more frequently than the baseline scenario. In some reservoirs and in some scenarios, this goal was not possible to achieve. The impacts of other specific implementation measures were evaluated in Chapter 7, *Environmental Analysis*, of the Staff Report. For example, the impacts of many of these measures including fish passage improvements, TCDs, and riparian restoration were evaluated in Section 7.21, *Habitat Restoration and Other Ecosystem Projects*. Please see Common Response 7.1, *General CEQA and Approach to the Analysis*, for more information on the CEQA analysis. Although the 2023 draft Staff Report identified the cold water habitat objective as a mitigation measure, this has been revised in the final Staff Report to clarify that the cold water habitat objective is part of the proposed project and not a mitigation measure. For more information, see Common Response 7.6.2, *Aquatic Biological Resources and Cold Water Habitat*.

Some commenters suggested that because the flow scenarios are expected to have some temperature impacts, they would not meet the proposed cold water habitat objective. Ultimately, implementation of the cold water habitat objective is expected to minimize potential temperature-related impacts on aquatic biological resources and generally improve temperature conditions in the Sacramento/Delta watershed. For more information on the modeling and implementation of the cold water habitat objective, see Common Response 7.6.2, *Aquatic Biological Resources and Cold Water Habitat*.

Several commenters requested specific reservoirs be removed from the list of reservoirs subject to initial cold water habitat implementation actions. For example, commenters requested that Indian Valley Reservoir be removed since they allege the requirements would have no benefit for cold

water habitat. The reservoirs subject to initial cold water habitat implementation actions include all rim reservoirs with some potential to release water that can support native cold water fisheries. The cold water habitat provisions have significant flexibility including the ability of reservoir owners and operators to propose a long-term temperature management plan and, for applicable reservoirs (which initially does not include Indian Valley Reservoir), carryover storage requirements. This flexibility would allow for implementation to be tailored to the needs of each tributary, while maintaining State Water Board oversight to ensure the cold water habitat requirements are met. If a reservoir owner or operator believes they have no ability to improve or protect cold water for native species, they would be able to submit such documentation as a component of their long-term temperature management strategy. In addition, the specific list of reservoirs could be reviewed and considered for modification during periodic reviews.

Similarly, some commenters requested that implementation of the cold water habitat under the regulatory pathway be revised to allow reservoir owners and operators to document how existing temperature management practices address temperature conditions. Reservoir owners and operators would have the ability to include existing practices in their proposed long-term temperature management strategies. No revisions are necessary to provide for this. Please see Common Response 7.6.2, *Aquatic Biological Resources and Cold Water Habitat*, for information on integration with existing temperature-related requirements.

A commenter argued that the cold water habitat provisions do not provide the necessary flexibility to directly manage the cold water pool (e.g., maintain a minimum hypolimnetic volume) instead of minimum carryover storage targets. Proposed long-term temperature management strategies can include any actions the reservoir owner/operator believes would assist in meeting the cold water habitat requirements, which could include any proposed measures for directly managing the cold water pool. However, it is not possible to control the hypolimnetic volume without also controlling storage. The carryover storage requirements are intended to provide for a cold water supply in the fall and into the subsequent water year while also maintaining supplies for other critical uses, including human health and safety. In addition, the carryover storage requirement includes significant flexibility, allowing the reservoir owner and operator to propose to the Board the specific carryover storage level to which they propose to operate.

Some commenters requested additional information on the integration of the inflow and cold water habitat requirements and whether one objective would be prioritized over another if conflicts occur. Because inflows and cold water habitat protection are intricately linked, the cold water habitat implementation actions are proposed to be integrated with the inflow implementation actions through the adaptive implementation provisions and flexibilities. Specific implementation measures would depend on the circumstances in individual tributaries, including structural, operational, and hydrological characteristics. Cold water management actions could include a variety of different measures depending on these circumstances, including management of reservoir storages and releases and associated TCDs, efforts to establish cold water refugia like riparian revegetation, passage above reservoirs or other impediments to allow access to cold water refugia, and other measures. The significant flexibility included in the inflow and cold water habitat requirements would allow for the objectives to be implemented together to avoid conflicts. See Common Response 7.6.2, *Aquatic Biological Resources and Cold Water Habitat*, for additional information on implementation of the cold water habitat objective.

Some commenters objected to the change in the 2025 revised draft Bay-Delta Plan to allow reservoir owners and operators to propose a carryover storage requirement within, or outside, a defined

range instead of defining a default carryover storage requirement to which each reservoir is required to operate. They also contend that the ranges included in the revised proposed Plan amendments are too low. The basis for the carryover storage ranges is described in Staff Report Appendix H1a1, *Assessment of Effect of Reservoir Storage on Reservoir Release Temperatures*. While reservoir owners and operators have the ability to propose carryover storage requirements, they are subject to Board approval. In addition, the Board would have the ability to require an adjustment to the carryover storage requirement based on best available scientific and technical information. Furthermore, the cold water habitat objective could be implemented in part through non-flow measures and the revised proposed Plan amendments acknowledge that additional actions would likely be needed to protect cold water habitat at the low end of carryover storage ranges. See Common Response 7.6.2, *Aquatic Biological Resources and Cold Water Habitat*, for more information on implementation of the cold water habitat objective.

Local Cooperative Solutions

In Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, two implementation pathways are described: "default implementation" and "voluntary implementation plans." The revised proposed Plan amendments revise the terminology from "voluntary implementation plans" to "local cooperative solutions." This helps distinguish them from the proposed "voluntary agreement pathway" (or VA pathway described below).

Water right holders could propose local cooperative solutions to comply with the applicable Sacramento/Delta inflow and cold water habitat requirements. Local cooperative solutions could utilize the adaptive implementation provisions, including shaping of flows and operating lower in the required inflow range by implementing those flows in combination with other complementary ecosystem protection measures and cold water habitat protection measures, including habitat restoration, passage, improvements in cold water management structures, or other measures that provide comparable benefits as would be expected absent the local cooperative solution.

Water right holders may propose local cooperative solutions for individual tributaries, two or more tributaries, or for regions, including the Delta. If a local cooperative solution is developed for two or more tributaries, the tributaries could work together to meet the combined numeric inflow requirements provided that the narrative inflow and cold water habitat objectives are met on each individual tributary. Specific quantitative accounting, including modeling and monitoring data as appropriate, would be required to show that the combined inflows are at least equal to what would have been provided by individual tributary implementation.

Prior to submittal of any proposed local cooperative solution to the State Water Board, the proponents would be required to consult with California Department of Fish and Wildlife (CDFW), appropriate California Native American Tribes, the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), and other appropriate entities. The State Water Board would provide for a minimum 30-day public comment period for local cooperative solutions under consideration. Upon discontinuation of the WSAs, local cooperative solutions that achieve at least 55 percent of unimpaired flow on a water year basis could be approved by the Executive Director. Upon discontinuation of WSAs, local cooperative solutions that achieve at least 45 but less than 55 percent of unimpaired flow on a water year basis would require approval by the State Water Board. If WSAs are applicable, local cooperative solutions that propose changes to the WSAs would be required to achieve flows that are no lower than the water year volume that would be provided by the WSAs, and these local cooperative solutions would require approval by the State Water Board through a

public process. In evaluating any local cooperative solution, the State Water Board would make an independent finding that the local cooperative solution is enforceable and is expected to provide comparable protection than default implementation for achieving the water quality objectives. For more information about local cooperative solutions see Section 4.4.2.4 of the revised proposed Plan amendments.

Responses to Comments

Some commenters stated that voluntary implementation plans could not be included both as part of the project description and as a mitigation measure. Voluntary implementation plans (now called local cooperative solutions) have been removed from the list of mitigation measures but are still provided for as a component of the revised proposed Plan amendments.

Commenters stated that the local cooperative solutions were not adequately described in the Staff Report and were thus not adequately analyzed. The Staff Report includes a detailed description of local cooperative solutions throughout Section 5.4, *Proposed New and Modified Objectives and Implementation* (in which they are referred to as voluntary implementation plans) and in Section 13.3.3.4, *Local Cooperative Solutions*. Further detail was provided in the proposed regulatory text of the December 2025 revised draft Bay-Delta Plan, which was released alongside the 2025 partially recirculated draft Staff Report Chapter 13, *Revised Proposed Plan Amendments*. The Staff Report fully analyzes the range of flow, habitat, and other actions that could be taken under local cooperative solutions. For example, the impacts of many of these actions including habitat restoration and fish passage improvements were evaluated in Section 7.21, *Habitat Restoration and Other Ecosystem Projects*, and possible flow shifting proposals were included in the range of modeling results. Because flows may be tailored to the needs of each tributary, every exact permutation of flow is not known; however, for the purpose of the environmental analysis, it was assumed that each tributary provides its share of the numeric inflow requirement so that the range of flow scenarios is sufficient to illustrate the potential changes that may result from the revised proposed Plan amendments.

Some commenters contended that local cooperative solutions would be challenging and result in uncertainty for water users. Local cooperative solutions provide the mechanism to utilize Plan flexibility in the form of adaptive implementation and are provided in part to reduce water supply impacts if tailored solutions are available that provide comparable protection for achieving the water quality objectives. The State Water Board provides these flexibilities with the intent that water diverters and reservoir owners/operators utilize these provisions because they often have a good understanding of the unique circumstances on a specific tributary. The State Water Board would have the authority to utilize the same flexibilities if water users are not engaged in proposing and implementing adaptive implementation and sensible adjustments can and should be made. This authority is also provided to make clear that the State Water Board may require adjustments when approving adaptive implementation proposals that are generally good but need revisions to ensure fish protection.

Another commenter asserted that the Board did not have the authority to require consultation with, or among, federal and state agencies or parties before submitting a proposed local cooperative solution. Water users are not required to develop local cooperative solutions. However, if they elect to submit this type of voluntary proposal, consultation with various agencies and entities is a prerequisite. This is within the State Water Board's authority and is similar to consultation requirements established in D-1641 and other water right orders and decisions.

Commenters expressed confusion about the requirements and decision-making processes for local cooperative solutions. To address these comments, the process for approving local cooperative solutions was revised to more explicitly detail which proposals could be approved by the Executive Director and which require State Water Board approval, and how they would interact with the water supply adjustments.

Delta Outflow

The proposed Delta outflow objectives, working with the inflow objective, are intended to provide a comprehensive integrated flow regime that protects fish and wildlife from natal streams out to the ocean. The narrative outflow objective would apply throughout the watershed and would be implemented through compliance with the existing Delta outflow objectives and implementation actions described above to meet the proposed narrative inflow and cold water habitat objectives, and implementation of the proposed inflow-based outflow objective described in this section.

The inflow-based Delta outflow objective would be implemented by requiring that required inflows be provided as outflows, including required inflows from the Sacramento/Delta tributaries including equivalent accretions from the Sacramento River Valley Floor and Delta and required inflows from the San Joaquin River and its tributaries. The required Delta outflow would be calculated by adding up the applicable required inflows from the Sacramento/Delta tributaries, including an equivalent amount of Sacramento River Valley Floor and Delta accretions, and required lower San Joaquin River flows making appropriate adjustments for natural losses. These flows are in addition to any approved HRL flow contributions to Delta outflows described below in the *Voluntary Agreement Pathway* section. Water users downstream of the tributaries, except for de minimis water users, also would bear responsibility for achieving the inflow-based Delta outflow objective through limits on their diversions, including Project diversions and other in-Delta diversions. Implementation would be met in order of water right priority, unless exceptions apply, using the implementation methodology as described in the *Implementation Methodology* section below.

The State Water Board could consider possible exemptions to meeting the inflow-based Delta outflow requirements for water rights in which the diversion and use of water is limited to irrigation of lands below sea level in the Legal Delta. Initial monitoring of water use suggests that the net consumptive use of irrigated agriculture on subsided islands below sea level in the Delta may be equivalent to the amount of water that would be used by the vegetation that would grow absent irrigation and land management. However, because of the limited data set available for analysis, there is uncertainty in this conclusion. Therefore, the State Water Board, in coordination with other appropriate agencies and entities, would conduct additional analyses regarding water use on irrigated lands below sea level in the Delta and undertake a public process to evaluate the effectiveness of curtailments of agricultural diversions below sea level. Based on those analyses, the State Water Board could consider exemptions during implementation or periodic reviews to the inflow-based Delta outflow requirements for water rights for which diversions and use are limited to irrigation of lands below sea level in the Legal Delta. Any water rights in the Delta that are not subject to an exemption would be subject to applicable curtailments pursuant to the implementation methodology for the Bay-Delta Plan, including to achieve the inflow-based Delta outflow objective. For more information about the implementation of the Delta outflow objectives, see Sections 4.4.2.5 through 4.4.2.7 of the revised proposed Plan amendments.

Responses to Comments

Several commenters argued that the inflow-based Delta outflow objective would modify the lower San Joaquin River flow objectives that were adopted in the 2018 Bay-Delta Plan or otherwise place new requirements on the lower San Joaquin River. For example, commenters argued that since the inflow-based Delta outflow objective is year-round, it would modify the lower San Joaquin River flow objectives to require year-round flows instead of February through June flows or that it would modify the Vernalis base flow objective. The revised proposed Plan amendments do not modify any flow objectives promulgated for the lower San Joaquin River or its tributaries in the 2018 LSJR/SD Bay-Delta Update. The inflow-based Delta outflow objective simply requires that any required inflows (from the Sacramento/Delta and Lower San Joaquin River) be provided as outflows. Implementation of the applicable inflow requirements would determine the required outflows from the inflow-based Delta outflow objective. If no inflows are required outside the February-June time period, then no additional flows would be required for Delta outflow. See Common Response 1.2, *Water Quality Control Planning Process*, for a discussion of the relationship to the 2018 LSJR/SD Update to the Bay-Delta Plan.

Some commenters questioned the basis for the possible exemption to meeting the inflow-based Delta outflow requirements for water rights in which the diversion and use of water is limited to irrigation of lands below sea level in the Legal Delta, or requested removal of this provision. Other commenters supported the evaluation of the possible exemption but requested it be broadened to include all land within the Delta tidal zone with a high water table. The revised proposed Plan amendments were updated to indicate that the Board will conduct a subsequent analysis and public process before the State Water Board considers any such exemptions. This subsequent process will include an opportunity for comments on the technical basis or merits of the possible exemption.

Commenters were confused about whether in-Delta water users would have implementation responsibility for contributing to the inflow-based Delta outflow requirements. The revised proposed Plan amendments were updated to clarify that "Any water rights in the Delta that are not subject to an exemption will be subject to applicable curtailments pursuant to the implementation methodology described in section 4.4.3, including to achieve the inflow-based Delta outflow objective."

DWR and Reclamation have relocated the locations of two compliance stations from D-1641 (Chipps Island and Port Chicago). They are currently using conversion equations to calculate compliance values based on the new locations. However, the use of these conversion equations has not yet been approved by the State Water Board. The provision for reviewing the Net Delta Outflow Index (NDOI) equation has been revised to provide for a process to develop and evaluate appropriate conversion equations for gage relocations.

Port Chicago X2 Analysis

A commenter stated that it was unclear whether the existing Port Chicago Delta outflow requirements included in Table 4 in the existing Bay-Delta Plan and D-1641 (referred to as X2 by the commenter and below) would be triggered by additional flows provided to meet the inflow and inflow-based Delta outflow requirements. Under the regulatory pathway, the Port Chicago X2 requirement would continue to be triggered based on observed water quality conditions, which may result in more frequent triggering as a result of flows that meet the inflow-based Delta outflow requirement. However, SacWAM results indicate that this would rarely result in an increased flow requirement relative to the inflow-based Delta outflow requirement itself.

Staff evaluated the conditions under which the Port Chicago salinity requirement would be newly triggered as a result of meeting the inflow-based Delta outflow objective, and whether the existing X2 requirement would be controlling under those conditions. Results indicate that newly triggered events during the February–June period are infrequent across scenarios, occurring in 26, 39, 20, and 57 months under the 45, 55, 55 w/WSAs, and 65 scenarios, respectively, out of a total of 495 applicable months in the modeling period. Instances in which the X2 requirement is controlling during these events are exceedingly rare, occurring in only 1, 1, 0, and 3 months, respectively (Table CR 1.3-1). This pattern is consistent across analyses and demonstrates that implementation of the inflow-based Delta outflow objective does not meaningfully increase the frequency of conditions in which the X2 requirement controls during newly triggered Port Chicago events.

Table CR 1.3-1. Frequency of Newly Triggered Port Chicago Salinity Events and Instances Where the X2 Requirement Is Controlling (February–June) for the 45, 55, 55 w/WSAs and 65 scenarios

	45	55	55 w/ WSAs	65
Number of Months with Newly Triggered Port Chicago Salinity Requirement	26 (5.3%)	39 (7.9%)	20 (4.0%)	57 (11.5%)
Number of Months with Newly Triggered Port Chicago Requirement Where X2 Requirement Is Controlling	1 (0.2%)	1 (0.2%)	0 (0%)	3 (0.6%)

Percentages in parentheses denote the percent of February through June months in the SacWAM analysis period.

Voluntary Agreement Pathway

The VA pathway is an alternate implementation pathway for meeting the proposed objectives for Sacramento/Delta inflow and cold water habitat, inflow-based Delta outflow, and native fish viability and the existing objective for salmon protection (see above) for the HRL water rights identified in Appendix B.1. The VA pathway would allow the HRL participants to meet the flow, habitat, and other required HRL commitments as described further below and in the revised proposed Plan amendments in lieu of meeting the regulatory pathway provisions for a period of 8 years with the possibility of extension. Implementation of the VA pathway for HRL water rights would commence no later than October 1, 2027. Modifications to this schedule of up to three months could be approved by the Executive Director for good cause shown. The revised proposed Plan amendments incorporate HRL flow and habitat commitments and were informed by the various documents produced by HRL participants. However, none of these documents is incorporated into the revised draft Bay-Delta Plan due to the inclusion of other information in HRL documents not relevant or appropriate for inclusion in the plan. The HRL participants also developed draft enforcement agreement proposals. While the possibility that HRL water rights would be required to move to the regulatory pathway if the HRL commitments are not met is, in and of itself, an enforcement mechanism, Section 4.4.9, *Implementation of Healthy Rivers and Landscapes Commitments Under the Voluntary Agreement (VA) Pathway*, of the revised proposed Plan amendments states that the State Water Board may also issue Government Code section 11415.60 decisions to enforce HRL commitments in accordance with the provisions contained in the Bay-Delta Plan. However, if it is determined that any Government Code section 11415.60 decision is needed, streamlined agreements would be developed that are acceptable to the State Water Board that focus on actions needed to ensure enforcement of the HRL commitments as described in the Bay-Delta Plan and remove other provisions not directly related to enforcement of those provisions.

The VA pathway described in the revised proposed Plan amendments is largely the same as the proposed VAs described in Chapter 9, *Proposed Voluntary Agreements*, with some modifications, including updates to the water quality objectives the VA pathway would implement; the addition of new HRL commitments on the Bear River, Yuba River, Auburn Ravine, and Putah Creek; provisions for protection of the VA pathway base flows; flow and habitat accounting; changes to the description of HRL flow and habitat commitments based on accounting provisions; and incorporation of provisions for VA pathway supplemental science and monitoring, reporting, and governance.

The VA pathway includes differing amounts of flow commitments, depending on water year type, and non-flow habitat restoration actions targeted at improving spawning and rearing capacity for juvenile salmonids, estuarine species, and other native fish and wildlife, on a portion of the Sacramento/Delta tributaries. The VA pathway includes governance and supplemental science and monitoring to direct flows and habitat restoration, conduct assessments, and develop strategic plans and annual reports. Since release of the 2023 draft Staff Report, the HRL participants provided new and updated documents that have informed development of the VA pathway, including term sheets for three additional HRL proposals on the Bear River, Auburn Ravine, Yuba River, and Putah Creek, which are described below.

The current flow and non-flow commitments are identified in Table CR 1.3-2. The VA pathway includes flow commitments on portions of the Sacramento River, Feather River, Bear River, Auburn Ravine, Yuba River, American River, Putah Creek, Mokelumne River, commitments for Delta outflows from Friant area contractors, commitments through foregone exports in the Delta, and water purchases. The VA pathway also includes non-flow commitments, including habitat restoration for spawning, instream rearing, and floodplain habitat.

Table CR 1.3-2. VA Flow and Non-Flow Commitments

	Additive Delta Inflows And Outflows (TAF) Above Base Conditions By Water Year Type					Restoration (Acres)		
Location	C	D	BN	AN	W	Spawning	Instream Rearing	Floodplain
Sacramento		100	100	100		113.5	137.5	20,000
American[1]	30	40	10	10		25	75	
Yuba[1]		50	50	50			50	100
Feather		60	60	60		15	5.25	1,655
Auburn Ravine (NID) C1 [1,2]		0-3.6	0-3.6	0-3.6				
Bear (NID) C2 [2]		5.6	5.6	5.6				
Yuba (NID) C3 [2]		5.6	5.6	5.6				
Bear (SSWD) C1 [3]		0-4.4	0-4.4	0-4.4				
Bear (SSWD) C2 [3]		0-4.4	0-4.4	0-4.4				
Putah[1]	7	6	6	6		1.4		
Putah (YCFCWCD)[1]		5	5	5				
Mokelumne[1]		5	5	7			1	25
Delta forgone exports		125	125	175				5,227.5[4]
Friant (by San Joaquin River Restoration Program Water Year Type)[1]		50	50	50				
PWA Fixed Price Purchases	3	63.5	84.5	99.5	27			
PWA Market Price Purchases		50	61	85				
Permanent State Water Purchases	65	108	9	52	123			

Blank cells indicate no proposed commitments in that category. Water year types are based on Sacramento Valley Index unless otherwise noted. C = Critical, D = Dry, BN = Below Normal, AN = Above Normal, W = Wet, NID = Nevada Irrigation District, SSWD = South Sutter Water District, TAF = thousand acre-feet, YCFCWCD = Yolo County Flood Control and Water Conservation District, PWA = public water agency, C1 = component 1, C2 = component 2, C3 = component 3.

[1] These flow volumes are provided either partially or fully through reservoir reoperations, through redirected water from another tributary, or in the case of Friant through limitations on future abilities to recapture flows and are up to amounts that are not expected to match these volumes in all years. Some or all of these flow commitments may not be accounted for as contributing to additive Delta outflows above base conditions as specified below and in Appendix B.1. Appendix B.1 includes more information about the specific commitments.

[2] Upon issuance of a new FERC license for the Yuba-Bear Hydroelectric Project, components 1 and 2 water will cease and component 3 will begin.

[3] Upon issuance of a new FERC license for Camp Far West Powerhouse, component 1 will cease and component 2 will begin. Additional Bear River inflow may be provided in any water year type for component 2, but any additional flows over the 4.4 TAF in dry, below normal, and above normal years will not be additive Delta outflow.

[4] Includes tidal wetland habitat.

The HRL water rights identified in Appendix B.1 of the revised proposed Plan amendments would contribute to meeting the water quality objectives described in the section above, *Water Quality Objectives for Fish and Wildlife Uses*, through the HRL flow and non-flow commitments described

below. Water rights that are not part of the VA pathway would be subject to the Sacramento/Delta inflow and cold water habitat provisions and inflow-based Delta outflow provisions described above in the *Regulatory Pathway* section, unless an exception applies. Water rights identified in Appendix B.1 may also be subject to these provisions upon discontinuation or termination of the VA pathway for some or all rights. Minor modifications to the water rights listed in Appendix B.1, including inclusion of existing water rights less than or equal to 100 acre-feet on a specific HRL water right list, could be approved by the Executive Director after a minimum 45-day public comment period if they fall within the scope of the analyses supporting inclusion of the VA pathway for HRL water rights in the revised proposed Plan amendments. Substantive modifications, including inclusion of water rights larger than 100 acre-feet that were not previously identified, inclusion of new water supply projects, or inclusion of water rights on new tributaries, to the water right list in Appendix B.1 could be considered for approval by the Board as part of the annual or periodic review process, along with any necessary supporting environmental and scientific documentation, including an analysis of the effect on the base conditions for the VA pathway, and any other documentation determined to be needed by the Executive Director. Any proposals to add new HRL water rights or new water supply projects pursuant to the processes described above would be required to coordinate with the existing HRL participants in advance of submittal. The HRL participants could also request removal of HRL water rights from Appendix B.1, which could be approved by the Executive Director after a minimum 45-day public comment period. Upon removal of any HRL water rights, the regulatory pathway would apply to those water rights. For more information regarding the implementation of the VA pathway, see Section 4.4.9 of the revised proposed Plan amendments.

Responses to Comments

Some commenters raised concerns about the omission of specific program of implementation text for the VAs from the 2023 draft Staff Report. Commenters also contended that the Board's inclusion of the proposed VAs resulted in a failure to have a complete or stable project description. The operable provisions of the VA proposal that would be contained in the program of implementation were described in sufficient detail for the purposes of the analysis in Chapter 9, *Proposed Voluntary Agreements*, of the 2023 draft Staff Report and in Section 13.3, *Revised Proposed Plan Amendments*, of the 2025 partially recirculated draft Staff Report. The Staff Report sufficiently described the main features of the proposed VAs, including the flow and habitat commitments and the time schedule for implementation of these commitments. In addition, the revised proposed Plan amendments that includes the VA pathway program of implementation was released with Chapter 13, *Revised Proposed Plan Amendments*, when it was released for a limited recirculation. Section 9.3, *Description of the Proposed Voluntary Agreements*, described the flow and habitat commitments, and those commitments were analyzed in Sections 9.5, *Changes in Hydrology and Water Supply*, through 9.8, *Economic Analysis and Other Considerations*. See Common Response 7.1, *General CEQA and Approach to the Analysis*, for more information on the project description.

Some commenters identified perceived differences between the HRL proposal as described in the MOU and other HRL documents with the regulatory language of the revised proposed Plan amendments or its description in the Staff Report. The HRL participants further clarified and refined the details in the MOU through the submittal of new and updated documents subsequent to the MOU. In some cases, those subsequent HRL documents appeared to change the proposal from the terms outlined in the MOU, such as through the introduction of caveats and contingencies, over which several commenters raised concerns. Commenters also expressed concern about the lack of

complete and final VA documents. Other commenters requested the State Water Board adopt the HRL documents as proposed by the HRL participants.

The State Water Board is not a signatory to the HRL proposal and is not bound by its terms or the terms of the MOU or other HRL documents. The State Water Board has independent statutory obligations under the Water Code that it must adhere to in updating the Bay-Delta Plan. As explained above, the VA pathway would allow the HRL participants to meet the flow, habitat, and other required HRL commitments as described further below and in the revised proposed Plan amendments in lieu of meeting the regulatory pathway requirements for a period of 8 years with the possibility of extension. The revised proposed Plan amendments incorporate HRL flow and habitat commitments and were informed by the various documents produced by HRL participants. However, none of these documents is incorporated into the revised proposed Plan amendments due to the inclusion of other information in HRL documents not relevant or appropriate for inclusion in the Plan. The program of implementation describes the required implementation actions to achieve the new water quality objectives in this Plan. The revised proposed Plan amendments include the operable provisions of the VA pathway, which were also described in the Staff Report. Documents produced by VA parties such as the VA MOU, the VA Strategic Plan, or draft Implementing and Enforcement agreements do not represent the VA pathway in the Bay-Delta Plan. While the HRL documents were considered to inform the Board's development of the VA pathway and may inform the HRL participants' implementation of their commitments, where conflicts exist, the language in the revised proposed Plan amendments is controlling. Thus, HRL documents may not introduce any caveats or contingencies that are not already provided for in the revised proposed Plan amendments.

Some commenters objected to the VA pathway bearing responsibility for implementing the new narrative objectives. This approach provides for a consistent framework for the updates to the Bay-Delta Plan since it provides for the water rights on the regulatory or VA pathways to be responsible for implementing the same set of objectives. Implementation requirements are those specified in the VA pathway.

Commenters contended that the VA pathway would not reasonably protect fish and wildlife beneficial uses or would be inconsistent with the 2017 Scientific Basis Report, for example because they argued that the habitat restoration commitments could not mitigate for the reduced flows that would be provided under the VA pathway. The State Water Board has consistently encouraged voluntary actions that are consistent with provisions included in the updated Bay-Delta Plan for their potential to provide large-scale benefits that will amplify the ecological benefit of new and existing flows beyond what may be provided through flow and water project operations alone. Successful voluntary measures to implement the Bay-Delta Plan could provide comprehensive, enduring, and timely benefits to the ecosystem. See Common Response 1.2, *Water Quality Control Planning Process*, for information on the reasonable protection of fish and wildlife and Common Response 3.1, *Fish Protection*, for information about the benefits of habitat restoration. Some commenters expressed concern about the effects of new water supply projects, including new water right applications and change petitions, on the flows and benefits that would result from the VA pathway. See Staff Report Section 13.5.5, *Range of Possible Benefits*, for a discussion of benefits in the context of new water supply projects, and see the section below, *Interaction with Other Projects and Regulatory Processes*, for a response to these comments.

Some commenters requested a delay to the start date for the VA pathway. In response to these comments, the start date has been adjusted to October 1, 2027. In addition, the time period for which the start date may be delayed has been reduced to three months.

A commenter requested revisions to clarify the applicability of regulatory pathway provisions to non-HRL water rights. In response to this comment, text throughout the Plan amendments was edited to increase clarity about how the regulatory pathway requirements would apply to water rights not included in Appendix B.1.

Some California Native American Tribes, environmental justice organizations, environmental non-governmental organizations, and other commenters expressed concerns about the VA pathway and particularly the process through which the HRL participants developed their proposed HRL commitments. These concerns with the VA development process are addressed in Common Response 1.1, *General Comments*.

New HRL Proposals and Water Rights

Some commenters expressed concern about the structure of the VA pathway providing coverage to specific water rights instead of covered parties or requested that the VA pathway be the default for all water rights in the watershed. The HRL participants identified the water rights they intend to be covered under the VA pathway. The list of water rights included in Appendix B.1 reflects that proposal with minor edits including removal of rights outside the watershed or that are inactive. To provide clarity on HRL water right responsibilities, text was added to explain that inclusion in the VA pathway for HRL water rights is contingent on the HRL commitment being met for that source. Some water users with contracted water supplies expressed confusion about whether their water supply would be covered under the VA pathway or the regulatory pathway. If the underlying water right used to supply the contracted water are HRL water rights listed in Appendix B.1, then the contracted supplies would also be covered by the VA pathway.

Several commenters expressed concern that they were not invited to join the HRL proposal or expressed interest in joining the HRL proposal. After Plan adoption, water right holders may propose local cooperative solutions to provide complementary ecosystem protection measures such as habitat restoration, passage, improvements in cold water management structures, or other measures to provide comparable reasonable protection for fish and wildlife at lower water supply costs. Local cooperative solutions, however, would need to fit within the unimpaired flow range and comply with the regulatory pathway provisions. The full list of requirements for Local Cooperative Solutions is described above and in Section 4.4.2.4 of the revised proposed Plan amendments. If water right holders are interested in proposing voluntary measures that would not fit within the requirements for a local cooperative solution, they could propose HRL commitments for inclusion in the HRL pathway after Plan adoption.

Some commenters requested revisions to allow for the submission of additional HRL water rights after Plan adoption. The revised proposed Plan amendments already include processes for adding new HRL water rights so additional revisions are not necessary to allow for this. The list of HRL water rights in Appendix B.1 may be modified after Plan adoption following the public process and procedures described in the revised proposed Plan amendments (Section 4.4.9), including any additional supporting environmental and scientific documentation. Commenters also requested modifying these processes so that the Executive Director would have the ability to approve larger water rights, instead of those additions being subject to Board approval. Other comments objected to the different treatment of water rights larger and smaller than 100 acre-feet and requested that

Board approval and HRL participant coordination be required to add any new water rights. The delineation between water rights larger and smaller than 100 acre-feet is necessary to ensure greater oversight for decisions of greater consequence. Water rights larger than 100 acre-feet, such as the 1,000 acre-feet value suggested by one commenter, have the potential to significantly affect flows in some tributaries and thus the addition of these water rights should be subject to Board consideration of approval consistent with the approval of other HRL proposals. Delegation of the authority to add water rights smaller than 100 acre-feet to the Executive Director is intended to increase efficiency of processing these requests. Some HRL participants expressed concerns about redirected impacts from other more recently added HRL proposals. The State Water Board expects HRL participants to coordinate internally and resolve any issues between any current HRL water right holders and associated HRL participant. To avoid future possible issues and to address comments requesting that the Plan specify the involvement of HRL participants in new HRL proposals, new provisions were added requiring coordination with the existing HRL participants in advance of submitting any proposals for new HRL water rights or new water supply projects. In addition, a provision was added to give the HRL participants the ability to request the Board remove HRL water rights from the VA pathway.

Some commenters submitted lists of new water rights that were requested to be added to the list of water rights covered by the VA pathway in Appendix B.1. Based on these requests, a total of 173 additional HRL water rights were added to the water right lists for the Feather, Yuba, Sacramento, and Bear Rivers.

Protection of Base Flows and Long-Term Operations (LTO) Balancing Provision

The HRL flows are intended to be additive to required flows under D-1641 and resulting flows under the 2024 BiOps/Record of Decision (ROD), including flows required under the regulatory pathway and from the 2018 Update to the Bay-Delta Plan, and non-regulatory flows that were analyzed as part of the Scientific Basis Report Supplement and Staff Report. The conditions to which HRL flows are added is referred to as the base (or reference conditions in Appendix B.1 to the Plan). While the implementation methodology will provide for the protection of the specific HRL flows that are provided that contribute to Delta outflows consistent with water right priorities and flows provided under the regulatory pathway, it will not provide for protecting other flows in the system that are not provided under the regulatory pathway, not provided under a water rights that is dedicated to meeting the HRL flow commitments, or not an approved instream flow dedication pursuant to Water Code section 1707. Because the base includes substantial flows that are outside of those that would be protected by the implementation methodology, additional mechanisms are needed to protect from diversion the base upon which the HRL flows are intended to be additive. As described in the Staff Report, in all but drier conditions D-1641 Delta outflow requirements are significantly less than current Delta outflow conditions. Further, the 2024 BiOps/ROD do not include Delta outflow requirements, with the exception of some fall Delta outflows, which have not been implemented recently. In addition, D-1641 Delta outflow and the BiOp/ROD requirements do not apply to other water users outside of the SWP and CVP. Accordingly, it is possible that the HRL flow base would be reduced over time affecting the expected benefits of the HRLs without provisions to avoid those effects.

Modular Alternative 6a, Protection of Voluntary Agreement Flows, was developed to potentially address this issue. Staff Report Section 7.2, *Description of Alternatives*, includes a description of Modular Alternative 6a. While Alternative 6a was not carried forward specifically, to fulfill the intent of Modular Alternative 6a, a provision is included in the revised proposed Plan amendments for

protection of the VA Pathway flow base applicable to new water supply projects. To help ensure that water quality conditions, including existing flows, together with other measures in the watershed, continue to support and maintain natural production of viable native fish populations, in future water right actions the revised proposed Plan amendments state that the State Water Board would consider imposing requirements, based on the record established during the administrative proceeding, including any hearing, to ensure that the use of water is consistent with and supports the salmon protection, fish viability, inflow, inflow-based Delta outflow, and interior Delta flow objectives. Increased diversions from new water supply projects that are subject to the regulatory pathway inflow and inflow-based Delta outflow requirements would not be included in determination of the base flows to which the HRL flow commitments are required to be additive.

The revised proposed Plan amendments also include a new LTO base flow balancing provision to require there be a commensurate increase in HRL flow commitments to replenish substantial reductions in Delta outflow from base conditions to which HRL flows were assumed to be additive in the scientific and environmental analyses supporting approval of the VA pathway due to substantive changes in water project operations or other operational changes. The affected HRL participants would submit an interim plan for Executive Director approval that documents the change in Delta outflow and the commensurate increase in Delta outflow that would be provided. If the timing or magnitude of the commensurate increase in Delta outflow differs from what would have been provided absent the change, the affected HRL participant is required to submit scientific and technical information demonstrating that the proposed outflows along with other measures are anticipated to provide ecological benefits comparable to what would have occurred absent the change in operations.

For more information on the protection of base flows provisions, see Section 4.4.9.1 of the revised proposed Plan amendments.

Responses to Comments

Some commenters requested that the VA pathway allow for the base flows to change as LTO implementation is updated and requested removal or substantial modification of provisions in Appendix B.1 of the Plan amendments that would trigger revision of flow accounting if the LTO is substantially modified. Current Delta outflows, which are similar to the base, are more than 15 million acre-feet (MAF) on average, of which less than 4 MAF is required by D-1641, and HRL flow commitments are less than 1 MAF at the most in any year and much less in other years. Accordingly, because the base constitutes a substantial portion of the flows assumed as part of the expected flow conditions under the VA pathway, changes to the base would require additional evaluation, analysis, and consideration, including any needed supporting environmental or scientific documentation, which could occur as part of the periodic review process.

Other commenters expressed concern about degradation of the base flows and specifically about recent changes to the 2024 LTO, including the 2025 ROD and 2025 ITP, which they argue could cancel out any increased flows that would have been provided under the VA pathway. These commenters requested that the Board require makeup water for any relaxations in the flow requirements to which the HRL flows are intended to be added. In order to provide greater certainty about the flows and benefits that would result from the VA pathway, the LTO Baseflow Balancing Provision described above is included. In addition, the protection of base flows provision provides for the Board to consider imposing conditions in future water right actions to ensure the use of water is consistent with and supports the narrative objectives. For a more detailed response to

comments about the 2025 ROD and 2025 ITP, please see the section below, *Interaction with Other Projects and Regulatory Actions*.

Commenters requested clarity on how the provision to protect the base flows would be applied for projects that constitute new diversions from the system. As discussed above, new water supply projects are not included in the VA pathway and do not include water supply adjustments. Any consideration of either would require a subsequent evaluation and public process during the periodic review process, including any needed environmental and scientific documentation, as described in further detail in the discussion of the regulatory pathway inflow requirements and the VA pathway above. Otherwise, the specific details of any additional requirements imposed on new projects would be discussed and considered during the relevant water right actions. However, a new provision was added to specify that new water supply projects subject to the regulatory pathway would not be included in determinations of the base flows to which the HRL flow commitments are required to be additive.

HRL Flow Commitments

HRL flow commitments are specified for different water sources based on water year type. In order to utilize the VA pathway, these flows would be required to be provided consistent with the accounting procedures in the revised proposed Plan amendments. HRL flow commitments would be in addition to flows resulting from the responsibilities of non-HRL water rights pursuant to the Bay-Delta Plan, including the Lower San Joaquin River flow requirements; and other instream flow dedications, including Water Code section 1707 instream flow dedications to the extent applicable. The VA pathway does not include proposed Tuolumne River HRL commitments that are being considered through a separate process. However, the Staff Report does evaluate the possible contribution of Tuolumne River HRL flows to Delta outflows under the VA pathway, as well as the Lower San Joaquin River flow objectives adopted in 2018.

All HRL flows, except where otherwise stated in the Plan and summarized below, would contribute to additive Delta outflows to be provided above base Delta outflows. In order to protect HRL flows dedicated to instream use, HRL flow commitments, including water purchases, would be required to be available under a valid water right, at the water right's priority at the time flows are provided, and could not be provided from a water right that is duplicative of another right still being used for consumptive purposes. HRL flow commitments would be required to be provided consistent with water right priorities, within the scope of the dedicated water right, and otherwise in accordance with law. HRL participants would be required to provide a list of the specific water rights for each HRL water source, including water rights proposed for purchases and any accompanying substantiating information requested by the Executive Director, that could be dedicated instream within 6 months of adoption of the Plan amendments. To modify the list, HRL participants could submit proposed modifications 6 months before the planned use of any new water rights. The State Water Board would notify the public, provide a 30-day comment period for the list of water rights, and conduct an initial verification of water rights proposed to be dedicated. The Executive Director would notify HRL participants and the public if any inconsistencies were identified that would need to be resolved for a water right to be included on the list of rights that could be dedicated instream.

Each year, HRL participants would be required to identify the specific water rights under which HRL flow commitments would be provided at least 90 days in advance of the planned use. The State Water Board would notify the public and provide a 30-day comment period for comments on whether dedication instream would injure other legal users of water, unreasonably affect fish and

wildlife or other instream uses, or increase the amount of water that would have otherwise been used under that right. The Executive Director would provide notification to HRL participants and the public if any inconsistencies are identified that must be resolved in order for a specific water right to be dedicated instream.

Implementation of HRL flow commitments would be subject to a default schedule and flexibility brackets for each water source and water year type. The default schedule defines the proportion of the annual HRL flow commitments to be provided in each month on a default basis. Each HRL flow commitment could also be shaped for the benefit of native fish and wildlife within defined flexibility brackets (provided in the revised proposed Plan amendments) such that the average schedule of each HRL flow commitment over the 8-year term of the VA pathway is consistent with the default schedule for January through June. The HRL participants would determine the proposed schedule for release of HRL flow commitments on a tributary and water source basis each year in consultation with the State Water Board. Any proposal to release HRL flows outside the flexibility brackets or that would result in less HRL flows during January through June than the default schedule, regardless of flexibility brackets, would be subject to approval by the Executive Director. The HRL flow commitments would be required to be implemented in a manner consistent with water right priorities, avoiding impacts to native aquatic species, consistent with the Sustainable Groundwater Management Act (SGMA) to avoid redirected impacts from groundwater substitution, and to improve temperatures to the extent possible and avoid redirected impacts on water temperatures. For more information regarding implementation of the HRL flow commitments, see Sections 4.4.9.2 and 4.4.9.3 of the revised proposed Plan amendments.

Responses to Comments

Some commenters requested removal of the requirement for Executive Director approval of HRL flows provided outside the January through June timeframe. This approval process is retained because it is consistent with the HRL proposal to provide additive flows in January through June and the Scientific Basis Report Supplement analyses. Any proposal that would result in less HRL flows during January through June than the default schedule, regardless of flexibility brackets, would require Executive Director review and approval to ensure it is for the benefit of fish and wildlife. However, the timeframe for this process was reduced to 30 days and the public comment period was replaced with a requirement for CDFW concurrence with the proposal.

Commenters requested that the Board have a method to protect HRL flows from unlawful diversion, that the legal mechanism for protecting HRL flow contributions is unclear since 1707 petitions are not required, and that it will be difficult to determine whether VA flows are paper water or real water. In response to these comments, additional details have been added to the process for the water rights that would be dedicated for HRL flow commitments. These edits are intended to ensure that HRL flows are provided consistent with water right priorities and thus that they can be protected through the implementation methodology.

Several commenters expressed concern with the ability of the VA pathway to protect cold water supplies needed to protect fish or alleged that the VA pathway provision for cold water habitat is overly permissive and would not protect cold water habitat. As part of the annual and periodic review processes, the HRL participants will be required to report on measures they have undertaken to address temperature impairments in their stream systems in coordination with HRL implementation measures. If the Board finds that the VA pathway is not providing reasonable protection of fish and wildlife, it would be able to modify or terminate the VA pathway. In addition,

the Board could consider information related to water temperature conditions during adaptive management decisions, as applicable.

Sacramento River

The Sacramento River HRL participants would provide 100 thousand acre-feet (TAF)[3] of additional Sacramento River inflow and associated Delta outflows above base conditions in dry, below normal, and above normal years through groundwater substitution and land fallowing. No more than 20 TAF of water each year could be provided through groundwater substitution sources and could only be provided in a manner that does not have redirected impacts on fish and wildlife and consistent with SGMA. Any proposal to maintain Sacramento River flow volumes in storage for cold water purposes could only occur in dry years and would require approval by the Executive Director of the State Water Board with support from NMFS and CDFW. Any portion of the flow contribution stored for cold water purposes and released in a subsequent year would be subject to the same provisions as would apply absent shifting the flows to another year, including approved accounting procedures, and would be required to result in additional Delta outflow at a time with benefits to native fish.

Responses to Comments

A commenter requested changing the default flow schedule for the Sacramento River HRL flow commitments to match the irrigation schedule. This change was not accepted since it would result in the majority of flows occurring outside the January through June period, which was the target for HRL flows due to the documented flow benefits during that time period in the scientific basis reports.

American River

The American River HRL participants would provide 30, 40, 10, and 10 TAF of additive inflow and associated Delta outflows above base conditions in critical, dry, below normal, and above normal years, respectively, through groundwater substitution and reservoir reoperation. Flows should be targeted in the first three dry or critical years and in the first three above normal or below normal years during the 8-year term of the VA pathway. A portion of American River HRL flows could be provided through groundwater substitution and could only be provided in a manner that does not have redirected impacts on fish and wildlife and consistent with SGMA.

Yuba River

The Yuba River HRL participants would provide up to 50 TAF of additive inflow and associated Delta outflows above base conditions in above normal, below normal, and dry years. The MOU identified 60 TAF for the Yuba River, but the Yuba River HRL participants have committed to 50 TAF. The HRL participants propose that the remaining 10 TAF is provided by the recently submitted HRL commitments on the Bear River, Auburn Ravine, and Yuba River from NID and SSWD. The flow commitments would be provided through reservoir reoperations.

[3]Appendix 1 to the MOU identified 2 TAF of flow commitments in critical years and 102 in dry years. However, subsequent HRL proposal documents have removed this 2 TAF from critical and dry years since no HRL participant has committed to providing those flows

Bear River, Yuba River, and Auburn Ravine (Nevada Irrigation District)

NID would provide the HRL flow commitments for components 1 and 2 prior to issuance of a new FERC license and component 3 following issuance of a new FERC license. Component 1 is a commitment to redirect up to 3.6 TAF of Bear River flow to be additive to Auburn Ravine flows above base conditions in dry, below normal, and above normal years. Component 1 would not be additive to Delta outflow. Component 2 is a commitment of 5.6 TAF of additive Bear River inflow and associated Delta outflows above approved base conditions in dry, below normal, and above normal years, provided through reservoir reoperations. Component 3 is a commitment of 5.6 TAF of additive Yuba River inflow and associated Delta outflows above approved base conditions in dry, below normal, and above normal years, provided through reduced diversions on the Yuba River.

Responses to Comments

Some commenters requested that the NID flow commitments include a minimum flow requirement. The VA pathway includes the flow commitments that HRL participants have agreed to provide. For the NID proposal this did not include minimum required flows. However, if flow commitments are not provided, or if fish and wildlife beneficial uses are not being reasonably protected, the Board would be able to modify or terminate the VA pathway for components of the VA pathway or the entire VA pathway as appropriate. Please see the discussion below on Continuation, Modification, or Termination of the VA pathway for more information.

Bear River (South Sutter Water District)

SSWD would provide the HRL flow commitments for component 1 prior to issuance of a new FERC license and component 2 following issuance of a new FERC license through reservoir reoperations. Both components include commitments to provide up to 4.4 TAF of additive Bear River inflow and associated Delta outflows above base conditions in dry, below normal, and above normal years. Component 2 also includes flows in wet and critical years that are not additive to Delta outflows and higher flows in dry, below normal, and above normal years that are not additive to Delta outflows.

Feather River

The Feather River HRL participants would provide 60 TAF of additive inflow and associated Delta outflows above base conditions in above normal, below normal, and dry years. A portion of the Feather River HRL flow commitments could be provided through groundwater substitution and could only be provided in a manner that does not have redirected impacts on fish and wildlife and consistent with SGMA. The other flow commitments would be provided through land fallowing, and reservoir reoperations.

Putah Creek

The Putah Creek HRL participants would provide 7, 6, 6, and 6 TAF of additive lower Putah Creek inflow above base conditions in critical, dry, below normal, and above normal years, respectively. The flow commitments would be provided through reservoir reoperations without refill limitations and would not be accounted for as contributing to increases in Delta outflows.

Putah Creek (Yolo County Flood Control and Water Conservation District)

The Putah Creek (Yolo County Flood Control and Water Conservation District [YCFCWCD]) HRL participants would provide 5 TAF of additive lower Putah Creek inflow above base conditions in dry, below normal, and above normal years. The Putah Creek (YCFCWCD) HRL flows would not be accounted for as contributing to increases in Delta outflows.

If YCFCWCD can demonstrate no significant adverse water quality effects to Putah Creek based on the approved monitoring described below and as determined by the State Water Board Executive Director in coordination with Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff, the Putah Creek (YCFCWCD) HRL flow commitment may involve routing surface water from Cache Creek to lower Putah Creek and/or conducting groundwater recharge and later utilizing a portion of the banked groundwater from its recharge efforts to provide enhanced environmental flow contributions to lower Putah Creek. If the aforementioned criteria are not met, or if required water right and other permits are not obtained to divert from Cache Creek, YCFCWCD will provide the remainder of a year's flow commitment via purchases or exchanges that will result in additive flows to lower Putah Creek.

Prior to releasing any Cache Creek surface water or banked groundwater into Putah Creek, YCFCWCD would be required to develop, in consultation with State Water Board and Central Valley Water Board staff, a monitoring plan to inform whether releases would result in adverse water quality effects in Putah Creek. The monitoring plan would be subject to approval by the Executive Director of the State Water Board, including any conditions of approval. Once approved, YCFCWCD will be required to conduct monitoring in accordance with that approved plan. The monitoring would be required to include provisions to evaluate effects related to boron, nitrates, harmful algal blooms (HABs), and mercury and include monitoring of Cache Creek water quality and banked groundwater quality prior to diversion into Putah Creek, and Putah Creek water quality before releases of Cache Creek water or banked groundwater into Putah Creek. If the monitoring shows no expected significant adverse effects to Putah Creek water quality, YCFCWCD will be required to continue monitoring Putah Creek during and after releasing Cache Creek water or banked groundwater into Putah Creek. If monitoring information indicates possible significant adverse effects to Putah Creek water quality, YCFCWCD will notify the State Water Board and Central Valley Water Board immediately and cease releasing water into Putah Creek until the State Water Board Executive Director in coordination with Central Valley Water Board staff determine that significant adverse effects to water quality in Putah Creek are no longer expected. To the extent that this HRL commitment results in additional groundwater recharge than would occur absent the HRL commitment, YCFCWCD will be required to monitor Cache Creek surface water prior to recharge for boron, nitrates, HABs, and mercury, at minimum and, if monitoring information indicates possible significant adverse effects to groundwater quality, cease recharging groundwater until the State Water Board Executive Director in coordination with Central Valley Water Board staff determine that significant adverse effects to groundwater quality are no longer expected.

Mokelumne River

The Mokelumne River HRL participants would operate to provide instream flows above the 1998 Joint Settlement Agreement (JSA) minimum instream flow requirement by 10, 20, and 45 TAF per year for dry, below normal, and normal and above JSA water year types, respectively, except in years when the March 1st median forecast of end-of-September total combined Pardee and Camanche storage is less than 350,000 AF when these increased flows do not apply. Mokelumne River HRL

participants indicate based on their modeling that they expect these changes to result in long-term average increases to Delta inflow and associated Delta outflows above base conditions in critically dry, dry and below normal Sacramento Valley Index years. However, these contributions would not be accounted for as Delta outflows. Instead, Mokelumne River HRL participants would provide financial contributions to fund 1 and 2 TAF of contributions to Delta outflows in below normal and above normal Sacramento Valley Index years, respectively, through market-price water purchases under the public water agency (PWA) water purchase program described below. The flow commitments would be provided through reservoir reoperations without refill limitations.

Friant Contributions to Delta Outflows

To implement the Friant HRL commitments, San Joaquin River Restoration Program (SJRRP) flows of up to 50 TAF would be provided in dry, normal-dry, and normal-wet years, as determined by SJRRP water year types, in order to contribute to Delta outflows above base conditions. If 50 TAF of contributions to Delta outflow would not be provided absent limitations on recapture of SJRRP flows, recapture of SJRRP flows would be reduced by up to 50 percent as needed to contribute toward the flow commitment of 50 TAF of Delta outflow.

Responses to Comments

Some commenters expressed concern about the inclusion of the Friant HRL commitments in the VA pathway. The Friant HRL commitments are included as a voluntary contribution to Delta outflow in the VA pathway. The water rights for the U.S. Bureau of Reclamation's Friant Division are not listed in Appendix B.1 because the Friant HRL flow contributions are not a reflection of a determination of the responsibilities of Friant water rights to meeting Bay-Delta Plan requirements and are not a determination of instream flow requirements in the Bay-Delta Plan applicable to Friant's water rights or the San Joaquin River. Inclusion of the Friant HRL commitments also does not prevent the Board from considering Bay-Delta requirements for the Upper San Joaquin River in the future. It also does not modify the terms of the San Joaquin River Restoration Settlement.

SWP and CVP Export Provisions

To utilize the VA pathway, the HRL participants responsible for providing SWP and CVP export contributions, including DWR and Reclamation, would reduce exports compared to what would have occurred under base conditions by 125 TAF in both dry and below normal water year types, and 175 TAF in above normal water year types, in order to provide additive Delta outflow above base conditions. Diverters in the Delta watershed, including the SWP and CVP would also be required to bypass other HRL flow commitments to achieve the additive HRL Delta outflow commitments above base conditions, as well as other flows provided by non-HRL water rights, that are above base conditions, to meet Bay-Delta Plan regulatory requirements and other instream flow dedications as specified in approved accounting provisions included in Appendix B.1 and approved as part of the implementation methodology and associated regulation for the current update to the Bay-Delta Plan.

If there are circumstances outside of the HRL participant control under which the full quantity of HRL committed export reductions could not be provided while meeting minimum human health and safety needs for exports, HRL participants could submit a request for approval by the Executive Director to provide the shortage in export reductions in a future year. Any portion of the flow contribution shifted to a subsequent year for human health and safety needs would be subject to the

same provisions as would apply absent shifting the flows to another year, and must result in additional Delta outflow at a time with benefits to fishes. Any such request must be supported by substantiation of the health and safety need, a proposal for how the flow shortage would be provided and accounted for in a future year, and other relevant information, including any additional information requested by the Executive Director.

Responses to Comments

Reclamation requested that the export reductions only be required if needed to achieve the Delta outflow, salmon protection, and fish viability objectives. This request is not consistent with the HRL commitments included in the VA MOU and other VA documents, to which Reclamation is a party. Nor is it consistent with any of the analyses supporting the update to the Bay-Delta Plan. Further, it would not be possible to assess compliance with such a provision, particularly in the short term.

Some commenters requested an exemption to meeting the SWP and CVP export reduction commitments if exports would drop below minimum levels associated with health and safety. To address this concern, a provision was added identifying that if there are circumstances outside of the HRL participant control under which the full quantity of HRL committed export reductions cannot be provided while meeting minimum human health and safety needs for exports, HRL participants may submit a request for approval by the Executive Director to provide the shortage in export reductions in a future year. Any portion of the flow contribution shifted to a subsequent year for human health and safety needs is subject to the same provisions as would apply absent shifting the flows to another year, and must result in additional Delta outflow at a time with benefits to fishes. Any such request must be supported by substantiation of the health and safety needs, a proposal for how the flow shortage would be provided and accounted for in a future year, and other relevant information, including any additional information requested by the Executive Director.

Water Purchases

HRL participants would provide the following additive Delta outflows above approved base conditions:

1. PWA water purchases consisting of:
    a. Fixed price purchases of 3 TAF in critical, 63.5 TAF in dry, 84.5 TAF in below normal, 99.5 TAF in above normal, and 27 TAF in wet water year types.
    b. Market price purchases of 50 TAF in dry, 61 TAF in below normal, and 85 TAF in above normal water year types (inclusive of 1 and 2 TAF Mokelumne River HRL participant contributions).
2. Permanent state water purchases of 65 TAF in critical, 108 TAF in dry, 9 TAF in below normal, 52 TAF in above normal, and 123 TAF in wet water year types.

HRL participants are in the process of identifying purchases to fulfill this flow commitment. As information becomes available, Appendix B.1 will be updated. HRL participants will also be required to provide specific flow accounting information including the water rights associated with the purchases, including the quantities to be provided by land fallowing, groundwater substitution, and export reductions, consistent with the timeframes and criteria in Section 4.4.9.2 of the revised proposed Plan amendments. Any permanent state water purchases not in place prior to each year's commitment are required to be backfilled with additional market price purchases.

Responses to Comments

DWR expressed confusion about the deadlines related to water purchase water rights and requested an extension to the deadline to identify the water rights that would be dedicated instream for the permanent state water purchases since they expect the full set of purchases would occur over the course of the initial 8-year period. In response to this concern, water purchase deadlines and requirements were clarified as discussed above and the provision was added that would allow for market price purchases to be used to fulfill any portion of permanent state purchases that are not provided in a year.

New Water Projects Water Purchases

The VA MOU identifies flow volumes to be provided from "New Water Projects (Before Year 8)" including Chino Basin, Kern Fan, and Willow Springs Conjunctive Use. These projects have been removed from the revised proposed Plan amendments based on input from HRL participants. These projects could possibly be integrated into the VA pathway in the future as appropriate.

Flow Accounting

Flow accounting procedures are included in Appendix B.1 of the revised proposed Plan amendments. The procedures are intended to demonstrate that the HRL flows are provided in addition to base flows, including flows required by D-1641, other regulatory requirements, and other non-regulatory flows that would be present absent the HRL flows. The flow accounting procedures are intended to ensure that HRL commitments are provided consistent with water right priorities and are provided in addition to flows needed to meet senior water right demands. The flow accounting procedures are also intended to ensure that the HRL flows are provided in addition to flows resulting from the responsibilities of non-HRL water right holders pursuant to the Bay-Delta Plan, including the Lower San Joaquin River flow requirements and other instream flow dedications, including Water Code section 1707 instream flow dedications. Flow accounting is included in Appendix B.1 to demonstrate that HRL flows are overall or seasonally new additive water over this base flow by demonstrating that the water came from any of the following sources: (1) a new source of water that is replacing the source to be left instream (e.g., groundwater substitution); (2) an overall reduction in consumptive water use relative to base conditions in order to provide this source instream (e.g., land fallowing, an overall reduction in exports that would have occurred relative to base conditions); or (3) in the case of reservoir reoperations or Friant contributions that may not be fully additive to base conditions, that the operations are consistent with the expectations for additive inflows and outflows, where applicable, as described in Appendix B.1. of the revised proposed Plan amendments. Flow accounting procedures may be refined by the Executive Director as part of the annual and periodic review processes in order to determine and account for compliance with the HRL flow commitments. Interested parties would have the opportunity to petition the State Water Board for reconsideration of Executive Director refinements to accounting procedures. For more information regarding the HRL flow accounting procedures, see Section 4.4.9.4 and Appendix B.1 of the revised proposed Plan amendments.

Responses to Comments

The State Water Board received numerous comments on the flow accounting procedures in the revised proposed Plan amendments. Board staff held several meetings with HRL participants to discuss their comments on flow accounting, which resulted in several changes to the Plan

amendments and to Appendix B.1. Meetings were requested by HRL participants to discuss flow accounting for the Sacramento River, Feather River, Yuba River, American River, Mokelumne River, and Delta operations, including export reductions. Most comments were resolved through edits or through discussion of the underlying issues. Other comments submitted by HRL participants but not discussed during these meetings were also resolved with edits when appropriate. More detailed responses are provided below for general topics and by HRL flow commitment sources and tributaries.

General Flow Accounting

The Board received several requests to adopt the HRL proposal for flow accounting (including the MOU and other HRL documents) in place of the provisions included in Appendix B.1. As described further above, the State Water Board is not a signatory to the MOU and is not bound by its terms or the terms of other HRL documents. Further, many of these documents include provisions that would not be appropriate for inclusion in the Bay-Delta Plan, including provisions that are not clear or implementable, are inappropriately binding, or otherwise not appropriate for inclusion in the Plan. However, Board staff relied on the HRL documents to develop the VA pathway and language within Appendix B.1.

Some commenters requested deletion of the Executive Director authority to refine accounting procedures included in Appendix B.1 as part of the annual and periodic review processes. This edit was not accepted; however, text was added to clarify that interested parties would have the opportunity to petition the State Water Board for reconsideration of Executive Director refinements to accounting procedures. Some HRL participants also requested removal of the Executive Director approval of the accounting approach. Board staff explained that this is applicable to all tributaries and clarified that B.1 sets the framework for the accounting protocols containing the minimum elements. Proposed accounting approaches that include these minimum elements would likely be approvable. No edits were made to this required approval.

Some commenters reliant on reservoir reoperations to provide HRL flow commitments requested revisions to the requirement that reservoir reoperations must be net additive January through June above base conditions. This provision was edited to state that reservoir reoperations are required to be additive January through June “unless otherwise specified in Appendix B.1.”

Some comments expressed confusion related to the timing of HRL participant coordination requirements and when this coordination should stop, and that real-time reporting of the sources of HRL flows would not be possible. The general coordination requirement in B.1.3 was adjusted to match the water sources, specifying that the coordination would end when flow commitments were completed. Additionally, “real-time” reporting was changed to “near real-time” reporting to reflect that HRL tributary flows will need to remain coordinated with operations in the Delta and to provide for transparent verifiable accounting in a meaningful timeframe.

Several commenters requested edits related to various reporting and accountability provisions, suggesting that the required documentation would be too difficult to provide and would not provide meaningful information to the Board. Board staff and HRL participants discussed these provisions and Board staff explained that these provisions are fundamental to understanding the additive nature of the HRL flows under the VA pathway. The reporting requirements were revised in response to these comments to improve consistency and clarify that supporting documentation would be sufficient. Board staff also explained that these reporting requirements are not intended to place constraints on reservoir operations or intended to establish reservoir refill limitations. The

reservoir refill limitations are specified within the description of flow commitment sections in tributaries where they apply (for example the Feather River). Additionally, Appendix B.1 requires participants to report "Water supply deliveries that would have been made in reference conditions and those actually delivered." Board staff and HRL participants discussed comments related to this and edited the provision to clarify that the reporting is required for water "…delivered under water rights covered by the VA pathway" not all water rights.

Representatives of Project tributaries requested to use a different exceedance level for water year type estimates before May, rather than relying on the 50% exceedance to determine water year type. Specifically, the request was to use the 90% exceedance forecast from January through March, the 75% forecast in April and the 50% forecast in May. This was discussed with participants and language was added that states participants may plan HRL flows using this strategy, if desired, but that the final May 50% exceedance forecast will be used for determining the total annual commitments required for that year.

Several commenters requested the addition of language in Appendix B.1 to ensure HRL participants do not experience re-directed impacts from other tributaries, re-diversions downstream, and that the Projects are not required to backstop regulatory responsibility of others. To address these concerns, language was added to identify that the State Water Board intends that any implementation methodology would reflect the HRL participants' commitments, and that HRL participants', including the CVP and SWP, would not be expected to backstop the commitments of other HRL participants or parties subject to the unimpaired flow regulatory inflow and inflow-based Delta outflow requirements.

Several HRL participants requested to modify the flexibility brackets that were submitted to the Board. The Board accepted a request from Friant Water Agency to modify the flexibility brackets for the Friant Area to reduce potential conflict with meeting SJRRP flow requirements. Sacramento River parties requested a change in the default schedule for the Sacramento River to better match the irrigation schedule. This comment is addressed above.

Appendix B.1 of the 2025 revised draft Bay-Delta Plan required that land fallowing plans be submitted for approval to the State Water Board's Deputy Director for Water Rights 90 days in advance of the time period the water is planned to be provided. DWR commented that specific fallowing decisions will not be finalized until after the water year type is confirmed as part of Bulletin 120. In response to these concerns, the provisions were edited to require submission of a prospective list of water rights with proposed fallowing 90 days in advance of fallowing, and submission of fallowing plans by March 1st. DWR also requested to incorporate additional flexibilities and coordination with Reclamation and DWR related to Evapotranspiration of Applied Water (ETAW) rates used for land fallowing for the Feather and Sacramento River HRL commitments. This was discussed with DWR and the language was edited such that the Executive Director would coordinate the approval of requested changes to ETAW rates for Feather and Sacramento tributaries with DWR and Reclamation.

Some comments requested changes related to the groundwater substitution provisions. Specifically, commenters suggested that the reference groundwater pumping be based on three years instead of six years of data. This change was accommodated with a clarification that the Deputy Director could require different averaging periods, if warranted. In response to a request to change the monitoring requirements related to meeting Groundwater Sustainability Plans, the text was adjusted to allow HRL participants to rely on the existing Groundwater Sustainability Plans if they contain the

information listed in B.1.8.3. HRL participants also requested to change the provisions related to streamflow depletion factors, and add text related to how to handle a stream depletion factor of zero. This change was not made because there is already flexibility in the plan for the stream depletion factor to be zero, if supported. Additionally, the stream depletion factor is a universal provision in the VA pathway for all applicable HRL flow commitments.

Several comments requested that Appendix B.1 retain the ability to be updated over time to incorporate potential future changes or unforeseen aspects that are not currently identified. No text edits were necessary as the Plan already includes sufficient options for updating the accounting in the future as appropriate.

To increase clarity throughout the flow accounting provisions, terminology regarding the HRL base flows and reference conditions was edited to eliminate inconsistencies and only use the synonymous terms "base flows," "base conditions," and "reference conditions."

Feather River

Feather River HRL participants expressed concerns about the allocation of responsibility for tracking and reporting flow commitments in Appendix B.1. Board staff and Feather River participants worked to resolve the issue by adding a statement at the top of the Feather River section in Appendix B.1 assigning reporting and coordination responsibility to DWR, on behalf of the Feather River HRL participants. DWR will act as the responsible party for conducting and reporting on the accounting procedures on behalf of all Feather River HRL participants. DWR will coordinate reservoir operations, land fallowing, and groundwater substitution actions and reporting with other Feather River HRL participants to provide and document the HRL flows. However, all Feather River HRL water rights remain collectively responsible for the HRL flow, habitat, science, and other associated commitments and their inclusion in the VA pathway is contingent on all Feather River HRL commitments being met.

Sacramento River

The Sacramento River Settlement Contractors commented that the Drought Protection Program included in the 2024 LTO for the CVP (providing for reduced contract deliveries of up to 500,000 acre-feet in critical years) should be included as part of the reference condition for the Sacramento River in Appendix B.1. This provision was already included in the reference conditions for the Sacramento River due to inclusion of the 2024 LTO Record of Decision. Staff Report Chapter 13, *Revised Proposed Plan Amendments*, has been updated to include a narrative description of this provision.

CDFW commented that the outflow data from the Keswick Reservoir CDEC gage and the United States Geological Survey (USGS) gage 11370500 generally do not provide the same value and if both gages are used, it could lead to inaccuracies in baseline calculations. Appendix B.1 has been updated to require Sacramento River HRL participants only use outflow data from the USGS gage 11370500 (KWK), and that the participants may use the Keswick Reservoir (KES) CDEC gage when the USGS gage is offline or malfunctioning.

American River

American River participants requested modifications to the HRL flow description that identifies that 10,000 acre-feet of American River HRL flows would be provided though groundwater substitution in above normal and below normal years if reservoir reoperation does not occur. To address this

concern, Appendix B.1 was edited to remove statements that groundwater substitution would be increased if the reoperation commitment is not available. The American River participants also requested revisions to the description of the years in which their flow commitments would be provided. This was discussed with HRL participants and in response to these comments, edits were made to the flow commitment section to allow the participants to submit requests to the Executive Director to approve a variance based on biological and technical information and consultation. Language was removed that stated American River participants could only request approval if there is a drought emergency and the requirement that flows must occur in the next dry year.

American River HRL participants requested some changes to the American River reference conditions, including water quality and groundwater pumping reference conditions. Board staff discussed this with participants and determined a change was not necessary because the language is already general enough to cover the relevant recommended additions. Additionally, the groundwater related reference conditions are already captured through the groundwater substitution provisions in Appendix B.1 Section B.1.8.

Yuba River

Yuba River participants submitted a comment requesting modifications to the requirement of weekly reporting of Component A water, because the reporting of Component A water requires confirmation through DWR. This was discussed with Yuba River HRL participants and text was updated to allow preliminary reporting until the Component 3 volumes are known. Yuba River HRL participants also requested minor edits to the language in Appendix B.1 to indicate that flows would be required to be above base conditions unless otherwise specified in Appendix B.1. This change was made to Section 4.4.9.4. Yuba River HRL participants requested removal of language that requires a demonstration of recharacterization of Component A flows at Marysville. Staff clarified with participants that this is “at Marysville” not downstream of Marysville.

Mokelumne River

Mokelumne River participants requested to remove requirements for tracking of reference conditions and changes in flow/storage compared to reference conditions because the Mokelumne River HRL commitment is to meet an instream flow instead of a volume of water above reference conditions and the Mokelumne River HRL flow commitment is not accounted for as additive outflow. Board staff explained that this is a water balance exercise to identify the difference from reference conditions, which will also be necessary to quantify incidental Delta inflow (a topic that Mokelumne participants requested to be added per another comment). Board staff also explained that these reporting requirements are not requirements that impose any type of reservoir refill limitations. The reservoir refill limitations are specified within the flow commitment sections in tributaries where they apply. Mokelumne River HRL participants also requested deletion of a reporting provision requiring verification that the VA pathway does not lead to reduction in bypass by another HRL participant. The provision was discussed with participants and clarifying edits were added that the provision does not apply to non-HRL diversions or HRL participants outside of the tributary or water source.

Mokelumne River HRL participants requested to include an offramp from HRL flow commitments if combined storage is below 350 TAF. Although the statement related to the 350 TAF exception was not included in the December 2025 revised draft Bay-Delta Plan, the modeling related to the Mokelumne River HRL commitments has reflected the exception since the release of the 2023 draft Staff Report. The offramp has been added to the description of the flow commitments on the

Mokelumne River and Appendix B.1. Mokelumne River HRL participants commented that the characterization of the modeling regarding the flow commitments resulting in 5, 5, and 7 TAF in dry, below normal, and above normal water years and the characterization of incidental Delta inflows from the Mokelumne HRL program was incorrect. The flow commitment description was updated to address this comment. In addition, the Mokelumne River HRL participants requested the addition of language that would allow a retrospective analysis of incidental additive Delta inflow resulting from the Mokelumne River HRL commitments. This language has been updated in Appendix B.1 Section B.1.13.5, *Verification of Additive Flow.* The parties further requested minor changes related to the reference condition of Water Right Order 2016-0019. This was resolved among the Mokelumne River HRL participants and no edits were necessary.

Mokelumne River participants stated it is incorrect to assume 0% losses from Camanche Dam to the Delta. This assumption does not affect Camanche given that none of the Mokelumne River flows are protected to Delta outflow except purchases of 1 and 2 TAF. The losses in the Delta Accounting section are specific to calculating the offsets DWR will use to calculate and verify net Delta inflows from tributaries and verify it is protected as Delta outflow. Since the Mokelumne River flow commitment, in excess of the purchased volumes, is incidentally additive to Delta inflow and outflow and unknown, DWR does not plan to adjust operations to ensure that portion of the Mokelumne River flow commitment is protected as Delta outflow. Mokelumne River HRL participants should, however, include estimates of losses and supporting information to substantiate them when conducting retrospective accounting of incidental Delta inflows.

Delta Operations, Exports/Export Reductions, and Water Purchases

CDFW suggested convening further conversations among DWR, CDFW, and State Water Board staff specifically for Delta accounting, regarding the value of validating travel times, comparing salinity results using hydraulically routed flow, and comparing attenuated flows against simply lagged flows and the impact to salinity offset accounting. Board staff met with CDFW and DWR several times during development of the December 2025 draft Plan, and several additional times since receiving these comments. However, these specific comments were not discussed in detail in those meetings and improvements to the language were not developed. No edits were made to the language regarding these topics. CDFW also requested clarification of how Delta accounting would work when the CVP and SWP may be operating to different standards. A sentence was added stating that if the CVP and SWP are operating to different standards, the reference conditions would be calculated separately for CVP and SWP. Additionally, the Plan amendments include the ability to update Appendix B.1 flow accounting in the future as appropriate.

Reclamation requested clarifying edits regarding the D-1641 Table 4 (X2) requirements and whether the 3-day or 14-day averages for salinity will be calculated using a weighted average. The language was clarified stating that the intent is to follow the averaging periods specified in D-1641. Commenters also requested to add fall X2 requirements from the 2024 ROD to the reference conditions. Although these requirements had already been included in the reference conditions, the language was edited so it was more explicitly identified.

Several changes were discussed with DWR related to the timing of submitting water rights information for purchases, or to provide additional market price purchases if state purchases are not in place 90 days prior to the planned flow commitment. The changes are made to Section 4.4.9 and Appendix B.1 to clarify that DWR would provide water rights and accounting information when it is available, and that the appendix would require update when this information is submitted.

Reclamation submitted comments in February 2026 related to the Friant system HRL flow accounting that appear to be on the July 2025 revised draft Plan rather than the December 2025 revised draft Plan. The December 2025 revised draft Plan included a number of edits made following a series of meetings with the Friant Water Authority, some of which Reclamation staff also attended. During these meetings, Friant system HRL participants agreed to these changes to improve language. The Board assumes that the changes that were made adequately address comments on the Friant HRL commitments and accounting. Furthermore, FWA commented that the December 2025 revised draft Plan was improved, and contained proper descriptions of the HRL flow commitments and accounting approach.

Commenters requested to add the 2024 BiOps and ITP to the Delta reference conditions. The 2024 BiOps, in addition to the 2024 ROD for CVP and SWP operations, were added to the Delta reference conditions. However, the SWP ITP is not included in reference conditions and thus was not added to the reference conditions. Instead, the SWP reference conditions are based on the 2024 BiOps and ROD.

HRL Non-Flow Habitat Restoration Actions

Table CR 1.3-3 identifies the minimum additive contributions to physical habitat restoration, in acres and by general location, that would be required to be completed by HRL participants within the initial 8-year term of the VA pathway. HRL habitat restoration includes activities to increase the area of spawning habitat, instream rearing habitat, and floodplain habitat for the benefit of native fish and other aquatic species. The “Sutter Bypass, Butte Sink, and Colusa Basin” habitat category has been renamed “Valley Floor” habitat and expanded to include floodplain rearing habitat in the Yolo Bypass, Tisdale Bypass, Sacramento River, and the Delta. These habitat commitments are further described in Table CR 1.3-3.

New incremental implementation requirements would apply to HRL habitat restoration projects, as provided below. For good cause shown, the Executive Director could approve extensions to these timelines.

i. Within one year of adoption of the Plan amendments, the HRL participants must submit an initial habitat implementation schedule to the State Water Board and provide annual updates thereafter. Changes to implementation schedules and individual projects should be reflected in annual reports.

ii. By the end of year two of the VA pathway, a preliminary list of HRL habitat restoration projects and the expected outcome of the habitat accounting protocol must be identified.

iii. By the end of year four of the VA pathway, 50 percent of the cumulative habitat commitments must have completed construction and accounting must be completed or largely completed for that quantity of habitat. In addition, the projected implementation schedule and expected outcome of habitat accounting must demonstrate that the full habitat commitment will be completed by the end of year eight of the VA pathway.

iv. By the end of year six of the VA pathway, 75 percent of the cumulative habitat commitments must have completed construction and accounting must be completed or largely completed for that quantity of habitat, or otherwise demonstrate an ability to achieve the full habitat commitment by the end of year eight, satisfactory to the Executive Director.

The VA pathway would require the HRL habitat restoration projects to include provisions for incorporating input from California Native American Tribes and other interested parties during the development, implementation, and assessment of non-flow habitat restoration measures, including input from tribes on Traditional Ecological Knowledge (TEK) and other relevant information.

Table CR 1.3-3. HRL Habitat Restoration Commitments

Tributary or Water Source	Habitat Restoration Commitment
Sacramento River	113.5 acres of spawning habitat and 137.5 acres of instream rearing habitat
Valley Floor	20,000 acres of floodplain rearing habitat in flood bypasses (Yolo Bypass, Tisdale Bypass, Sutter Bypass, Butte Sink, and Colusa Basin), the Sacramento River, and the Delta (preferably located outside of the flood bypasses)
American River	25 acres of spawning habitat and 75 acres of instream rearing habitat
Yuba River	50 acres of instream rearing habitat and 100 acres of floodplain rearing habitat
Auburn Ravine	Installation of additional fish screens on private diversions in lower Auburn Ravine
Feather River	15 acres of spawning habitat, 5.25 acres of instream rearing habitat, and 1,655 acres of floodplain rearing habitat
Putah Creek	1.4 acres of spawning habitat
Mokelumne River	1 acre of instream rearing habitat and 25 acres of floodplain rearing habitat
North Delta Arc and Suisun Marsh	5,227.5 acres of tidal wetland and associated floodplain habitat

In addition, the HRL participants could conduct fish food production pilot actions if it can be demonstrated that contaminant concentrations would not exceed benchmarks for aquatic life and that the action would not increase aqueous or bioaccumulated methylmercury, subject to Executive Director approval in consultation with the Central Valley Regional Board. Any such pilot actions would be subject to evaluations of effectiveness during the first periodic review process under the VA pathway, and could continue if it were demonstrated that the source waters were not exceeding aquatic life benchmarks for contaminants and pesticides, that the actions had not resulted in a measurable increased concentration in aqueous or bioaccumulated methylmercury, and that the action was resulting in significant benefits for native fishes. All fish food production actions would be required to be conducted pursuant to and consistent with a valid water right.

For more information regarding the HRL non-flow habitat restoration commitments, please refer to Section 4.4.9.5 of the revised proposed Plan amendments.

Responses to Comments

Several commenters requested lists of the specific habitat projects, including the location of habitat projects, that would be provided to fulfill the HRL commitments. Since habitat accounting has not yet been conducted on any VA projects and could not be conducted until the Bay-Delta Plan amendments are approved, it would be speculative to list specific projects at this time. However, the analysis in Staff Report Section 7.21, *Habitat Restoration and Other Ecosystem Projects*, considers the environmental impacts of a wide range of habitat restoration projects that would encompass the possible projects that could be provided to fulfill the HRL commitments.

Commenters including DWR requested changes to increase flexibility in meeting the HRL habitat commitments, including allowing HRL habitat projects to be completed after the initial 8 year term and allowing other non-flow measures not identified in the Plan to count toward the habitat commitments. The habitat commitments were incorporated as proposed by the HRL participants and the habitat accounting requirements already include significant flexibility as described below. The HRL participants proposed the 8-year deadline for completing habitat restoration commitments that was incorporated within the revised proposed Plan amendments. Extending this deadline beyond 8 years would remove the ability of the Board to evaluate whether the habitat commitments were met when deciding whether to continue, modify, or terminate the VA pathway at the end of the initial 8 year term. Allowing for other habitat measures not identified in the Plan would diminish certainty in the benefits that could be provided by the VA pathway since it would be uncertain what actions would be taken, how they would be accounted for, or what benefits they would provide.

Some commenters stated that the HRL habitat restoration commitments are unlikely to occur due to uncertainty in federal funding. If the VA flow, habitat, science, and other commitments are not provided, the VA pathway could be modified or terminated as described further below. Commenters also expressed concern that the HRL participants would repackage ongoing habitat restoration efforts, including those conducted for the Central Valley Improvement Act (CVPIA), instead of expanding habitat above current conditions. HRL habitat projects could not be used to fulfill any regulatory requirements that existed as of December 2018 or earlier, including the CVPIA (adopted in 1992). In addition, commenters expressed concern about HRL habitat commitments that are already legally required, such as adding fish screens to points of diversion. The VA pathway does not alter any existing law that would apply absent the VA pathway. To address concerns about the HRL participants meeting their habitat commitments, incremental implementation requirements have been added to the revised proposed Plan amendments to ensure the HRL participants remain on a path to meeting their habitat commitments throughout the initial 8-year term of the VA pathway.

CDFW recommended adding requirements for maintenance of restoration projects. In response to this request, a new requirement was added for ongoing maintenance of habitat restoration. CDFW also included a number of other recommendations for designing, planning and implementing habitat restoration actions for the HRL commitments. While these provisions were not added to the Plan, the Board expects that CDFW would consider these recommendations when issuing permits for the restoration projects, and as a member of HRL governance.

CDFW raised concerns about the potential water quality impacts of the fish food production commitment. After Board staff discussed these concerns with CDFW and DWR, the fish food production action was removed as a required commitment in the VA pathway and transformed into an optional special study that could be conducted if certain requirements are met, including demonstration of no impacts to water quality and significant benefits to native fishes.

Non-Flow Habitat Restoration Accounting

The HRL non-flow habitat restoration commitments are required to be additive to existing physical habitat conditions and regulatory requirements existing as of December 2018 as determined through the non-flow habitat accounting protocols included in Appendix B.2 of the revised proposed Plan amendments. The HRL non-flow habitat restoration actions are required to be completed within the initial 8-year term of the VA pathway. Accounting for HRL non-flow habitat restoration would be required to account for the following three steps:

First, projects completed by HRL participants would be required to fulfill all of the following conditions in order to count toward the HRL commitments under the VA pathway:

i. The project must create new suitable habitat or restore existing habitat with limited suitability in a manner that provides significant additional benefits for the target species and life stages;

ii. The project must not be used to fulfill any regulatory requirements that existed as of December 2018 or earlier; and

iii. Project construction must be started after December 2018 and completed by the end of year 8 of the VA pathway.

Second, the number of acres of qualifying projects that meet all applicable design criteria must be determined. Tributary spawning, instream rearing, and tributary floodplain rearing habitat restoration projects (including tributary floodplain projects intended to be counted toward the valley floor floodplain habitat commitment) would be subject to the design criteria specified in the revised proposed Plan amendments. HRL participants could request project-specific modifications to these design criteria, subject to approval by the Executive Director and CDFW. Bypass floodplain and tidal wetland habitat projects do not have pre-defined criteria and instead HRL participants would be required to submit proposed design criteria for approval by the Executive Director and CDFW.

Design criteria for spawning, instream rearing and floodplain rearing habitat projects. These criteria include depth, velocity, substrate (for spawning), cover (for rearing), and inundation (for floodplain rearing). The basis for the design criteria is described in the final Scientific Basis Report Supplement (Appendix G2, *Final Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan*) but is also described briefly here. Depth and velocity criteria were based on field surveys associating depth and velocity with fish observations and were defined by the depth and velocity ranges identified by the Conservation Planning Foundation for Restoring Chinook Salmon and O. mykiss in the Stanislaus River (Anchor QEA, LLC 2019). The criterion for suitable spawning substrate was based on Gard (2006), Riebe et al. (2014) and Merz et al. (2018). The cover criterion is based on prior research indicating that cover is important for rearing habitat suitability and is often the most limiting factor when applied alongside velocity and depth (San Joaquin River Restoration Program 2012). Available literature indicates that habitat for rearing Chinook salmon contains suitable cover if cover features constitute at least 20 percent (Raleigh et al. 1986) or at least 75 percent (Whipple et al. 2019) of the habitat area, or if suitable cover features are present within 1 meter of any point in the stream area (San Joaquin River Restoration Program 2012). The cover criterion requires at least 15 percent of the habitat area constitute suitable cover features and an additional 5 percent of the habitat area is required to constitute either cobble, a 2-foot buffer applied to cover features, or additional suitable cover features. Only a small portion of the cover requirement is allowed to be provided by cobble or buffer due to limited cover provided by those features and uncertainty regarding the effectiveness of those features as cover for salmonid rearing. The inundation criterion is based on the meaningful floodplain event (MFE) criteria in the final Scientific Basis Report Supplement, which found that floodplain rearing benefits are maximized by at least two 21-day inundation events during the rearing period, occurring in 2 out of every 3 years.

Third, for tributary spawning, instream rearing, and floodplain rearing, habitat verification would occur to confirm that the acreage of habitat meeting design criteria across a range of flows conforms

with or provides equivalent benefits to the flow-habitat relationships representing the incremental addition of VA habitat over existing conditions provided by HRL participants for assessment of the benefits of the VA pathway (i.e., those used in the *Final Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan* [Scientific Basis Report Supplement]). This verification would be provided to the Executive Director of the State Water Board and CDFW for approval. This verification would not be required for tributary floodplain restoration projects intended to be counted toward the valley floor floodplain habitat commitment. Instead, the number of acres meeting applicable design criteria could be counted toward the valley floor floodplain habitat commitment. For more information regarding the non-flow habitat restoration accounting, see Section 4.4.9.6 of the revised proposed Plan amendments.

Responses to Comments

Several commenters criticized the habitat accounting design criteria and protocols and alleged that they had no scientific basis. The final Scientific Basis Report Supplement (Appendix G2, *Final Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan*, to the Staff Report) provides the scientific basis for the habitat accounting criteria, but specific concerns are additionally responded to in this section.

Some commenters contended that the inundation criterion is inappropriate or not supported by best available science. Other commenters (including HRL participants) supported the tributary floodplain inundation criterion. The inundation criterion is based on the meaningful floodplain event criteria in the Scientific Basis Report Supplement, which found that floodplain rearing benefits are maximized by at least two 21-day inundation events during the rearing period, occurring in 2 out of every 3 years. The MFE was developed to evaluate the HRL floodplain habitat with modeled monthly flows based on literature recommending longer inundation periods and repeated pulses throughout the year and interannually (Grosholz and Gallo 2006; Opperman 2012; Takata et al. 2017; Goertler et al. 2018). Longer periods of floodplain inundation contribute to increased juvenile Chinook salmon growth in the Central Valley (Takata et al. 2017; Corline et al. 2017; Jeffres et al. 2020; Holmes et al. 2021), which may be driven in part by enhanced organic matter and nutrient recycling leading to high prey densities (^Sommer et al. 2001, 2004; Grosholz and Gallo 2006; Katz et al. 2017; Goertler et al. 2018). Repeated flood pulses of sufficient duration have also been found to support native fishes (Grosholz and Gallo 2006).

Some commenters argued that shorter inundation durations are preferable to longer inundations for tributary floodplain habitat. As described above, the duration of floodplain inundation is directly related to the benefits the floodplain habitat could provide such that longer and more frequent floodplain inundations provide greater benefits (Sellheim et al. 2026; Serup pers. comm.). For salmon to benefit from floodplain habitat, the habitat must be available throughout the rearing season. Less frequent or shorter duration inundation of floodplain habitat would prevent salmon from accessing and utilizing that habitat and may result in benefits too low to be measurable (Serup pers. comm.) or greater costs from stranding (Sellheim et al. 2026). The inundation criterion is thus formulated to incentivize longer inundation durations to ensure that HRL floodplain restoration provides meaningful benefits. Some commenters argued that the tributary floodplain inundation criterion is overly complex. The floodplain inundation accounting criterion increased in complexity to provide additional flexibility in response to HRL participant concerns. The transition to a more flexible inundation credit system necessitated changes to the quantitative protocol to ensure it could

be incorporated within the steps of the habitat accounting protocol and avoid issues such as double counting of habitat. In addition, HRL participants and other commenters have not provided any alternative proposal for how to quantitatively evaluate the floodplain inundation criterion.

Several commenters argued that the cover criterion was not based on best available science, particularly the limitation to using cobble and cover buffer for only 25% of the cover requirement. Research indicates that cover is important for rearing habitat suitability and is often the most limiting factor when applied alongside velocity and depth (San Joaquin River Restoration Program 2012). Peer reviewer Dr. John Sabo on the final draft Scientific Basis Report Supplement confirmed this, noting that "Non-flow habitat as measured by depth and velocity is a good proxy, but vegetative cover may be equally or more important in terms of providing protection from piscivore and avian predation" (Domagalski et al. 2024). Available literature indicates that habitat for rearing Chinook salmon contains suitable cover if cover features constitute at least 20 percent (Raleigh et al. 1986) or at least 75 percent (Whipple et al. 2019) of the habitat area, or if suitable cover features are present within 1 meter of any point in the stream area (San Joaquin River Restoration Program 2012). The cover criterion requires that at least 15 percent of the habitat area constitute suitable cover features (defined as a Habitat Suitability Index value of at least 0.5 from San Joaquin River Restoration Program 2012) and an additional 5 percent of the habitat area is required to constitute either cobble (3 to 12 inches in diameter), a 2-foot buffer applied to select suitable cover features (woody debris, boulders, undercut banks, root wads, logjam/submerged brush piles, and large wood), or additional suitable cover features. Cobble provides limited cover and there is uncertainty regarding the effectiveness of those features as cover for salmonid rearing. The suitability of cobble as cover is uncertain because studies have found that juvenile salmon do not prefer cobble over no cover (Hampton 1988; Gard 2006) or do not include cobble in lists of suitable cover features (San Joaquin River Restoration Program 2012; Whipple et al. 2019). There is uncertainty regarding the use of a buffer for cover features as well (Bonham 2025).

Monitoring in the upper Sacramento River found that almost all juvenile salmonids observed were found within 2 feet of cover habitat (Banet et al. 2020). This builds upon monitoring conducted on the Trinity River indicating that 2 feet is the maximum distance juvenile salmonids stray from cover (Goodman et al. 2015). In addition, it is important to note that cover complexity, cover type, and fish size affect the distance that juvenile salmon stray from cover (Holecek et al. 2009). Although there is evidence that juvenile salmonids stray up to 2 feet from cover, that buffer distance does not serve the habitat functions of cover, including protection from predators (Bonham 2025). Thus, the area of a buffer applied to cover features without considering the type, size, location, and complexity of the cover features, as well as water velocities surrounding the cover features and fish size, may not provide suitable cover. Adding a 2-foot buffer on top of the 20% cover requirement would inflate the total number of acres in a restoration site that are credited as cover, without providing that function. Some commenters requested adjustments to the cover criterion to allow anticipated recruitment of riparian vegetation to count as cover. It is unclear how "anticipated recruitment" could be accounted for or when this anticipated recruitment would occur and provide benefit to fishes, so this change was not made. However, the accounting protocols in Appendix B.2 include provisions for accounting for the expected growth of cover vegetation.

Commenters requested that early implementation habitat projects should be subject to more lenient habitat design criteria because they contend the design criteria in the revised proposed Plan amendments were not available when those projects were designed and constructed. These commenters were particularly concerned with the inundation and cover criteria. The habitat accounting provisions already include appropriate flexibilities to accommodate different design

criteria for projects such as early implementation projects, if scientific documentation of the benefits is provided and the Executive Director and CDFW approve. In addition, the design criteria in the revised proposed Plan amendments are based on best available science that was available during and prior to 2018 when early implementation projects were designed and constructed, as evidenced by the majority of dates of the primary references used above and in the Scientific Basis Report Supplement.

Some commenters argued that the habitat verification step is not appropriate because it does not result in a single value of the acreage of habitat restored that can be compared to the MOU commitments. Tributary habitat is flow-dependent, so it cannot be represented by a single number. The habitat verification step determines whether the habitat commitments are met and includes clear procedures for determining this. The VA parties represented their habitat commitments in further detail than the single acreage number in the MOU through flow-habitat relationships that they developed and submitted for use in the Scientific Basis Report Supplement for the analysis of the benefits of the VA proposal. Some commenters also argued that the habitat verification step should only consider hydraulic criteria (velocity and depth) because they contend that the flow-habitat relationships submitted for the Scientific Basis Report Supplement and used as the basis for this step are only based on hydraulic criteria. The Scientific Basis Report Supplement assumes that all spawning habitat provides suitable substrate, all rearing habitat provides suitable cover, and all floodplain habitat is inundated for sufficient time to provide benefits. Thus, there is no justification for removing those criteria from consideration in the habitat accounting process.

In addition, VA parties were offered multiple opportunities to update these flow-habitat relationships to reflect the habitat accounting design criteria that have consistently included requirements for substrate, cover, and inundation since the HRL strategic plan was released in 2023, and substantively unchanged since the first draft of Sacramento/Delta updates to the Bay-Delta Plan were released in 2024, except for some changes to increase flexibility in the accounting protocol at the request of HRL participants. Some HRL participants from the Yuba, Mokelumne, and American Rivers accepted the offer to revise flow-habitat relationships and submitted new relationships that were incorporated within the Scientific Basis Report Supplement. Since HRL participants were aware of the habitat accounting design criteria and offered the opportunity to revise their flow-habitat relationships, it is assumed that these flow-habitat curves reflect the habitat suitability assumptions in the design criteria and Scientific Basis Report Supplement, including cover. To increase clarity, the description of this step was modified to clarify that the constructed flow habitat relationship would be compared against the relationship from the Scientific Basis Report Supplement that represents the additive contribution of HRL habitat restoration over baseline conditions.

Commenters suggested that the habitat accounting protocol proposed by HRL participants should be used instead of the habitat accounting protocol in the revised proposed Plan amendments. The habitat accounting protocol proposed by HRL participants places no limitations on the flows at which habitat should be available and thus would allow for the entirety of a habitat commitment to be provided by habitat only available during very rare flood or drought events. While it may not be likely that the habitat would be restored in this manner, the lack of consideration of the specific flows under which habitat is made available would reduce certainty in the benefits of the HRL habitat restoration actions as they were represented by HRL participants for the Scientific Basis Report Supplement. The accounting protocol proposed by HRL participants also did not include quantitative protocols for evaluating all design criteria since there was no protocol for evaluating the floodplain inundation criterion. The accounting protocol proposed by HRL participants had a

number of other issues, including a provision that would allow for any areas determined to have predator issues to count toward the habitat commitment, even if no restoration or predator removal actions were conducted in that area. A commenter requested edits to Appendix B.2 to clarify that an alternative accounting approach would be considered by the Board. The use of an entirely different accounting protocol, such as the accounting protocol proposed by HRL participants, would not fall within the flexibilities allowed for in the revised proposed Plan amendments. The final accounting assessment to which the commenter requested edits relies on the outcome of the prior steps in the accounting protocol and is not an avenue for following a different accounting protocol. Although there is significant flexibility in the accounting protocol for proposing alternative design criteria or submitting an alternative analysis within the parameters of the final accounting assessment, these flexibilities do not include the ability to follow a different accounting protocol.

Some commenters requested the ability to submit additional documentation for consideration in the habitat accounting assessment. HRL participants would be free to submit any documentation to support requests for variances to design criteria or for any other approval steps defined in the program of implementation. To add clarity, this ability is now explicitly acknowledged within the procedure for proposing design criteria variances.

Commenters requested the addition of language stating that any changes to the flow accounting procedures could not be used to require the HRL participants to restore more habitat than the amount that would have been calculated by the initial method. Given the considerable flexibility in the habitat accounting protocols, it is unclear how this could be assessed. Any change to the accounting protocol would occur through a public process in which any interested parties would be able to comment.

While many comments were received on the habitat accounting requirements, the habitat accounting procedures include significant flexibility. HRL participants can propose alternative design criteria or alternative analyses for the final habitat accounting assessment step. These flexibilities appropriately provide for State Water Board oversight while allowing for new scientific information and enabling projects to be designed for the unique circumstances in each tributary and region.

Supplemental Science and Monitoring

HRL participants would be required to conduct supplemental science and monitoring in addition to general monitoring processes and activities described in the section below, *Bay-Delta Monitoring and Evaluation Program*. The HRL participants would be required to develop hypotheses, metrics, targets, and associated monitoring to inform assessment of compliance and effectiveness of the VA pathway. The hypotheses, metrics, targets, and monitoring would be provided to the Executive Director for approval and may be updated through the annual or periodic review process after public review and comment. The HRL monitoring as approved by the Executive Director would be required to begin within the first year of implementation of the VA pathway. The HRL supplemental science and monitoring would be incorporated within the BDMEP defined below and would be required to adhere to the requirements in the BDMEP, including for review and revision of monitoring and special studies, data management and quality, and reporting. In conducting supplemental monitoring, HRL participants should coordinate with any topically and geographically related monitoring surveys, including the Delta and San Francisco Bay Regional Monitoring Programs. In addition, the HRL participants would be required to provide support for implementation of the Delta Cyanobacterial Harmful Algal Blooms (CHABs) Monitoring Strategy.

The HRL participants would also be required to conduct habitat suitability assessments and habitat utilization and biological effectiveness assessments. The habitat suitability assessments would evaluate the suitability over time of non-flow habitat restoration projects and their conformance to applicable design criteria and other variables with an influence on habitat suitability, such as dissolved oxygen and temperature. The habitat utilization and biological effectiveness assessments would evaluate whether each project is effective in achieving biological outcomes and the applicable narrative objectives, based primarily on empirical data and observations obtained through monitoring. These assessments would evaluate whether and the extent to which constructed non-flow habitat restoration sites are being used by target native species populations and life stages. Habitat suitability and utilization and biological effectiveness assessments would be conducted annually for the term of the VA pathway. For more information regarding the HRL supplemental science and monitoring, see Section 4.4.9.7 of the revised proposed Plan amendments.

Responses to Comments

Some commenters requested that the revised proposed Plan amendments incorporate the HRL Science Plan. The HRL participants are still working on developing a final HRL Science Plan, which they anticipate completing after adoption of the Plan amendments. Therefore, there is no final HRL Science Plan that could be incorporated within the revised proposed Plan amendments. However, after Plan adoption, the HRL participants would be required to submit the operable components of the HRL Science Plan, i.e., the hypotheses, metrics, targets, and monitoring, for consideration of approval.

Several commenters requested changes to the timelines or specific requirements for HRL supplemental science and monitoring. The timelines for hypotheses, metrics, targets, and monitoring are necessary to ensure that the HRL participants can collect and analyze data for the full initial 8-year term of the VA pathway to inform the Board's decision on the consideration of continuation, modification, or termination at the end of the 8-year term. Similarly, the specific requirements for HRL supplemental science and monitoring are necessary to ensure a complete evaluation of the effectiveness of the VA pathway.

Some HRL participants requested removal or reduction of the contaminant (pesticide and methylmercury) monitoring requirements. Other commenters, including CDFW (an HRL participant) supported the pesticide and methylmercury monitoring requirements. The contaminant monitoring requirements in the VA pathway are limited to the geographic areas affected by the HRL habitat restoration actions that may be expected to affect contaminant concentrations. Staff Report Chapter 4, *Other Aquatic Ecosystem Stressors*, and Section 7.21, *Habitat Restoration and Other Ecosystem Projects*, document the evidence supporting pesticide and methylmercury impacts from floodplains and flooded agricultural lands.

An HRL participant requested that the Plan require 100% marking on fish released from hatcheries since this would help evaluate the HRL hypotheses. HRL participants, including the commenter, are responsible for conducting the monitoring necessary to evaluate the effectiveness of the VA pathway. HRL participants also include the entities operating or funding fish hatcheries in the Sacramento/Delta watershed. A proposal to fund a 100% marking program could be included in the HRL monitoring plan submitted to the Board after Plan adoption.

Some HRL participants requested additional detail on the required frequency of monitoring for HRL habitat restoration projects, or suggested that the requirement to monitor for a minimum of 8 years was too long. In response to this comment, the required monitoring duration was revised to remove

the prior requirement for at least 8 years of monitoring and instead specify that the monitoring would need to be conducted for the duration of the VA pathway. The requirement to monitor restoration projects for the duration of the VA pathway is necessary to achieve the intent of the VA pathway to determine the effectiveness of their combination of flow and non-flow habitat commitments. The combination of the high hydrological variability in the Bay-Delta watershed with the time necessary for restoration sites to become established after completion of construction necessitates monitoring over at least the duration of the VA pathway in order to evaluate the effectiveness of the restoration action. The numerous comments from environmental NGOs and HRL participants about the difficulty in evaluating the effectiveness of the VA pathway after only 8 years further highlight why it is important to ensure data are collected for as long as possible. Without high quality monitoring data on the effectiveness of the habitat restoration projects, the Board would not have the information necessary to determine whether the VA pathway is effective enough to justify its continuation after the end of the initial 8-year term. In addition, at the recommendation of CDFW (Swart pers. comm.), the required frequency for monitoring habitat restoration projects was clarified to be annually at a minimum.

Some commenters, including HRL participants, requested that the revised proposed Plan amendments require the HRL Science Committee to be open to all interested participants. The HRL participants have stated that the HRL science committee has an "open door." Although expanded participation has not yet occurred, the Plan amendments require that HRL participants allow tribal participation in the HRL science committee, and the Board expects the HRL participants to allow other interested parties to participate as well.

Commenters expressed concern about the scope of the HRL science committee and governance structure and particularly whether it would encompass all monitoring conducted pursuant to the Bay-Delta Plan. These commenters were concerned about overlap with existing monitoring governance systems such as the Interagency Ecological Program (IEP) and requested the addition of clarification to the scope of the HRL science committee. In response to these comments, clarification has been added that the science committee would be limited in scope to the supplemental science and monitoring for implementing the HRL commitments.

Harmful Algal Bloom Monitoring

Some commenters requested further clarification on HAB monitoring included as part of the Supplemental Science and Monitoring required by HRL participants. The HRL hypotheses and monitoring described above would be required to include HAB monitoring and commitments to support the Delta CHAB Monitoring Strategy, including providing support for implementing a Delta-wide HAB monitoring program and special studies. The HAB monitoring would also be required to include monitoring on HRL tributaries following the tiered approach detailed in Table A-3 of Appendix A of the revised proposed Plan amendments.

HAB monitoring by HRL participants is necessary due to the current gaps in monitoring that exist in the Bay-Delta system. As described in Chapter 4, *Other Aquatic Ecosystem Stressors*, cyanobacteria and their toxin levels are not routinely measured in the Delta despite their regular occurrence at potentially toxic concentrations. The Delta CHAB Monitoring Strategy identifies a lack of coordinated monitoring in areas of the Delta that are known for exhibiting severe HABs and suggests additional special studies to help fill key knowledge gaps and further inform monitoring needs (Preece et al. 2024). Chapter 4 also describes the lack of knowledge around drivers of HABs in the Delta. Special studies focused on HAB dynamics in the Delta along with a more comprehensive

network of monitoring can provide the necessary data for better understanding drivers and informing the development of mechanistic and predictive models for HABs and for testing management and mitigation measures. The USGS has prepared a Delta CHAB Monitoring Designs Report, recommending possible monitoring designs that could be implemented as part of a Delta-wide CHAB monitoring program. These recommendations include a tiered monitoring structure aimed at understanding management questions about baseline conditions and long-term status and trends for CHABs in the Delta (Bouma-Gregson et al. 2025). A tiered approach is intended to use monitoring resources more efficiently by applying more resources when CHAB conditions pose a higher risk and fewer resources when the risk is lower. The tiered monitoring structure is further described below within the *Monitoring and Evaluation* section of this common response.

Commenters also stated that the requirement for HAB monitoring on tributaries is unnecessarily broad and lacks scientific support. With climate change increasing temperatures statewide and lower stream flows occurring during drought years (Herbold et al. 2022), HABs may become more common in areas outside of the Delta in the future, necessitating monitoring on the tributaries to ensure sufficient data is collected for better understanding conditions that lead to bloom formation. Additionally, HAB toxins may be transported from headwater sources to downstream receiving waterbodies and monitoring on the tributaries is necessary to understand how cyanobacteria and cyanotoxins may be transported into the Delta (Howard et al. 2023). The Water Quality Monitoring Council's HAB Reports Map indicates that HAB incidents have been reported and confirmed at multiple tributary locations, including on the Yuba River and other HRL tributaries, during the 2022-2026 time period (California Water Quality Monitoring Council, n.d.). Gathering data on the tributaries is necessary for better understanding long-term status and trends of HABs and for developing mechanistic and predictive models for HABs.

The State Water Board has heard concerns throughout the Sacramento/Delta update process from California Native American Tribes about HABs on tributaries to the Sacramento/Delta that pose risks to ceremonial and other tribal uses of water. Tribes have also expressed concerns about a lack of monitoring for HABs on the tributaries. Throughout the Plan update process, many other commenters have expressed the desire for increased monitoring of and response to HABs. To support appropriate management and mitigation responses to HABs, additional data collection is needed. Requirements for HAB monitoring were included within the HRL supplemental science and monitoring in response to tribal and public comments during public workshops to help fill the need for sufficient HAB data collection.

Annual Reports, Periodic Reports, and Ecological Outcomes Analysis Report

The HRL participants will be required to submit annual reports, periodic reports, and an ecological outcomes analysis report to the State Water Board. These reports will be required to include all associated accounting and ecological monitoring data. In addition, HRL participants would be required to participate in annual public meetings before the State Water Board consistent with the annual and periodic review processes described below in the *Annual and Periodic Review* section, including possible needed revisions to science and monitoring activities. California Native American Tribes and the public will have the opportunity to provide input on HRL science and monitoring activities during annual reviews.

Annual reports will be required to include information on HRL actions, including HRL flow and non-flow measures, that were taken in the previous year, an implementation schedule for HRL non-flow habitat restoration projects, a summary of scientific findings, a summary of tribal outreach and

engagement, a summary of expected HRL activities for the next water year, an analysis demonstrating that implementation of the HRL commitments did not result in redirected impacts to native fish and wildlife resources in the Trinity River watershed, and an assessment of water temperature management in each HRL tributary including any planned improvements in future years.

Periodic reports will be required to be submitted every 3 years and include all items required for annual reports over the prior 3 years, and an analysis of progress to date on contributing toward the applicable narrative objectives, including progress related to HRL hypotheses, metrics, and targets informed by required monitoring.

The ecological outcomes analysis report is required to be provided after year 6 of implementation of the VA pathway. The ecological outcomes analysis report would include a synthesis of scientific data and information generated by the VA pathway with documentation of the hypotheses tested, and associated monitoring, evaluation, and results. The ecological outcomes report will be required to evaluate the scientific basis and rationale for continuing the VA pathway as is, or continuing the VA pathway with modifications, beyond year 8 if HRL participants intend to seek an extension of the VA pathway beyond the initial 8-year term, as well as possible termination of the VA pathway for HRL water rights. The report will be required to contain methods and presentation of the results equivalent to those in the Scientific Basis Report Supplement for the initial VA pathway in order to evaluate whether the expected benefits occurred. The State Water Board will request a Delta Independent Science Board review of the ecological outcomes report to receive input and recommendations on the scientific rationale for continuing or modifying the VA pathway. For more information regarding the HRL reporting requirements, see Section 4.4.9.8 of the revised proposed Plan amendments.

HRL Governance

State Water Board staff will provide advice and oversight on compliance and participate in decision-making affecting the HRL Governance as described in the revised proposed Plan amendments. HRL participants will also be required to engage with California Native American Tribes and consider their input in decision-making affecting HRL Governance, including but not limited to tribal participation in the HRL science committee. HRL participants will be required to develop a tribal engagement plan in coordination with tribes, describing specific tribal engagement opportunities related to HRL milestones that would require approval by the Executive Director of the State Water Board prior to year 1 of the initial 8-year term of the VA pathway. The tribal engagement plan will be required to include the designation of a tribal coordinator responsible for engaging with tribes and liaising between the HRL participants and the State Water Board on tribal matters relevant to the VA pathway. For more information regarding HRL governance see Section 4.4.9.9 of the revised proposed Plan amendments.

Responses to Comments

Some commenters requested that HRL governance include opportunities for public engagement and transparency in governance. As described above, the HRL participants will be required to engage tribes throughout their governance and specifically engage tribes and NGOs in the development of targets as part of the supplemental science and monitoring. In addition, the annual and periodic reviews will offer opportunities for public engagement on the VA pathway through the Board's processes.

Commenters requested that adaptive management decisions be delegated to the HRL governance committee instead of requiring Executive Director approval, or in cases where the Board must retain decision-making, those decisions should be made by the Board itself with input from the HRL governance committee. As further described below in the discussion of State Water Board oversight, the Board is required to maintain an appropriate level of oversight and cannot delegate these authorities to other entities. However, the HRL governance committee, along with other interested parties, would generally have the opportunity to provide input on decisions made by the Executive Director or the State Water Board, Furthermore, decisions by the Executive Director could be revisited by the Board during annual reviews, with opportunity for public input.

Continuation, Modification, or Termination of the VA Pathway

The VA pathway would remain in effect for a term of 8 years after the effective date, unless the VA pathway is terminated before 8 years or extended as discussed below. The State Water Board could also require modifications to the VA pathway as discussed below. Prior to a decision to extend, modify, or terminate the VA pathway, State Water Board staff would produce a draft recommendation that would undergo public comment and Delta Independent Science Board review and input before consideration by the State Water Board at a public Board meeting. The following default and annual and periodic review processes apply to extension, modification, or termination of the VA pathway.

Under the default process, the HRL participants could submit a request to the State Water Board at year 6 of VA pathway implementation to extend the VA pathway beyond the initial 8-year term. The State Water Board would then initiate a process to evaluate the VA pathway for consideration of extension, including possible modifications. The State Water Board would solicit public comments and hold a public workshop to discuss the possible extension and modification of the VA pathway, including information regarding the effectiveness of the VA pathway at achieving the applicable narrative objectives. Following the public workshop, the State Water Board would act on the request for VA pathway extension or modification to determine whether to extend the VAs after year 8. The State Water Board would consider the green, yellow, and red light criteria to determine the continuation of the VA pathway (green light), modification of the VA pathway (yellow light), or termination of the VA pathway (red light).

If the draft recommendation is to terminate the VA pathway, the State Water Board staff would include an addendum to the Scientific Basis Report Supplement that synthesizes the then-current scientific information concerning flows for the protection of fish and wildlife beneficial uses. The addendum would be publicly circulated for comment with the draft recommendation for continuation, modification, or termination of the VA pathway and provided to the Delta Independent Science Board for review and input. The State Water Board would consider that addendum as part of its Board meeting on the staff recommendation for continuation, modification, or termination of the VA pathway. If the State Water Board concludes that it is appropriate to terminate the VA pathway under the red light scenario discussed below, it would also decide whether any modifications to the regulatory pathway are necessary in recognition of updated scientific information in the addendum or other legal or policy reasons and take one of the following actions:

1. If the State Water Board determines modifications to the regulatory pathway are necessary, it would immediately commence an update to the Bay-Delta Plan or its implementing regulation to incorporate the necessary changes.

2. If the State Water Board determines modifications to the regulatory pathway are not necessary, it would provide a new determination, that is judicially reviewable under Code of Civil Procedure section 1085, that the regulatory pathway is legally and scientifically appropriate under the provisions of Water Code section 13241.

A green light determination could occur if the State Water Board concludes that the VA pathway provided flow and non-flow commitments, including in a manner substantially consistent with Board-approved accounting protocols, and the monitoring, science, reporting, and other requirements of the Bay-Delta Plan have been fulfilled. The State Water Board would also be required to determine that the VA pathway is substantially achieving the HRL metrics and targets, including biological effectiveness, habitat suitability, and habitat utilization criteria; and that the ecological outcomes analysis and other relevant information support the conclusion that continuing the VA pathway would contribute the HRL participants' responsibility toward attainment of the narrative fish viability and salmon protection objectives by 2050.

A yellow light determination could occur if the State Water Board concludes that the VA pathway provided flow and non-flow commitments, including in a manner substantially consistent with Board-approved accounting protocols, and the monitoring, science, reporting, and other requirements of the Bay-Delta Plan have been fulfilled. The State Water Board would also be required to determine that the VA pathway is meeting a significant number of HRL metrics and targets, including biological effectiveness, habitat suitability, and habitat utilization criteria; and the ecological outcomes analysis and other relevant information support the conclusion that continuing the VA pathway, with modifications, would contribute the HRL participants' responsibility toward attainment of the narrative fish viability and salmon protection objectives by 2050.

The red light determination could occur if the State Water Board concludes that the VA pathway is not achieving the conditions above for the green or yellow light determinations. Under a red light determination, the State Water Board may determine the regulatory pathway provisions, including the Sacramento/Delta inflow and cold water habitat and inflow-based outflow provisions, would apply to the HRL water rights. The State Water Board could also determine that modifications to the regulatory provisions are needed and pursue appropriate processes to update the Bay-Delta Plan.

In addition to determining whether the VA pathway should continue after year 8, the VA pathway could be modified or terminated as part of the State Water Board's annual or periodic review processes prior to or after the end of the 8-year term. Specifically, the VA pathway may be modified or terminated if the HRL participants fail to or are unable to implement HRL commitments including failure to implement the HRL flow, habitat, funding, monitoring, science, or other provisions consistent with the program of implementation or withdrawal of a party or parties from the VA pathway that materially affects the ability of any remaining HRL participants to fulfill their HRL commitments included in the program of implementation. The State Water Board would conduct a public workshop and solicit public comments and could allow additional time for the HRL participants to come into compliance before considering modification or termination of the VA pathway. The State Water Board may modify or terminate the VA pathway for compliance issues without a Bay-Delta Plan amendment.

In addition, as part of the periodic review processes, the State Water Board could consider modifying or terminating the VA pathway before year 8 based on significant evidence that continuing implementation of the VA pathway will not provide reasonable protection of beneficial uses or will jeopardize the continued survival of native fishes. State Water Board staff would

prepare an assessment that would undergo public comment and Delta Independent Science Board review and input before consideration by the State Water Board at a public Board meeting. If the State Water Board determines that significant evidence supports the conclusion that continuing implementation of the VA pathway will not provide reasonable protection of beneficial uses or will jeopardize the continued survival of native fishes, the State Water Board could modify or terminate the Bay-Delta Plan's VA pathway through a Bay-Delta Plan amendment.

For more information regarding processes to continue, modify, or terminate the VA pathway, see Section 4.4.9.10 of the revised proposed Plan amendments.

Responses to Comments

Some commenters contend that if the VA pathway is discontinued, the State Water Board would need to restart the water quality control planning process. The State Water Board analyzed all components of the revised proposed Plan amendments, including the regulatory pathway and the VA pathway, so that the Board would not need to restart the water quality control planning process if the VA pathway is discontinued. If the Board decides to modify or terminate the VA pathway at the end of the initial 8-year term, or if the Board determines the HRL participants are not complying with the requirements in the Bay-Delta Plan at any time, including before year 8, the Board may choose to pivot some or all HRL participants to the regulatory pathway without a Bay-Delta Plan amendment. Commenters also questioned whether termination of the VA pathway would be an automatic process or if there would be a public process. There are extensive public process steps included before any decision to continue, modify, or terminate the VA pathway and the Board would retain discretion in its decision-making.

HRL participants and related commenters expressed concern about the ability to modify or terminate the VA pathway prior to the end of the initial 8-year period since they contend it would result in water supply uncertainty. These commenters requested regulatory assurances. Other commenters expressed concern about whether the HRL participants would fulfill their commitments and questioned whether there were sufficient safeguards if commitments were not provided. Additionally, commenters stated that 8 years is too long to wait to determine the effectiveness of the VA pathway, given the current declining status of native fishes. As described above, the Board would regularly evaluate the compliance and effectiveness of the VA pathway through annual and periodic review processes and provisions are included to allow for modification or termination of the VA pathway prior to the end of the 8-year term under certain circumstances. This is necessary to ensure State Water Board oversight over the VA pathway and provide the opportunity to change direction if the HRL commitments are not provided or are not reasonably protecting fish and wildlife consistent with provisions of the Porter Cologne Act and Clean Water Act.

Some commenters requested expansion of the determination that is judicially reviewable under Code of Civil Procedure section 1085 to apply to all decisions to modify or terminate the VAs. Commenters also suggested edits to expand the evaluation of then-current scientific information concerning flows for the protection of fish and wildlife beneficial uses that would occur during a red-light scenario. Other commenters expressed concern that these provisions would effectively require adoption of amendments to the Plan before pivoting to the regulatory pathway, and would trigger requirements to complete CEQA, rulemaking under the Administrative Procedures Act, and consideration of updated scientific information. These procedures already outline a rigorous

process for public review and assessment of the HRL experiment, but do not require a new plan amendment. Therefore, no changes were made.

Some commenters requested to add additional procedural steps and limitations to the processes for possible modification or termination of the VA pathway as part of annual or periodic reviews. These provisions already include significant constraints and process, including a requirement to amend the Bay-Delta Plan if the modification or termination is based on significant evidence that continuing implementation of the VA pathway will not provide reasonable protection of beneficial uses or will jeopardize the continued survival of native fishes. Therefore, no changes were made.

Some commenters argued that the provisions for continuation, modification, or termination of the VA pathway unlawfully provide regulatory assurances to the HRL participants and include procedural requirements that unlawfully constrain or bias the Board's discretion in the future. These provisions outline a rigorous process for public review and assessment of the HRL experiment at the end of the 8-year period, but do not require a new plan amendment. Committing to this assessment process via Plan language does not impermissibly constrain the Board and these procedural constraints could be removed via a Plan amendment in the future should a future Board choose to do so. In addition, the Board would have the ability to modify or terminate the VA pathway for compliance reasons without a Plan amendment at any time before or after the initial 8-year period.

Commenters further contended that the program of implementation does not demonstrate how the objectives would be achieved if the VAs are terminated since they alleged that no other requirements would become immediately applicable. If the VA pathway is terminated at year 8, the Plan includes a process for reviewing any new scientific information concerning flows for the protection of fish and wildlife beneficial uses and determining whether any updates are needed to the regulatory pathway. If the Board determines modifications to the regulatory pathway are necessary, it will commence an update to the Plan or its implementing regulation. If the Board determines that updates are not needed to the regulatory pathway, the Board will provide a new determination, that is judicially reviewable under Code of Civil Procedure section 1085, that the regulatory pathway is legally and scientifically appropriate under the provisions of Water Code section 13241, and the HRL water rights would become subject to the regulatory pathway requirements. The Board would commence these actions in advance of the termination date to ensure that replacement requirements can be applied at the date the VA pathway is terminated.

Some HRL participants or related commenters requested changes to the red, yellow, or green light criteria, for example to replace "substantially achieving the HRL metrics and targets" with "substantially contribute to achieving the HRL metrics and targets," or to clarify what would continue or what would change in the VA pathway under a green light scenario. The "substantially achieving" language was incorporated from the VA proposal in the MOU and substantively unchanged except for terminology updates. In order to preserve clarity in the criteria, these and other suggested changes to the red, yellow, and green light criteria were not made.

The provisions for continuation, modification, or termination of the VA pathway previously referred to an "ecosystem protection objective." This has been corrected to refer to the "fish viability objective."

Enforceability

Responses to Comments

Some commenters argued that the VAs are not enforceable because they are voluntary or have no clear enforceable standards. The HRL commitments are included as regulatory requirements in the revised proposed Plan amendments and the VA pathway will have regulatory effect upon adoption of the Plan amendments. The revised proposed Plan amendments include clear descriptions of the required actions the HRL participants are required to conduct (e.g., flow, habitat, and science), the required timelines for those actions, and the consequences if those actions and timelines are not complied with. Early termination or modification of the VA pathway for some or all HRL water rights is the primary enforcement mechanism for the VA pathway within the Board's authority. For example, if the commitments are not met on an HRL tributary, all HRL water rights assigned to that tributary's table of HRL water rights in Appendix B.1 could be removed from the VA pathway and subjected to the regulatory pathway. The Board will also consider compliance with the VA pathway requirements in its determination of continuing, modifying, or terminating the VA pathway after the initial 8-year term. These provisions are described further in the prior section, *Continuation, Modification, or Termination of the VA Pathway*. Furthermore, the revised proposed Plan amendments require the HRL participants to produce reports and participate in the annual and periodic review processes, which will provide the public with an opportunity to comment on the implementation of the VA pathway and allow the Board to consider actions related to the VA pathway.

Several commenters requested the State Water Board commit to signing enforcement agreements as proposed by the HRL participants as the enforcement mechanism for the VA pathway and requested removal of references to other implementation mechanisms such as decisions, orders, and regulations. Other commenters argued that enforcement agreements are not appropriate because all interested parties in the watershed were not involved in the negotiation of the agreements. As described above, early termination or modification is the primary enforcement mechanism for the VA pathway within the Board's authority and the Board would have the freedom to use any other mechanisms within its authority, including orders, decisions, or regulations. The Board may issue Government Code section 11415.60 decisions by settlement or other decisions, orders, or regulations to enforce VA pathway commitments in accordance with the Plan's provisions. If and when the Board proceeds with enforcement agreements under Government Code section 11415.60, there would be an opportunity for public comment on those agreements before the Board or Executive Director makes a final decision on whether to accept the agreement.

Some HRL participants expressed concern about some HRL participants backstopping the HRL flow commitments of other participants, or being held responsible for operation of facilities they do not control, and requested that the Board ensure all HRL participants are complying with their requirements. Commenters also requested that the Plan identify the roles and responsibilities for each HRL participant, including a lead entity for each tributary. Similarly, some commenters requested the Plan identify contingency strategies for HRL participants if flow commitments cannot be met. The State Water Board expects the HRL participants to work together collaboratively to resolve compliance issues before they occur. The HRL water rights listed for each HRL proposal in the separate tables of Appendix B.1 are collectively responsible for providing the flow and habitat commitments included in that proposal. If those commitments do not materialize, all water rights on that table of HRL water rights could be removed from the VA pathway and subject to the regulatory pathway. However, to address these concerns, an additional provision was added to give the HRL

participants the ability to request the Board remove HRL water rights from the VA pathway. In addition, the revised proposed Plan amendments now state the intent of the State Water Board that any implementation methodology will reflect the HRL participants' commitments, and that HRL participants, including the CVP and SWP, will not be expected to backstop the commitments of other HRL participants or parties subject to the unimpaired flow regulatory inflow and inflow-based Delta outflow requirements.

Implementation Methodology

The State Water Board will implement the flow components of the Sacramento/Delta updates to the Bay-Delta Plan through water right or water quality actions, as necessary, including and primarily through water right curtailments based on water right priorities subject to possible modifications (e.g., drought, public health and safety, public trust obligations). The State Water Board would curtail water rights when it is determined that:

1. Water is not available at water right priorities regardless of instream flow requirements. These curtailments would apply to all water rights, including for HRL water rights that are part of the VA pathway, unless an approved exception to curtailment applies.
2. Water is not available based on water right priorities due to responsibility for meeting the tributary inflow and the inflow-based Delta outflow requirements. These curtailments would apply unless a water right is covered under the VA pathway or an exception to curtailment applies.

To inform the above curtailments, the State Water Board would develop an implementation methodology to determine when water is not available at water right holders' priorities of right, including operational rules for reservoir management and integration of adaptive implementation provisions. The Executive Director could approve exceptions to curtailments for certain wildlife refuge supplies. In addition, the State Water Board would develop appropriate provisions to address human health and safety needs and other possible reasons for short-term and long-term exceptions to curtailments associated with implementation of the Bay-Delta Plan for specific purposes.

This methodology would be based on the Water Unavailability Methodology for the Delta Watershed, which was developed and used to implement emergency drought curtailment regulations in water years 2021 to 2023. The methodology will incorporate water right demands for water and unimpaired flow data in order to determine when water is not available for diversion under specific water right priorities. The methodology would be developed through a public process before use in implementation of the Bay-Delta Plan and would be subject to refinement over time through a public process. For more information about the implementation methodology, see Section 4.4.3 of the revised proposed Plan amendments.

Responses to Comments

Considerations in Developing an Implementation Methodology

Some commenters suggested that the Staff Report should account for differences in the size, upstream versus downstream position, and relative water right priorities of different watersheds and state clear rules including compliance points and responsibilities of water right users upstream of rim dams. As described in Section 13.3.3.2, *Sacramento/Delta Tributary Inflows*, of the Staff Report, the inflow objective would generally be implemented in order of water right priority within

each subwatershed to provide for benefits in all tributaries subject to the regulatory pathway inflow requirements. Initial compliance points are defined in the revised proposed Plan amendments and may be updated in the future with Executive Director approval. The implementation methodology will also account for the connectivity and relative upstream or downstream location of subwatersheds and tributaries within the Bay-Delta watershed.

Commenters expressed concern about how instream flow dedications would be protected with the implementation methodology. The implementation methodology will include provisions for protecting approved instream flow dedications from diversion consistent with the extent of those dedications, including dedications that are approved as contributing to Delta outflows.

Some commenters expressed concern that implementation of the lower San Joaquin River flow objectives would be modified by edits to the program of implementation, including the provision for integrating the Sacramento/Delta implementation methodology with the methodology to implement lower San Joaquin River instream flows. These provisions do not modify the lower San Joaquin River flow objectives or their implementation. The lower San Joaquin River flow objectives have broad implementation options that encompass an approach that could be integrated to the extent possible with the implementation methodology for the Sacramento/Delta updates. This also includes the option of using a regulation, which is within the Board's authority and within the scope of implementation mechanisms identified for the lower San Joaquin River flow objectives. Please see Common Response 1.2, *Water Quality Control Planning Process*, for additional information on the implementation methodology and curtailment regulation.

Board Authority

Some commenters alleged that the State Water Board lacks the authority to administer the water rights priority system through non-emergency curtailment regulations based on a water accounting methodology. They alleged that water rights can only be curtailed through adjudicatory decisions involving an evidentiary hearing and that the Board's limited authority to prevent the waste and unreasonable use of water does not extend to curtailments based on water right priority. As discussed in Common Response 1.2, *Water Quality Control Planning Process*, the Board has authority to adopt regulations as appropriate in carrying out its powers and duties.

Commenters further alleged that the State Water Board cannot use the curtailment methodology that was used during the water year 2021 to 2023 drought emergency because that methodology was developed for emergency conditions and not for the purposes of the Bay-Delta Plan. They alleged that because the Plan is intended to be used over long periods of time rather than as an urgent response to drought, the prior methodology has no scientific basis in supporting the Plan's objectives. They also claimed that, by relying on a methodology developed during a drought emergency, the Board is not following through on its promise to develop an implementation methodology through a public process. Although the implementation methodology for this update to the Bay-Delta Plan is planned to generally be based on the previous drought curtailment methodology, the Board will make any appropriate and necessary refinements to through a public process, including technical analyses, before using it to implement the Bay-Delta Plan.

Generally, the Board plans to implement the Plan through the use of curtailment regulations, though the Board may consider other or additional implementation procedures that are designed to achieve similar outcomes, including 401 certifications, water rights orders, or some other mechanisms.

Water Right Priority

Some commenters requested that references to use of the implementation methodology under the VA pathway be removed, indicating that the HRL commitments are not based on water right priority. All water rights are subject to the rule of priority unless there is agreement amongst all affected water right holders to an alternate arrangement or another valid exception applies. Because there are water rights that are not included in the VA pathway that are included in the regulatory pathway and HRL water rights may shift to the regulatory pathway, a system is needed to implement these two pathways consistent with water right priorities. While the flows provided under the VA pathway may be provided by willing sellers or other similar arrangements not based on water rights priorities, to dedicate those flows instream under the VA pathway, water must be available under the right in which flows are dedicated while meeting senior demands for water. Without the implementation methodology there is not a mechanism for evaluating, determining, or ensuring that HRL flows are provided consistent with water right priorities without impacting other water right holders and there is not a mechanism to protect HRL flows. A mechanism is also needed to determine responsibilities for providing regulatory pathway flows consistent with water right priorities and to protect the flows provided under the regulatory pathway from diversion by other water rights, including HRL rights, consistent with water right priorities. The implementation methodology, which is simply a tool to implement the water right priority system based on available supplies, is intended to be developed and used for these purposes. While some commenters have objected to the development and use of the implementation methodology, they have not suggested another mechanism to provide for the VA pathway and regulatory pathway to be implemented consistent with water right priorities.

Several commenters expressed concern that by allowing curtailment exceptions, the implementation methodology would circumvent the rules of priority and would not allow impacted diverters sufficient opportunity to oppose such exceptions. Although the implementation methodology will be based on water right priorities, some modifications may be warranted to account for public health and safety considerations, public trust obligations, or other circumstances. The Board has authorities under the public trust doctrine and article X, section 2 of the California Constitution to prevent the waste and unreasonable use of water. Such authority may be used alongside water right priorities to implement the proposed Plan amendments. In some cases, this may involve allowing exceptions to curtailment or tailored flow requirements for human health and safety, wildlife habitat, and other such exceptions. As mentioned above, the implementation methodology, including the process for granting exceptions to curtailment, will be further developed and refined through a public process before being used to implement the Bay-Delta Plan.

Commenters also alleged that modifications or exceptions to the implementation methodology may significantly impact the temperature and availability of water and should therefore be more thoroughly discussed in the Staff Report in order to understand all environmental impacts. The Staff Report thoroughly analyzes the environmental impacts of the Project and a range of alternatives including higher and lower flows. Curtailment exceptions for wildlife refuges, human health and safety, or other appropriate reasons would not significantly change flows and have always been a component of the proposed Project, for example see Staff Report Sections 5.6.2.3, *Climate Change, Drought, and Public Safety*, and 5.6.2.6, *Refuge Water Supplies and Other Wildlife Protection Measures*.

Some commenters expressed concern that the Plan amendments indicate that other water right holders other than DWR and Reclamation, including more senior water right holders, will be responsible for meeting the new objectives and implementation measures instead of identifying that

DWR and Reclamation will only be responsible similar to the existing responsibilities included in D-1641(that places primary responsibility on DWR and Reclamation's water rights for meeting the objectives identified in D-1641). They allege that this illegally and unjustifiably violates the rules of water right priority. Commenters also misinterpreted that the Plan amendments would modify DWR and Reclamation's responsibilities included in D-1641 to backstop current objectives.

As explained above, the revised proposed Plan amendments would be implemented consistent with water right priorities unless an exception applies and would not modify DWR or Reclamation's existing responsibilities to backstop the objectives identified in D-1641. As also explained above, DWR and Reclamation's responsibility for backstopping the objectives included in D-1641 is the result of a prior agreement to do so for an undefined period, which they could request to change in the future. It is not the reflection of implementing the water right priority system. DWR and Reclamation have not agreed to backstop the new objectives and implementation measures in the revised proposed Plan amendments, other than meeting their commitment identified in the VA pathway. The Plan amendments do not replace or reassign responsibilities of DWR and Reclamation, nor does it reinterpret D-1641 to apply to additional parties. DWR and Reclamation would remain responsible for all flow objectives and other actions assigned to them in D-1641, including the Rio Vista flow objective. As described above, except in cases where exceptions apply, the revised proposed Plan amendments would be implemented in order of water right priority, and therefore the rule of water right priority will not be violated within the discretion and other authorities provided to the Board.

Commenters also raised detailed technical and legal arguments related to the previous methodology, including its treatment of water rights in the Delta that were claimed as both riparian and pre-1914 appropriative rights. In developing the implementation methodology for the Bay-Delta Plan through a public process, the State Water Board will ensure that water right priorities are properly represented and consistent with water rights law and established policies. This includes relative priorities among riparian claims, pre-1914 appropriative claims, and post-1914 appropriative rights.

Unimpaired Flows

Commenters expressed concern regarding how unimpaired flows would be calculated and claimed that implementing the regulatory pathway based on a percentage of unimpaired flows would be infeasible. Assertions that implementation of the regulatory pathway is infeasible are unfounded. As described above, the instream flow requirements of the regulatory pathway will generally be implemented through a system of curtailments based on a methodology similar to the Water Unavailability Methodology for the Delta Watershed, which was successfully used to issue emergency curtailments based on unimpaired flow during the 2021 to 2023 drought emergency.

Commenters remarked on the timescale on which unimpaired flows would be calculated. Many commenters expressed concern about the 7-day running average and suggested that references to a 7-day average be removed from the revised proposed Plan amendments. They claimed that it would not be implementable because of alleged unavailability of sufficient data and claims that unimpaired flows have historically only been calculated with significant time delays. As discussed in Section 5.4.2.4, *Implementation*, of the Staff Report, unimpaired flows will be calculated based on a 7-day running average. Daily unimpaired flow data are publicly available from such sources as the California Nevada River Forecast Center (CNRFC), which was the source of unimpaired flow data during the water year 2021 to 2023 drought (State Water Resources Control Board 2023). Data

from CNRFC are updated daily and includes unimpaired flow values for dates as recent as the current day, as well as forecasts of future daily unimpaired flows extending as far as 365 days from the current day. The implementation methodology will be developed with data tools, assumptions, and flexibility to address the uncertainty that is inherent to the forecasting of future water supply conditions. Public processes will also be utilized to explain these uncertainties and further refine methods to address them. Commenters also claimed that the Staff Report lacks sufficient explanation of how the 7-day running average would be computed. The 7-day running average of unimpaired flows would be calculated using unimpaired flow data, such as that provided by CNRFC, incorporating transit time lags into the analysis as appropriate, as well as measurements collected at the confluence of the tributary or other locations determined by the Executive Director as being necessary for ensuring compliance with the inflow objective. Additionally, Section 4.4.3 of the revised proposed Plan amendments states that additional monitoring and reporting of diversions may be required in the curtailment regulations to supplement any data needed to calculate or enforce the flow requirements.

Diversion measurement data collected pursuant to the water measurement regulation (Cal. Code Regs, title 23, division 3, chapter 2.8) may also be used, including near real-time data collected under the water measurement regulation's large diversion requirements. When necessary, appropriate assumptions will be used to estimate expected demand, including anticipated reservoir storage based on real-time conditions and forecasted inflow. To provide flexibility, the revised proposed Plan amendments now include a provision for integrating the adaptive implementation provisions with the implementation methodology and allow for refining provisions for determining curtailments to meet the inflow requirement as a 7-day running average as part of the process to develop the implementation methodology.

Some commenters expressed confusion regarding reservoir operations under the Bay-Delta Plan and how flow requirements and cold water objectives would be simultaneously implemented without having complete forecasts of future hydrological conditions. Flow requirements and cold water habitat protection are intricately linked, with each objective complementing the other. As such, and as discussed above in the section for the *Regulatory Pathway*, cold water habitat implementation actions would be integrated with inflow implementation actions. Owners and operators of reservoirs would be required to develop long-term strategies to meet cold water habitat requirements, including identifying proposed end-of-water-year carryover storage requirements. Additionally, diverters and reservoir owners and operators may propose local cooperative solutions to meet inflow and cold water habitat requirements. Please see Common Response 7.6.2, *Aquatic Biological Resources and Cold Water Habitat*, for more information about the implementation of the cold water habitat objective.

Water Supply Impacts

Some commenters alleged that because the implementation methodology is not currently available, the Board would need to prepare a supplemental analysis when considering any curtailments because the Board has not fully disclosed the implementation methodology. The State Water Board will develop the implementation methodology through a public process within one year of California Office of Administrative Law (OAL) approval of the proposed Plan amendments. As previously described, the implementation methodology would be based on the prior curtailment methodology used in the water year 2021 to 2023 drought emergency. The Board has sufficiently analyzed the revised proposed Plan amendments in the Staff Report. As discussed in Common Response 7.1, *General CEQA and Approach to the Analysis*, subsequent State Water Board actions to implement the

Plan will be examined in light of the Staff Report to determine whether additional environmental analyses must be prepared. Detailed information on the implementation methodology, including the underlying calculations and methods for notifying the public, is not necessary to analyze the environmental impacts.

Commenters also alleged that because the implementation methodology is not currently available, the VA pathway effectively has no backstop in the event that HRL participants are unable to meet their commitments or if the VAs are not effective. The backstop in the event the VA pathway is discontinued is the regulatory pathway as described above. The revised proposed Plan amendments call for the Board to begin implementation of the regulatory pathway within 2 years of approval of the Plan amendments by OAL and to fully implement within 5 years of initial implementation. The VA pathway would remain in effect for eight years, at which point it may either be continued, modified, or terminated. The VA pathway may also be modified or terminated before the eight-year term if, during annual or periodic reviews, the Board finds that HRL participants did not implement HRL commitments, or if there is significant evidence that continuation of the VA pathway would jeopardize the continued survival of native fish species. If the VA pathway is terminated, HRL participants would be required to comply with the regulatory pathway, thereby creating a backstop for the VA pathway. Any former HRL participants who have been moved to the regulatory pathway would be beholden to the same requirements as other water users in the regulatory pathway.

Some commenters objected to any potential redirected impacts to the SWP and CVP that could occur by backstopping the regulatory responsibilities of other parties. In response to these concerns, provisions were added to the Plan amendments to make clear that as part of the development of the implementation methodology, the Board will develop methods to avoid redirected impacts to water right holders in the event of non-compliance by other water right holders. Provisions were also added to identify that the State Water Board intends that any implementation methodology will reflect the HRL participants' commitments, and that HRL participants, including the CVP and SWP, will not be expected to backstop the commitments of other HRL participants or parties subject to the unimpaired flow regulatory requirements.

Data Considerations

Commenters expressed concern about the quality of data being used to inform the implementation methodology related to compliance with the water measurement regulation, the accuracy and extent of water rights and diversion data, and unauthorized diversions. These issues are not unique to implementation of the Bay-Delta Plan, but are wider issues related to better characterizing water right demands relative to available supplies that are fundamental to any efforts to implement the water right priority system in California, particularly during times of shortage as occurred during the 2021 through 2023 drought. The State Water Board has been actively working to improve its data and tools for this reason, particularly as climate change and growing and hardening demands for water intensify this need along with environmental challenges due to water shortages. The State Water Board has specifically revised the water measurement regulation with the goal of standardizing data, improving data quality, and simplifying requirements to improve regulatory compliance. Through the revised water measurement regulation and planned refinements to the prior drought curtailment methodology before implementing the Bay-Delta Plan, the Board anticipates improvements in the quality and extent of water rights and diversion data that will further improve the accuracy of data informing implementation of the Bay-Delta Plan. The revised proposed Plan amendments also identify that the methodology would be subject to improvement over time given that data and tools are only expected to improve over time. If specific improvements

are needed related to the Bay-Delta Plan, those would be considered during the methodology development process and during annual and periodic reviews.

Interior Delta Flows

Operation of the SWP and CVP pumping facilities and other water diversion projects in the Delta can affect salmonids, pelagic fishes, and other species through alteration of channel flow, which can lead to adverse transport flows, changes in water quality, changes to Delta habitat, and entrainment of fish and other aquatic organisms, depending on the specific diversion facility design and operational criteria. The revised proposed Plan amendments include a new narrative interior Delta flow objective and minor revisions to the existing numeric interior Delta flow objectives. The implementation provisions described below apply to the water rights for the SWP and CVP regardless of whether these rights are subject to the VA or regulatory pathway. The narrative objective is expected to be met through compliance by the SWP and CVP with the numeric interior Delta flow objectives in the Plan and implementation measures required pursuant to State and federal Endangered Species Act requirements for the operations of the CVP and SWP export facilities. As appropriate, during the annual or periodic review of the Bay-Delta Plan and its implementation, the State Water Board would evaluate the effectiveness of the interior Delta flow objectives and implementation actions and any needed changes to the Bay-Delta Plan or its implementation to ensure the reasonable protection of fish and wildlife beneficial uses, including to provide for consistent operations of the CVP and SWP export facilities for the reasonable protection of fish and wildlife.

The December 2025 draft Plan proposed to add specific provisions from the NMFS BiOp for Delta Cross Channel Gate operations to the Bay-Delta Plan, but those are no longer proposed to be added. However, other minor updates to the implementation provisions have been made to this and other interior Delta flow objectives to clarify the language and update decision-making processes.

For more information about the implementation of the interior Delta flow objectives, see Section 4.4.4 of the revised proposed Plan amendments.

Responses to Comments

Some commenters objected to the SWP and CVP bearing full responsibility for the interior Delta flows objectives. In contrast, Contra Costa Water District requested additional clarification that only CVP and SWP are responsible for the interior Delta flows objectives and no other Delta diverters bear responsibility. Consistent with other objectives in the Bay-Delta Plan that are implemented by D-1641, no substantive changes have been made to the numeric interior Delta flow objectives or their implementation measures at this time. Changes could be considered, if appropriate, during periodic review. The specific changes related to responsibility for the existing objectives have not been the focus of the current updates to the Bay-Delta Plan due to a lack of sufficient support for doing so and would require further evaluation and consideration.

Interaction with Federal and State Endangered Species Acts

Some commenters objected to the alleged incorporation of the BiOps and ITPs into the Bay-Delta Plan, or references to those documents. The BiOps and ITPs are not incorporated into the Bay-Delta Plan. Instead, the revised proposed Plan amendments provide for the SWP and CVP to comply with the narrative objective by complying with their existing ESA and CESA obligations rather than

incorporating specific additional numeric requirements into the Plan. Some commenters objected to the reliance on CESA and ESA permit requirements to achieve the narrative interior Delta flow objective because they allege the Board does not require or even suggest actions if those permit conditions change in the future. As described above, the revised proposed Plan amendments provide for annual and periodic review of the effectiveness and any needed changes to the interior Delta flow objectives and implementation actions. Commenters also argued that reliance on CESA and ESA permit requirements would not result in protections for non-listed species. As part of the periodic review process, the Board would consider the effectiveness of the interior Delta flow objectives in providing for the reasonable protection of both listed and non-listed species.

Commenters also objected to alleged conflicts between the revised proposed Plan amendments and ESA or CESA requirements, or alleged that references to the BiOps and ITPs made the State Water Board the de facto decision-maker for the state and federal endangered species acts. The State Water Board and the agencies responsible for the state and federal endangered species acts each have independent regulatory authority and the revised proposed Plan amendments do not alter any of those underlying authorities. Furthermore, as explained further in Common Response 1.1, *General Comments*, regarding the federal and state Endangered Species Acts, the federal ESA states explicitly that "[a]ny State law or regulation respecting the taking of an endangered or threatened species may be more restrictive than the exemptions or permits provided for in this chapter or any regulation which implements this chapter but not less restrictive than the prohibitions so defined." (16 U.S.C. § 1535(f).) This means the State Water Board's requirements would only be in conflict if they purported to relax ESA standards, which they do not and cannot.

Some commenters objected to the inclusion of provisions related to Project operations or fish salvage in the Plan. The Board has clear authority, responsibility, and expertise to develop water quality objectives for the reasonable protection of fish and wildlife and other beneficial uses of water and to implement objectives within the Board's authorities as appropriate. Those authorities include actions needed to avoid and address water quality impairments and administration and continuing oversight over water rights and needed conditions on those rights, including conditions to provide for the reasonable protection of fish and wildlife from diversion activities (e.g., entrainment, impingement, adverse flow conditions, impacts to water quality). Interior Delta flows involve all of those issues and the measures that can be taken to control interior Delta flows are directly related to water diversions by the CVP and SWP under their water right permits and license for which the Board maintains continuing jurisdiction.

The program of implementation describes how, as appropriate, during the annual or periodic review of the Bay-Delta Plan and its implementation, the State Water Board will evaluate the effectiveness of the interior Delta flow objectives and implementation actions and any needed changes to the Bay-Delta Plan or its implementation to ensure the reasonable protection of fish and wildlife beneficial uses, including to provide for consistent operations of the CVP and SWP export facilities for the reasonable protection of fish and wildlife. These provisions are directly within the State Water Board's authorities and responsibilities to ensure the reasonable protection of fish and wildlife, which may call for additional measures beyond those needed to comply with the ESA given that ESA is focused on avoiding jeopardy and Porter Cologne goes beyond jeopardy and calls for the reasonable protection of beneficial uses.

Specifically, interior Delta flow conditions (exports, Old and Middle River Reverse flows) are directly affected by water diversions and related activities (operations of the Delta Cross Channel Gates) by the CVP and SWP under water right permits issued by the State Water Board and over which the

Board has authority and continuing oversight. Further, the existing objectives in the Plan already include objectives for export restrictions and Delta Cross Channel Gate closures that have been included in the Plan since 1995 or earlier and have been implemented by the Board through D-1641 since 2000.

Some commenters objected to the provision regarding consistent operations of the CVP and SWP for the reasonable protection of fish and wildlife. The State Water Board maintains continuing authority over ensuring the reasonable protection of fish and wildlife beneficial uses. If inconsistent operations of the CVP and SWP are jeopardizing protection of fish and wildlife beneficial uses, it would be appropriate for the Board to consider any needed changes to the Bay-Delta Plan or its implementation. The State Water Board may also include specific conditions needed to implement the narrative objective in water right decisions as appropriate, without modification to the Bay-Delta Plan. For the reasons described above and in the discussion of federal and state endangered species acts in Common Response 1.1, *General Comments*, and the discussion of reasonable protection of fish and wildlife in Common Response 1.2, *Water Quality Control Planning Process*, these provisions are retained.

Designation of Tribal Tradition and Culture (CUL) and Incorporation of Tribal and Subsistence Fishing Beneficial Uses

In 2017, in collaboration with California Native American Tribes and the public, the State Water Board established and defined two beneficial uses unique to California Native American Tribes and a third beneficial use unique to people and communities who engage in subsistence fishing, which are CUL, Tribal Subsistence Fishing (T-SUB), and Subsistence Fishing (SUB). Together, these beneficial uses are generally referred to as TBUs. The CUL beneficial use is defined as uses of water that support the cultural, spiritual, ceremonial, or traditional rights or lifeways of California Native American Tribes, including but not limited to, navigation, ceremonies, or fishing, gathering, or consumption of natural aquatic resources, including fish, shellfish, vegetation, and materials. It is expressly designed to encompass the great variety of California Native American cultural, ceremonial, and traditional uses of waters within the State. While not designed to directly protect fish populations and aquatic life, the consumption of fish, as well as tribal cultural ceremonies and spiritual lifeways, depend on healthy fish populations.

The revised proposed Plan amendments designate CUL specifically due to the cultural and spiritual importance of native fish and wildlife that migrate throughout the watershed, particularly salmon, to tribes. The reasonable protection of CUL as it relates to the tribes' cultural ceremonies and spiritual lifeways to salmon overlaps with the reasonable protection of the aquatic life beneficial uses identified in the Bay-Delta Plan or designated in the applicable Regional Water Boards' water quality control plans, including EST, COLD, WARM, MIGR, SPWN, WILD, and RARE (also referred to as fish and wildlife beneficial uses). Although the CUL beneficial use does not itself authorize implementation actions aimed at protecting fish populations, there is a practical overlap: implementation actions taken to protect aquatic life beneficial uses related to flow, water project operations, and physical habitat restoration, also support the healthy fish populations on which tribal cultural uses depend. Other tribal uses and activities encompassed within the CUL use may be directly supported by flow actions, including for example, navigation, gathering and consumption of natural resources, and immersion ceremonies.

The designation of CUL within the Bay-Delta watershed is based on substantial evidence provided to the State Water Board through tribal outreach and engagement efforts. Tribal representatives

shared through written and verbal testimony the significance of salmon within tribal culture, including in creation stories, as a centerpiece of traditional ceremonies and feasts (such as traditional salmon bakes), and the general correlation of Native American life ways with the timing and locations of northern California salmon runs. The State Water Board recognizes the centrality that vital fish populations have for cultural, spiritual, ceremonial, and traditional rights and lifeways of tribes in the Bay-Delta watershed. Salmonids utilize the watershed both temporally and spatially at various life stages, and the tribes' cultural and spiritual use is centered on the connectivity between themselves and their ancestors with these species and the ecosystem that supports them.

Throughout the scoping period, tribal representatives shared the prominent role salmon hold within tribal culture. Through the submission of comments and input delivered at State Water Board workshops, hearings, and other meetings, tribal representatives have offered numerous examples of tribal uses of water within the watershed and the significance salmon and water, including a healthy ecosystem that supports salmon populations, have to tribal culture. The significance of salmon was conveyed through the sharing of relationships between Native American life ways, salmon, and the streams and watersheds that support them. This connection is passed down through generations as Traditional Ecological Knowledge (TEK).

T-SUB and SUB are not designated by the revised proposed Plan amendments for any waterbodies in the Bay-Delta watershed. However, while T-SUB and SUB relate to the risks to human health from consumption of noncommercial fish or shellfish at higher rates and were not developed to in and of themselves protect aquatic life, a thriving fish population, especially salmon which are a key sensitive species in the Bay-Delta Plan, could support fishing at higher consumptive rates; therefore, flow actions for the reasonable protection of fish and wildlife are related to the T-SUB and SUB beneficial uses on the same waters. Implementation measures for the reasonable protection of fish and wildlife also will inure to the benefit of subsistence fishing by tribes and non-tribal communities. Individual stream segments could also be designated for T-SUB and SUB beneficial uses as appropriate by the regional water boards.

Please refer to Common Response 11.1, *Tribal Engagement and Tribal Beneficial Uses*, for information on Tribal Beneficial Uses and responses to comments regarding Tribal Beneficial Uses and other concerns from California Native American Tribes. Please also refer to Section 2.2 of the revised proposed Plan amendments for information about the designation and incorporation of Tribal Beneficial Uses.

General Provisions

Trinity River Provision to Avoid Redirected Impacts

The revised proposed Plan amendments include provisions to ensure no redirected impacts from implementation of the revised proposed Plan amendments on the Trinity River. Reclamation currently operates the CVP Trinity River Division, comprised of Trinity Dam, Lewiston Dam, and the Clear Creek Tunnel, which transports water from Lewiston Dam into Whiskeytown Lake on Clear Creek. As the operator of the CVP Trinity River Division, Reclamation would be required to ensure that implementation of the Bay-Delta Plan, including the VA pathway, does not result in redirected impacts to native fish and wildlife resources in the Trinity River watershed, including temperature and instream flow impacts. Reclamation would be required to report at least annually to confirm there are no redirected impacts to the Trinity River from implementation of the current updates to the Bay-Delta Plan. As part of the annual and periodic review processes, and more often if needed,

the State Water Board would evaluate whether any additional actions are needed to address any redirected impacts to the Trinity River or to ensure that beneficial uses are protected on the Trinity River, in consultation with the North Coast Regional Water Quality Control Board. For more information on the Trinity River Provision, see Section 4.4.10.1 of the revised proposed Plan amendments.

Responses to Comments

The State Board received numerous public comments about potential impacts to the Trinity River from the Bay-Delta Plan update, and existing water quality issues in the Trinity River. Staff Report Section 2.2.1, *Sacramento River*, describes Sacramento River imports from the Trinity River system through Reclamation's operations of the CVP. The Sacramento/Delta Update to the Bay-Delta Plan does not propose any changes to the operations of Trinity Reservoir and Lewiston Dam. Instead, water exports from Trinity Reservoir to the Sacramento River are treated as a constant. The Trinity River was not included in the plan area because the new flow requirements would not apply to the Trinity River. The Trinity River watershed was not included in the study area because it does not receive Sacramento/Delta supply, and therefore reductions in Sac/Delta supply would not affect the area. However, in response to public comment on this topic, the Trinity River has been added into the defined study area in the Staff Report (Figure 1-1c).

Comments asking for additional evaluation and consideration of existing water quality problems on the Trinity River through the Bay-Delta Plan update are misplaced and ignore the purposes and goals of the project, which is to establish water quality control measures and flow requirements needed to provide reasonable protection of beneficial uses in the Bay-Delta watershed, particularly for fish and wildlife beneficial uses in the Sacramento River watershed, Delta eastside tributaries, and Delta regions (Sacramento/Delta). Section 7.1.3, *Purpose and Goals of the Sacramento/Delta Update to the Bay-Delta Plan*, of the Staff Report lists the purposes and goals of the project. The Trinity River is not in the Bay-Delta watershed and therefore is not included.

There is no legal requirement that the Staff Report evaluate existing impacts to the Trinity River and develop/modify water quality objectives for the reasonable protection of beneficial uses in the Trinity River watershed. That would be an entirely separate proceeding and process. As part of the annual and periodic review processes, and more often if needed, the State Water Board will evaluate whether any additional actions are needed to address any redirected impacts to the Trinity River or to ensure that beneficial uses are protected on the Trinity River, in consultation with the North Coast Regional Water Quality Control Board.

For a more detailed discussion of Trinity River comments and responses, please refer to Common Response 1.5, *Trinity River*.

Fully Appropriated Stream Systems

Responses to Comments

Some commenters requested that the revised proposed Plan amendments include a deadline for updating the Fully Appropriated Stream Systems (FASS) list. Updating the FASS listing would occur through a separate process and no deadline is identified at this time. Some commenters appeared to interpret the regulatory pathway as automatically updating the FASS list. Updates to the FASS list are required to be conducted through a separate process and thus would not be updated until that

subsequent process is completed. For more information about provisions for the FASS list, see Section 4.4.10.2 of the revised proposed Plan amendments.

Habitat Restoration and Other Complementary Ecosystem Measures

The State Water Board's Bay-Delta planning and implementation efforts are part of a multi-faceted approach to address protection of fish and wildlife in the Bay-Delta and reconcile an altered ecosystem. The State Water Board has responsibility and authority for addressing flow and other water quality impairments, but ecosystem recovery in the Delta depends on more than adequate flows. It also requires implementation of complementary measures, including habitat restoration, fisheries management, control of waste discharges and invasive species, and other efforts by other agencies and entities in the watershed that are responsible for these actions. These actions are discussed in more detail in Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*, and Section 4.4.10.7 of the revised proposed Plan amendments.

Responses to Comments

Some commenters requested that the program of implementation identify the non-flow actions that would contribute to meeting the objectives. In addition, commenters argued that the purpose of the Bay-Delta Plan update cannot be achieved solely through flow and that a flow-only approach is insufficient and would fail. The revised proposed Plan amendments include a number of complementary habitat restoration actions such as floodplain management; gravel replacement and maintenance; and the restoration of marsh, riparian, and upland habitat in the Delta. In addition, as described in the sections above, non-flow actions are included within the regulatory and VA pathways.

Monitoring and Evaluation

Bay-Delta Monitoring and Evaluation Program

The proposed changes to the Bay-Delta Plan will require additional supporting monitoring, reporting, assessment, accounting, and adaptive management at the watershed scale, including the Bay, Delta, and tributaries. A comprehensive monitoring, evaluation, reporting, and special studies program is needed for the Bay-Delta watershed to assess compliance with water quality objectives, investigate the technical factors involved in water quality control, inform implementation of the Bay-Delta Plan (including adaptive management), and inform possible future changes to the Plan. Further discussion of the existing monitoring for the Bay-Delta Plan and watershed and the need for a comprehensive monitoring program can be found in Staff Report Chapter 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*.

The State Water Board would require monitoring, evaluation, reporting, and special studies through water right and water quality actions. Pursuant to its authorities, including but not limited to Water Code sections 1051, 13165, and 13267, monitoring, evaluation, reporting, and special studies (collectively referred to as monitoring activities) would address both the individual and cumulative impacts of diversions and discharges on beneficial uses of water including fish and wildlife, recreation, tribal, municipal, industrial, and agricultural uses.

To accomplish these purposes, the State Water Board would establish the Bay-Delta Monitoring and Evaluation Program (BDMEP), comprising the monitoring activities needed to implement the Bay-

Delta Plan. The BDMEP would be an appendix (Appendix A) to the Bay-Delta Plan that could be regularly updated without Plan amendments, as appropriate, including through the annual and periodic review processes. Development and implementation of the BDMEP would be done incrementally. As a starting point, the initial BDMEP (included in Appendix A of the revised proposed Plan amendments) includes the proposed monitoring and reporting requirements pursuant to conditions in the water rights for the operations of the SWP and CVP, including the addition of specific requirements for monitoring pursuant to general water right conditions; monitoring and reporting identified in the 2018 Bay-Delta Plan; and additional monitoring needed to address HABs (described below under *Harmful Algal Blooms*). The BDMEP also further defines the processes that will be used for modifying monitoring activities and includes data quality requirements to produce accessible, high-quality, reliable data.

The initial BDMEP will incorporate HRL supplemental monitoring and science activities, which are the collective responsibility of HRL participants. HRL supplemental monitoring and science activities are required to adhere to the requirements in the BDMEP, including for review and revision of monitoring and special studies, data management and quality, and reporting.

The initial BDMEP will be further developed to include monitoring, special study, and reporting activities needed to implement the current amendments to the Bay-Delta Plan, including needed monitoring, special study, and reporting that should be conducted by other water right holders in addition to DWR and Reclamation and in tributary watersheds in addition to the Bay-Delta estuary. This comprehensive BDMEP will be developed by State Water Board staff in coordination with partner agencies, California Native American Tribes, and other interested participants.

The State Water Board will work with California Native American Tribes to incorporate TEK in the BDMEP to the extent practicable. Partner monitoring with California Native American Tribes could help fulfill monitoring requirements and fill geographic gaps (e.g., on tributaries) or gaps in monitoring elements. Any component of monitoring and assessment incorporating TEK will follow the Collective benefit, Authority to control, Responsibility, Ethics Principles for Indigenous Data Governance (CARE principles). The CARE principles help ensure that Indigenous People receive the collective benefit of their own data and retain authority to control their data, as well as helping guarantee that data holders engage respectfully so that the use of Indigenous data helps strengthen tribal communities. Indigenous Peoples' ethics would inform the use of Indigenous data.

Special studies and monitoring for southern Delta salinity and the San Joaquin River monitoring and evaluation program have been incorporated into the BDMEP and relocated within the BDMEP section of the revised proposed Plan amendments without substantive edits from the original text approved in the 2018 update to the Bay-Delta Plan. However, one edit was made to the San Joaquin River monitoring and evaluation program that changes the due date for the Annual Report from December 31 to May 31 to be consistent with other reporting dates in the BDMEP.

For more information on the BDMEP, see Section 4.5.1 of the revised proposed Plan amendments.

Responses to Comments

Some commenters requested that the BDMEP be governed and conducted through an open and transparent process. Updates on the BDMEP would be regularly provided in public annual and periodic review processes, during which the Board could provide direction on any needed changes to the BDMEP. In addition, the BDMEP includes defined public processes for reporting and the review and revision of monitoring requirements and activities.

Some commenters questioned the Board's authority to expand monitoring requirements, require specific monitoring surveys, or assign responsibility for those actions. Other commenters, including the Delta Stewardship Council, supported the additional clarity added to monitoring requirements through the BDMEP. The State Water Board will require monitoring, evaluation, reporting, and special studies through water right and water quality actions. Pursuant to its authorities, including but not limited to Water Code sections 1051, 13165, and 13267, monitoring, evaluation, reporting, and special studies (collectively referred to as monitoring activities) will address both the individual and cumulative impacts of diversions and discharges on beneficial uses of water, including fish and wildlife, recreation, tribal, municipal, industrial, and agricultural uses. In addition, the initial BDMEP includes the clarification of specific requirements for monitoring pursuant to general water right conditions, such as those contained in D-1641 and Water Right Decision1485 (D-1485). Some commenters questioned the reliance on water right decisions that are more than 30-50 years old as authority. The Delta Stewardship Council complimented the legacy of science and monitoring prompted by previous Water Rights Decisions, including D-1485 and D- 1641, and stated that it is more important than ever to continue and strengthen that legacy. Regardless of the age of an order or decision, it is still in effect unless it has been rescinded. D-1641 and the portions of D-1485 that have not been rescinded are still in effect and therefore applicable sources of authority. See Common Response 1.2, *Water Quality Control Planning Process*, for more information on the State Water Board's authorities as they relate to monitoring.

Some commenters argued that it is not appropriate for the State Water Board to be required to approve modifications to monitoring efforts. The Delta Stewardship Council supported the proposed approach to regularly reviewing monitoring surveys in the BDMEP and stated that it is consistent with the Delta Science Program's practices when supporting credible and relevant science in the San Francisco Bay-Delta Estuary. This approval process is necessary to provide Board oversight over the monitoring required in the Bay-Delta Plan and ensure that the monitoring necessary to implement, review, and update the Plan is conducted. Commenters contended that requiring the Executive Director to approve changes to monitoring activities would be cumbersome, an extra burden, or a new process. The State Water Board and other regulatory and Project agencies have historically approved changes to monitoring through the collaborative IEP workplan process provided that process is in place and appropriate entities participate in the process. State Water Board approval could continue to be exercised through a collaborative interagency process such as the IEP workplan, or DWR and Reclamation could pursue separate approval processes for ESA, CESA, and Bay-Delta Plan requirements. If it is necessary to change the monitoring regularly, the Plan allows for that to occur.

Some commenters questioned the justification for the inclusion of specific monitoring surveys, including the discontinued monitoring surveys. The identified purpose(s) and the water right conditions that are fulfilled, in part, by each monitoring survey are identified in Table A-2 of the revised proposed Plan amendments.

Some commenters requested more detail on the exact monitoring requirements that would be included in the comprehensive BDMEP and the specific entities who would be responsible for that monitoring, or expressed opposition to those elements. Other commenters objected to the SWP and CVP bearing full responsibility for the BDMEP monitoring and requested that monitoring responsibility be expanded. The comprehensive BDMEP would be developed through a subsequent public process and would expand the scope and responsibility of the initial BDMEP to include tributary monitoring and other water right holders. While the minimum requirements for the comprehensive BDMEP monitoring are provided in the revised proposed Plan amendments, the

specific details of required monitoring and the assignment of responsibilities to water right holders would be determined during the subsequent public process. The scientific rationale for the minimum monitoring requirements are identified in Staff Report Chapters 2, *Hydrology and Water Supply*, through 5, *Proposed Changes to the Bay-Delta Plan for the Sacramento/Delta*. For example, year-round food web monitoring in the tributaries is necessary because, as identified in Staff Report Section 3.4.2.1, *Chinook Salmon*, salmon and steelhead rear in the tributaries year-round and are dependent on productive food webs. However, the interpretation of these minimum requirements into specific monitoring designs would occur during the subsequent process. The Executive Director would consider approval of the comprehensive BDMEP within two years of approval of the current Plan amendments by OAL.

A commenter was concerned that the reporting timelines were unrealistic, particularly since the identification and enumeration of invertebrates is time consuming. Timely data availability is necessary to evaluate compliance with water quality objectives and inform adaptive management. Regarding invertebrate identification, the requirement is for data to be posted within 6 months of data collection, not within 6 months of sample collection.

CDFW requested providing a timeline for the special study on LSJR barriers, salmonid survival, and life history diversity. In response to this comment, this special study is now required to be completed by the first periodic review of the current Plan amendments.

In April 2026, Reclamation awarded a contract that would result in changes in operations of the Knights Landing Rotary Screw Trap, which is the longest-running juvenile salmonid monitoring location in the Central Valley, and has operated since 1996. Under the changes, the seasonal time frame for the study would be reduced to October through January, which would result in the loss of information and discontinuity in the data record for fall-run, spring-run, and early and late migrating winter-run Chinook salmon, as well as Steelhead. In order to ensure the continuity of the monitoring information that the Board relies on for its planning, review, and implementation processes, provisions in the BDMEP were updated to require: that any changes to required monitoring after 2025 be subject to the BDMEP procedures for review and revision of monitoring surveys; add additional specificity for the rotary screw traps included in Table A-2; and clarify language in footnote 2 of Table A-2 regarding monitoring changes pursuant to ESA or CESA requirements.

Harmful Algal Blooms

The revised proposed Plan amendments include general monitoring provisions related to harmful HABs and provisions that would apply under the VA pathway. As part of the HRL supplemental science and monitoring activities, HRL participants would be required to support the Delta Stewardship Council's Delta CHAB Monitoring Strategy through implementation of a coordinated, Delta-wide HAB monitoring program and associated special studies to ensure necessary data collection for understanding HAB drivers and effects, developing mechanistic and predictive models, and identifying possible management and mitigation measures to control HABs in the Delta. The HRL monitoring plan developed for these purposes must also include provisions for monitoring for HABs on the HRL tributaries during the bloom season from May through October, or at the earliest detection of a bloom and continuing until blooms are no longer detected, following the tiered monitoring approach further described in Table A-3 of Appendix A to the revised proposed Plan amendments. During drought years, monitoring must extend through November.

The initial BDMEP (detailed above) incorporates the HRL supplemental monitoring and science activities for HABs described above and new monitoring and measurement requirements for HABs applicable to the SWP and CVP that are added to the "Water Quality Compliance and Baseline Monitoring" table, including HAB visual indices and cyanobacterial toxins. These requirements are added pursuant to the requirements of condition 10 of D-1485 requiring intensive phytoplankton studies and developing and improving water quality predictive tools with an emphasis on the understanding of flow, salinity, and phytoplankton relationships. These requirements also contribute to fulfilling condition 11 of D-1641 requiring water quality and ecological monitoring. These requirements include six new monitoring locations at HAB "hotspots", where HABs regularly occur in the Delta, as well as additional HAB monitoring at existing locations in the Delta following the tiered monitoring approach described in Table A-3 of Appendix A of the revised proposed Plan amendments. The requirements also include additional HAB monitoring in the south Delta. A monitoring workplan describing the detailed protocols for HAB monitoring would be required to be submitted for approval to the State Water Board Executive Director within 1 year of approval of the current Plan amendments by OAL.

In addition, the initial BDMEP includes special studies relating to HABs to inform the development of mechanistic and predictive modeling of HABs and to test the efficacy of HAB management and mitigation measures. A special study investigating the exposure of native estuarine fish species to cyanobacterial toxins will also be required to be completed within 5 years of approval of the current Plan amendments by OAL. This special study would include a literature review and/or a synthesis of existing data to evaluate how HABs have affected native fish species in the Delta. The review/synthesis will identify gaps in monitoring information that would be needed to further evaluate effects on native fish species. The proposed monitoring workplan for the special study will be submitted for review and comment by CDFW prior to submittal to the State Water Board Executive Director for approval, including any necessary conditions, prior to commencing work on the special study.

The initial HAB special study requirements under the BDMEP will be further developed into a more comprehensive monitoring program. The State Water Board has committed to working with the Central Valley and San Francisco Bay Regional Water Quality Control Boards (Regional Water Boards) and other appropriate entities to develop and implement a long-term, Delta-wide HAB monitoring program, as recommended by the Delta CHAB Monitoring Strategy (Preece et al. 2024). Monitoring activities for HABs would include a combination of remote-sensing with high resolution satellite imagery and field-based surveys using continuous and discrete monitoring methods at known HAB "hotspots" and other regions of the Delta. The monitoring program would include monitoring during the bloom season from May to October, or at the earliest detection of a bloom and continuing until blooms are no longer detected, following the tiered approach for HAB monitoring further described in Table A-3 of Appendix A to the revised proposed Plan amendments. During drought years, monitoring will extend through November. Tiered monitoring includes discrete physical/chemical monitoring, sampling for phytoplankton communities and benthic algal mats, including cyanobacterial and other planktonic and benthic species known to produce toxins, algal pigment analysis, HAB visual indices, and monitoring for concentrations of cyanobacterial toxins when HABs are forming. The tiered monitoring for HABs is comprised of three tiers (routine monitoring, enhanced monitoring, and enhanced laboratory analysis) and is intended to reduce resources needed for monitoring by requiring enhanced monitoring only during active HAB events.

Monitoring requirements for HABs under the BDMEP were informed by the Delta CHAB monitoring designs report prepared by the U.S. Geological Survey (Bouma-Gregson et al. 2025). The report

recommends possible monitoring designs that could be implemented as part of a coordinated Delta-wide CHAB monitoring program, consistent with recommendations from the Delta CHAB Monitoring Strategy (Preece et al. 2024).

As part of the revised proposed Plan amendments, the State Water Board will take actions to implement the California Water Boards' Framework and Strategy for Freshwater Harmful Algal Bloom Monitoring (FHAB Strategy) within the Bay-Delta watershed. This is in addition to coordinating with Regional Water Boards, other agencies, California Native American Tribes, and other interested parties including environmental justice communities to help implement the Delta CHAB Monitoring Strategy to improve HAB science, research, and monitoring, develop HAB models, and identify management and mitigation measures for HABs in the Delta. This information will be used during the periodic review process to determine whether changes are needed to the Bay-Delta Plan or its implementation to address HABs.

For more information on the HABs provisions, see Section 4.5.4 of the revised proposed Plan amendments.

Responses to Comments

Throughout the Plan update process, many commenters have expressed the desire for increased monitoring of and responses to HABs. To support appropriate management and mitigation responses to HABs, additional data collection is needed for understanding drivers and to develop mechanistic and predictive models. Requirements for HAB monitoring were included within the BDMEP in response to public comments to help fill the need for sufficient HAB data collection.

Some commenters questioned why the Projects would be solely responsible for HABs monitoring in the initial BDMEP and requested that this responsibility be broadened to other water users in the watershed. Distribution of monitoring responsibilities more broadly among water right holders in the Bay-Delta will occur as part of the comprehensive BDMEP, but until that is completed, HABs monitoring would remain the responsibility of the Projects consistent with phytoplankton monitoring requirements in D-1641 and D-1485.

Some commenters requested extension of the HAB monitoring season. The specified HAB monitoring window described in the revised proposed Plan amendments now includes language to indicate that monitoring would be required throughout the May to October time window or beginning at the earliest detection of a bloom and continuing until blooms are no longer detected. Additionally, the specified monitoring window would include November during drought years as research indicates that blooms typically occur later in the season under dry hydrologic conditions (Preece et al. 2026, in review).

Many commenters requested additional clarification on the HAB monitoring requirements, particularly regarding the elements included in the tiered monitoring structure. Commenters requested further details on conditions for moving between tiers and requested explanation and evidence for the proposed relationship between HAB visual index scores and toxicity. One commenter suggested that enhanced monitoring should be triggered at a lower HAB visual index value.

The tiered approach described in Table A-3 of Appendix A to the revised proposed Plan amendments requires monitoring from approximately May to October and through November during drought conditions, depending on when blooms are detected, to target the seasonal period

when blooms are most likely to occur in the Delta due to optimal water temperatures (^Lehman et al. 2013). Tiered monitoring is consistent with recommendations from the USGS Delta CHAB Monitoring Designs Report and the State Water Board FHAB Strategy (Bouma-Gregson et al. 2025; ^Smith et al. 2021). Routine monitoring starts at Tier 1, where discrete sampling occurs once per month. The HAB visual index is recorded during routine sampling while CIcyano is monitored weekly. Moving between tiers is possible when measured parameters surpass or fall below defined thresholds. Monitoring moves to Tier 2 if the HAB visual index is 3 or above and if CIcyano is 0.00228 or above. One commenter questioned the relationship between HAB visual index scores and toxicity that is relied upon in Table A-3 for defining when to move between tiers, and another commenter suggested that Tier 2 should be triggered when HAB visual index scores are equal to 2 or higher. Monitoring from the Delta suggests that index values of less than 3 have often resulted in non-detects or low microcystin concentrations; therefore, values of 3 and above require more intensive monitoring (Bouma-Gregson et al. 2025). For locations that are resolvable with Sentinel-3 imagery, remote sensing data can be used to detect a bloom in between discrete sampling events and a "bloom alert" threshold has been defined as CIcyano values at or above 0.00229 using World Health Organization alert levels for chlorophyll (Bouma-Gregson et al. 2025).

At Tier 2, enhanced monitoring occurs twice per month, and samples are collected to quantify toxigenic and total cyanobacterial cells of potentially toxigenic strains in the Delta using qPCR analyses. In using qPCR, potentially toxigenic cells can be quantitatively tracked while limiting the use of more costly analyses such as cyanotoxin analyses. Studies in the Delta have found strong relationships between sample toxicity and high counts of toxin biosynthesis genes, such as mycE (Preece et al. 2025, Otten et al. 2017). To move to Tier 3, enhanced laboratory analysis, a threshold count of toxin biosynthesis genes must be exceeded. An example threshold for mcyE gene counts of 60,000 copies per mL is provided. This density corresponds with a 50% probability of exceeding the California Cyanobacteria and Harmful Algal Bloom (CCHAB) Network "warning" threshold of 6 µg microcystins/L (Bouma-Gregson et al. 2025). It is expected that this threshold will be used unless a different threshold is identified in the monitoring workplan submitted for approval to the Executive Director or if new information suggests that analyses for toxin biosynthesis genes of other toxin-producers are needed as conditions in the Delta change and other toxins and/or toxin-producers become more prevalent. At Tier 3, samples collected at Tier 2 are further analyzed for cyanotoxins twice per month for the duration of the bloom or until sampling returns to Tier 2.

Moving down a tier is possible when the measured "trigger" parameter falls below the specified threshold. For example, moving from Tier 3 down to Tier 2 is possible once measured toxin biosynthesis genes (mycE) fall below 60,000 copies per mL. One commenter suggested that the HAB monitoring should clarify that cyanotoxin monitoring specifically refers to the cyanotoxin microcystin. Although *Microcystis* is presently the most commonly occurring cyanobacterial genus that produces cyanotoxins, and microcystin is the most commonly detected cyanotoxin, other cyanotoxins and toxigenic strains of cyanobacteria have been identified in the Delta. Though currently only ever present in low abundance, the recent identification of several new cyanotoxin producers highlights that potentially toxigenic taxa other than *Microcystis* are at times present within the Delta (Otten et al. 2026) and could become more common in the future. Other monitoring has indicated that low concentrations of cyanotoxins other than microcystin are frequently recorded in the Delta, and future monitoring may need to encompass additional potentially toxigenic cyanobacteria and their cyanotoxins (Bouma-Gregson et al. 2025a). Therefore, the term "cyanotoxins" is intentionally used throughout the monitoring requirements. In addition, in response to this comment, revisions have been made to Table A-3 to clarify that requirements for

qPCR and cyanotoxin testing at Tiers 2 and 3 are intentionally broad to provide flexibility to adjust to changing environmental conditions, such as a shift in the dominant toxigenic cyanobacterial taxa or toxins. Specifically, Table A-3 has been updated in response to these comments to clarify that the Tier 2 and 3 requirements encompass analysis for toxigenic and total cyanobacterial cells of potentially toxigenic strains in the Delta, and the footnotes to the table have been revised to clarify that it is expected that at present these analyses would apply to *Microcystis* and mycE genes unless new toxin-producing cyanobacteria become more dominant in the future.

A commenter questioned the requirement for sampling benthic algal mats in the tributaries. Benthic algal mat monitoring is included within the tiered monitoring approach because the HABs provisions in the program of implementation would require benthic monitoring as part of the comprehensive BDMEP. Recent research has highlighted elevated concentrations of benthic cyanobacteria in the Delta, potentially overwintering in the sediment that can serve as seedstock for subsequent year's blooms (Preece et al. 2025). For tributaries to the Delta, cyanobacterial mats have the potential to dislodge from benthic environments and be transported downstream. Sampling for benthic algal mats throughout the estuary and in the tributaries is necessary for understanding the drivers and dynamics of bloom formation, in addition to understanding how cyanobacteria may be transported into and seeded in and throughout the estuary.

A commenter requested the expansion of HAB monitoring requirements to include investigation and monitoring of potential HAB effects on fish and wildlife. Special studies to address data gaps and focus on technical questions related to HABs have been recommended through the Delta CHAB Monitoring Strategy, the Delta CHAB Monitoring Designs Report, and the FHAB Strategy (Preece et al. 2024; Bouma-Gregson et al. 2025; ^Smith et al. 2021). Monitoring and evaluation requirements in the BDMEP already include provisions that address potential effects of HABs on fish and wildlife, including a special study directed towards HAB effects on native fish species. A specific study focused on cyanotoxin exposure to native fish species is needed to help supplement the general lack of knowledge surrounding HAB impacts to fish and wildlife in the Delta. For many aquatic organisms, toxicity thresholds are unknown and the best methods for sampling and analyzing for microcystin concentrations in target species have yet to be explored (Bouma-Gregson et al. 2025). Additionally, there is a lack of research on impacts to certain fish species such as green and white sturgeon, which are known to consume shellfish in the Delta that may lead to cyanotoxin exposure through diet (Preece et al. 2024). In response to comments requesting more monitoring of the effects of HABs on native fish species, the special study requirement included in the revised proposed Plan amendments has been clarified to indicate that a literature review and/or synthesis of existing data would be included as part of the special study and would identify gaps in monitoring information that would be needed to further evaluate effects on native fish species. Additionally, the proposed monitoring plan associated with this special study would be reviewed by CDFW and submitted to the State Water Board Executive Director for approval.

A commenter raised concerns surrounding the new HAB monitoring locations and questioned how the number and locations of sites were selected. The revised proposed Plan amendments designate seven new HAB monitoring locations (including a variable location in the south Delta that was added in response to comments on the 2025 revised draft Bay-Delta Plan, see below) at HAB "hotspot" locations where toxic algal blooms are known to regularly occur. Currently, these areas lack consistent data on environmental conditions and are not routinely monitored for HAB activity despite reports of recurrent HABs via the Water Quality Monitoring Council's HAB Reports Map. Please see Common Response 4.1, *Harmful Algal Blooms*, for a map showing locations of harmful algal bloom reports throughout the Delta. These incident reports were used to inform monitoring

site selection. Monitoring is needed in these locations to establish a more comprehensive, Delta-wide HAB monitoring network, as recommended by the Delta CHAB Monitoring Strategy, and to better understand HAB formation in areas of the south-central Delta where HABs are most abundant. These new monitoring locations are also selected for unique site-specific factors that make them more conducive to blooms and relevant for monitoring from a public safety perspective, representing dead-end sloughs or flooded islands with longer water residence times and in frequently recreated or populated areas of the Delta (Preece et al. 2025; Bouma-Gregson et al. 2025). Based on input from USGS, the monitoring location at Frank's Tract was adjusted to a site that better represents average conditions for the area and receives reports of high biomass (Bouma-Gregson pers. comm.) For existing monitoring locations where HAB monitoring is a new requirement, sites were selected based on data received from DWR that indicated locations historically receiving Microcystis Visual Index (MVI) scores of 2 or higher during the bloom season (Nemeth, 2025) Additional HAB monitoring sites may be considered through annual and periodic review.

A commenter requested additional HAB monitoring locations in the south Delta. To address this comment, the revised proposed Plan amendments now include a requirement for additional HAB monitoring in the south Delta (see Table A-1, Appendix A). This requirement may be fulfilled by monitoring conducted pursuant to other requirements (e.g., monitoring associated with 401 Water Quality Certifications). All monitoring data would be required to be reported to the State Water Board according to the reporting requirements outlined in the BDMEP. The south Delta monitoring requirement, in combination with the other six new HABs monitoring locations and new HABs monitoring requirements at existing locations, ensures that a broad range of locations across the Delta, including the south Delta, are routinely monitored for HABs. This new monitoring advances progress towards developing a comprehensive, Delta-wide HAB monitoring network, as recommended in the Delta CHAB Monitoring Strategy (Preece et al. 2024).

Commenters also submitted a number of detailed suggestions for changes to the HABs requirements, including changes to the tiered monitoring approach or suggestions for monitoring new parameters. When warranted to increase clarity, revisions were made. If the suggestions would greatly expand the scope of required monitoring, they were generally not accepted.

Biological Goals

Biological goals will be developed and used to inform the continued update and implementation of the Bay-Delta Plan, including adaptive implementation and evaluation of the effectiveness of Bay-Delta Plan and its implementation; inform updates and implementation of the BDMEP, and future changes to the Bay-Delta Plan and its implementation. Biological goals will be developed for tributaries that provide for contributing to meeting the overall goals for each population, including the narrative salmon protection objective, and goals for the Delta. The biological goals are required to be developed consistent with the best available scientific information, including information regarding viable populations, recovery plans for listed species, and other appropriate information. Biological goals for the Sacramento/Delta will use scientific information to establish a numeric value or range of values for biological goals, would be expressed in terms that are SMART (specific, measurable, achievable, relevant, and time-bound), and for anadromous salmonids would be based on VSP parameters including abundance, life history and genetic diversity, productivity, and spatial structure. Biological goals do not change or amend the Bay-Delta Plan, they provide indicators of overall progress against which to measure the success of various implementation measures. For

more information about biological goals, see Section 4.5.2 of the revised proposed Plan amendments.

Responses to Comments

Some commenters stated that the biological goals have no timeline for development. As explained above, this is not the case, as the revised proposed Plan amendments require the Board to develop biological goals within two years of OAL approval of the current Plan update through a public process, with opportunity for public comment.

Other commenters asserted that the State Water Board will violate CEQA by deferring development of biological goals, or that the Board will not have the necessary information to determine whether the Plan provides reasonable protection for fish and wildlife beneficial uses without having already developed biological goals. The Board does not need to develop biological goals in order to provide a complete project description or fully analyze impacts and alternatives, as required under CEQA. The biological goals are intended as a measuring stick to inform adaptive implementation, evaluate the effectiveness of the Plan and its implementation, and guide future Plan updates. In other words, the biological goals help assess whether the Plan is successful in achieving water quality objectives, and while they may be used to inform adjustments under adaptive implementation, any such adjustments would fall within the boundaries and rules established by provisions contained in the Plan and fully described and analyzed in the Staff Report. Further, the fact that biological goals have not been developed does not detract from the considerable analysis contained in the Staff Report. Waiting for the development of biological goals would further delay Plan adoption and implementation, thereby also delaying progress toward protection of fish and wildlife beneficial uses.

Some commenters requested more detail on biological goals or questioned how they would be defined. In addition to the detail provided in the description above and in the revised proposed Plan amendments, the Sacramento/Delta biological goals would be expected to be similar to those adopted for the lower San Joaquin River in 2023 (State Water Resources Control Board 2023), except modified for the Sacramento/Delta Watershed, including expansion to additional species. The lower San Joaquin River biological goals were based on the concept of a VSP developed by McElhaney et al. (2000). These concepts are also intended to be used as the basis for biological goals for the Sacramento/Delta.

Commenters alleged that the adoption of biological goals after the Plan amendments would constitute an amendment to the Bay-Delta Plan and would therefore be an underground regulation in violation of the Administrative Procedures Act (APA) and Water Code sections 13241 and 13242. As stated above, biological goals do not change or amend the Bay-Delta Plan, and are not intended to serve as regulatory targets or requirements. Development of biological goals is an action described in the program of implementation for the Plan amendments. The adaptive implementation actions that could be informed by biological goals were fully described and analyzed in the Staff Report. Please see the discussion above for more information on adaptive implementation measures, including flow shaping, non-flow cold water habitat implementation measures, and local cooperative solutions. Such a process would not create new objectives or alter the Plan's program of implementation, and would not violate the APA nor sections 13241 and 13242 of the Water Code.

Some commenters argued that the benefits of the regulatory pathway cannot be determined and used to inform decisions before benefits are measured against biological goals. Before a policy is implemented, the benefits must be predicted to inform a decision on that policy, as was conducted in

the scientific basis reports, since it is not possible to "measure" a policy's benefits before it is implemented. After a policy is implemented, the benefits can be measured and assessed to inform adaptive management or changes to the policy, as would occur through biological goals and annual and periodic reviews. See Common Response 3.1, *Fish Protection*, for more information on the scientific basis reports.

Tribal Engagement and Traditional Ecological Knowledge

The State Water Board will develop and regularly update a tribal engagement plan in coordination with California Native American Tribes for consultation, outreach, and engagement to incorporate tribal knowledge and perspectives into its Bay-Delta Plan update, and implementation efforts. The State Water Board will also hold tribal listening sessions with interested California Native American Tribes at least once per year in conjunction with annual and periodic reviews to hear feedback from tribes on the Bay-Delta Plan, its implementation, and any needed updates. The State Water Board will form, in conjunction with tribes, a Bay-Delta Tribal Advisory Group to provide input to the State Water Board on Bay-Delta Plan update and implementation issues and related matters. The composition, structure, and meeting frequency would be determined by members.

The State Water Board will consider and incorporate TEK, tribal feedback, and perspectives shared by California Native American Tribes to inform the State Water Board's efforts to update and implement the Bay-Delta Plan. TEK will be considered in a full and complementary way alongside non-Indigenous scientific approaches. As the State Water Board develops specific policies and guidelines regarding incorporation of TEK, those policies and guidelines will be adhered to. In addition, the State Water Board's consideration and incorporation of TEK and tribal feedback and perspectives will follow CARE principles. To ensure adherence to the CARE principles, the State Water Board will request tribal review by the Bay-Delta Tribal Advisory Group of any Bay-Delta Plan related documents incorporating TEK and will revise documentation of TEK based on any feedback.

The State Water Board will continue working to improve its tribal engagement processes using existing resources and will devote additional resources toward this process as they become available. The State Water Board will continue to offer California Native American Tribes the opportunity to engage in formal Government-to-Government Consultation on Board actions, policies, and processes that may affect tribes and would continue to engage with tribes outside of formal consultation.

Please refer to Common Response 11.1, *Tribal Engagement and Tribal Beneficial Uses*, for information on Tribal Beneficial Uses and responses to comments regarding Tribal Beneficial Uses and other concerns from California Native American Tribes. For more information on the tribal engagement and TEK provisions, see Section 4.5.3 of the revised proposed Plan amendments.

Annual and Periodic Review

The Bay-Delta Plan and its implementation measures will undergo annual and periodic reviews to assess and report on progress on implementation of the Bay-Delta Plan and any needed changes to the Plan or its implementation to provide for the reasonable protection of beneficial uses.

The State Water Board will hold annual public meetings to discuss progress on implementing the Bay-Delta Plan by the State Water Board and other entities with responsibility for implementation actions. During annual reviews, the State Water Board could act on various approvals or adjustments provided for in the program of implementation and receive updates and public input

and could provide direction on any delegated approvals or adjustments provided in the program of implementation.

As part of periodic reviews, the State Water Board will conduct a hearing consistent with applicable legal requirements every 3 years to discuss progress to date on implementation of the Bay-Delta Plan, effectiveness at providing for the reasonable protection of beneficial uses, and possible needed changes to the Bay-Delta Plan and its implementation, including the opportunity for public input.

In addition to allowing for public input on priority issues during periodic review, the State Water Board will identify priority issues for discussion as part of each periodic review. Key topics for periodic review include:

- Efforts by the State Water Board and other entities to implement the Bay-Delta Plan;
- The effectiveness of the water quality objectives and implementation measures at protecting beneficial uses of water;
- Possible needed changes to the objectives or implementation measures to provide for the reasonable protection of beneficial uses;
- Progress on achieving biological goals once developed and other fish and wildlife conditions;
- Monitoring and special study activities and HRL supplemental science and monitoring, including hypotheses, metrics, targets, and monitoring, and any needed changes; and
- Climate change effects and any needed adjustments to the Bay-Delta Plan or its implementation.

The State Water Board will also consider other topics for prioritized discussion during periodic review that may involve actions within the Bay-Delta Plan and its implementation and actions outside of those processes. The following list of actions was identified based on the latest update to the Bay-Delta Plan and could be modified in the future:

- Possible methods to reduce the incidence of TUCPs related to Bay-Delta Plan requirements;
- Possible changes to interior Delta flow implementation measures that may be needed to provide for reasonable protection of fish and wildlife beneficial uses;
- Possible changes to WSAs that may be needed to provide for the reasonable protection of fish and wildlife beneficial uses;
- Consideration of water supply adjustments for new water supply projects;
- Consideration of possible future HRL proposals;
- A possible high flow offramp for the regulatory pathway inflow and outflow requirements while providing for the reasonable protection of fish and wildlife;
- Actions by the Water Boards or other agencies to protect beneficial uses on the Trinity River, including any needed measures to address any redirected impacts from implementation of the Bay-Delta Plan;
- Actions by the Water Boards or other agencies to protect beneficial uses on the upper San Joaquin River, including any needed measures to address any redirected impacts from implementation of the Bay-Delta Plan; and
- Any other issues identified by the Board.

Topics will be prioritized and addressed through successive annual and periodic reviews. These lists of periodic review topics could be modified within or outside of the Plan without a basin plan amendment. Staff will identify any recommendations for any proposed amendments to the Bay-Delta Plan or its implementation that may be needed and prepare a report describing proposed changes. The report will be subject to public review and comment, and associated procedures, including any environmental documentation needed, as appropriate, and be presented to the State Water Board for consideration. Individual periodic review cycles could extend longer than 3 years and updates to the Bay-Delta Plan and its implementation would be carried out continually as needed. For more information regarding the annual and periodic review process, see Section 4.6 of the revised proposed Plan amendments.

Responses to Comments

Some commenters suggested that the revised proposed Plan amendments would establish limits on the timing of annual or periodic review. While the Plan establishes procedures, timelines, and expectations for annual and periodic reviews, the Board would always have the ability to initiate a review or update to the Bay-Delta Plan at any time. No provisions in the Plan constrain this ability.

Commenters argued that it is unlawful to allow for appendices to the Bay-Delta Plan, including the BDMEP, to be updated during annual and periodic review processes without following all of the processes required for updating a water quality control plan. The State Water Board's implementation of the Plan is constrained by the range of actions analyzed in the Staff Report and the flexibilities provided for in the Plan. To the extent the Plan incorporates flexible ranges or alternative actions evaluated in the analyses, the Board may act within those bounds without additional environmental review or other statutory processes required by Porter-Cologne. If the Board determines that actions outside of the analyzed range or delegated authority are warranted, it would be required to provide appropriate notice and undertake any additional procedural or environmental review required by law. Modification of the Plan appendices including the BDMEP is a delegated authority within the Plan and thus updating them through annual or periodic review would not subvert the process required by Porter-Cologne or other applicable laws.

Several commenters requested changes to portions of the Bay-Delta Plan or raised issues that would be better suited to consideration during a future periodic review because they require further evaluation, could not be resolved in this current update to the Bay-Delta Plan for the Sacramento/Delta, or could not be resolved in the Bay-Delta Plan. To provide more detail on the issues the Board intends to revisit through periodic reviews, a new list of topics has been added to the periodic review provisions. The Board would maintain discretion in prioritizing or revising this list in the future.

State Water Board Oversight

Responses to Comments

Several commenters expressed concern with the level of State Water Board oversight during implementation of the revised proposed Plan amendments. For example, there are multiple provisions in the regulatory and VA pathway requiring State Water Board Executive Director review of adaptive implementation or accounting measures. Some commenters claimed that this delegation to the Executive Director is unlawful and inconsistent with Porter-Cologne and Water Code

requirements, for example because they contend that this delegation would allow the Executive Director to unilaterally change the VA pathway as part of the Bay-Delta Plan's program of implementation without amending the Bay-Delta Plan. Executive Director approvals do not amount to a "unilateral change" to the VA Pathway, but rather would be part of adaptive management within the parameters established through Board approval of this update to the Plan. To the extent the Plan incorporates flexible ranges or alternative actions evaluated in the analyses, and the Plan delegates authority to the Executive Director, the Executive Director may act within those bounds without additional environmental review or other statutory processes required by Porter-Cologne. Similarly, for adaptive measures delegated to Board decisions within the Plan, the Board may act within those bounds without additional environmental review or other statutory processes. If the Board determines that actions outside of the analyzed range or delegated authorities are warranted, it would be required to provide appropriate notice and undertake any additional procedural or environmental review required by law. The State Water Board is required to maintain oversight over implementation of the Bay-Delta Plan to avoid unlawful delegation of authority. In addition, oversight allows the State Water Board to ensure that implementation activities remain within the bounds of the environmental and scientific analyses and provide for the reasonable protection of fish and wildlife beneficial uses. Some commenters contended that the Plan amendments contain no clear legal mechanism to seek review or reconsideration of the Executive Directors' exercise of authority. The Plan amendments include provisions for this in annual and periodic review. During the annual and periodic reviews, the State Water Board could act on various approvals or adjustments provided for in the program of implementation and will receive updates and public input and may provide direction on any delegated approvals or adjustments provided in the program of implementation.

Some commenters argued that the VA pathway allows too many details about the flow and non-flow commitments to be determined later. The revised proposed Plan amendments define the HRL commitments for flow and habitat and include detailed quantitative accounting protocols to verify that those commitments are met. Where flexibilities are provided, the Plan amendments include appropriate State Water Board oversight. For example, Executive Director approval is required if HRL participants intend to provide flows outside the flexibility brackets or in a manner that would result in less HRL flows during January through June than the default schedule, or if HRL participants request modifications to design criteria for habitat restoration.

Some commenters requested that decisions delegated to the Executive Director be revised to require Board approval. DWR requested that decision-making be delegated below the Executive Director or to peer review. The State Water Board is unable to delegate its authorities to peer review. Further, it is not even clear how a peer review could be delegated decision-making authority and, even if it could be done, doing so would be extremely complex and time consuming and would prevent the Board from having oversight over its regulatory responsibilities. Some approval processes were revised to require Board approval instead of Executive Director approval in response to comments as appropriate. However, many were not changed because it was not warranted, efficient, or appropriate to change the delegation. Decisions before the Board require substantial additional time and administrative process and thus should be focused on more significant actions. Whereas decisions by the Executive Director can be made more efficiently with less administrative process. However, the Executive Director keeps the Board appraised of significant decisions and the Board retains oversight over the Executive Director and their actions and the public has the ability to raise concerns to the Board during annual and periodic review and outside of those processes at any time as appropriate.

Interaction with Other Projects and Regulatory Processes

This section provides responses to comments regarding actions that interact with the revised proposed Plan amendments to the Bay-Delta Plan but are separate and distinct from Board consideration of approval of the proposed updates to the Bay-Delta Plan. Those comments include concerns that the revised proposed Plan amendments will not prevent reductions of Delta outflows, including below minimums required by D-1641 and Delta outflows to which HRL flows were assumed to be additive due to TUCPs, modification of long-term operations of the CVP and SWP, and Board approval of water right applications, and water right change petitions that can expand existing diversions.

Temporary Urgency Change Petitions

A number of commenters expressed concern about the possibility of future TUCPs and analysis of TUCPs in the Staff Report. Water Code section 1435 provides that a water right permittee or licensee who has an urgent need to change the point of diversion, place of use, or purpose of use from that specified in the permit or license may petition for a conditional temporary change order. The State Water Board's regulations clarify that requests for changes to permits or licenses other than changes in the point of diversion, place of use, or purpose of use may also be filed. Before approving a temporary urgency change, the State Water Board must make the following findings: 1) the permittee or licensee has an urgent need to make the proposed change; 2) the proposed change may be made without injury to any other lawful user of water; 3) the proposed change may be made without unreasonable effect upon fish, wildlife, or other instream beneficial uses; and 4) the proposed change is in the public interest. The State Water Board exercises continuing supervision over temporary urgency change orders (TUCO) and may modify or revoke them at any time. The authorization to divert and use water under a TUCO expires automatically 180 days after issuance, unless the TUCO is revoked, or an earlier expiration date is specified. The State Water Board may renew a TUCO for a period not to exceed 180 days.

In order to approve a TUCP to modify requirements of D-1641 implementing the Bay-Delta Plan, there must also be a suspension of the requirements of Water Code section 13247 requiring state offices, departments, and boards to comply with state-approved water quality control plans during any activities that may affect water quality. Compliance with CEQA is also required unless there is also a suspension of those requirements.

Commenters specifically expressed concerns about future submittal and approval by the Board of TUCPs requesting modification to flow and water quality requirements in D-1641. Some comments also expressed concern about possible future TUCPs to modify requirements of the regulatory and/or voluntary pathways.

Implementation of the revised proposed Plan amendments would be expected to reduce TUCPs for meeting current water quality objectives included in D-1641. Specifically, the provisions in the Plan for implementing the water right priority system through the implementation methodology would be expected to reduce the need for TUCPs, which in part are associated with water diverters taking water at times when it is not available under their right. Other than standard water right Term 91 that only affects a small group of junior water right holders, there is not currently a long-term system for determining when water is not available under specific rights in the Bay-Delta

watershed, leading to diverters taking water at times that is not available under their rights. When diverters take water that is not available under their right, it increases the need for the Projects to release previously stored water to meet existing Bay-Delta Plan objectives, depleting storage available for meeting these objectives in the future. Under the revised proposed Plan amendments, the Board will be developing regulations and an implementation methodology to determine when water is not available for water rights at different priorities that would apply under both the regulatory and VA pathways. Under the regulatory pathway, the methodology would be used to determine when water is not available under water rights based on water right priority after accounting for regulatory pathway inflow and inflow-based Delta outflow requirements. Under the VA pathway, the methodology would be used to determine when no water is available under HRL water rights without the regulatory pathway flows assuming all flows in the system are allocated, similar to curtailments that occurred in the most recent drought. Further, HRL flow commitments were proposed by HRL participants to add flows to D-1641 requirements. Thus, it is expected that those parties would make every effort during which the VA pathway is effective to meet those requirements. In addition, the revised proposed Plan amendments specify that actions to avoid TUCPs could be evaluated in periodic review. Further, the various requirements for approval of TUCPs listed above serve to limit the circumstances under which the Board may approve TUCPs.

Multiple comments expressed concerns that Board approval of TUCPs in the past has adversely affected aquatic resources, water quality, and public trust resources in the Bay-Delta and that the Staff Report did not appropriately account for these past effects. Various comments asserted that TUCPs and their effects should have been represented in the environmental baseline, in project alternatives, and in the environmental analysis. Related comments further assert that the negative effects of TUCPs on aquatic resources were not adequately considered in the revised proposed Plan amendments and that Plan amendments should include requirements that prohibit or significantly limit use of TUCPs in the future.

A description of the historical submittal and approval of TUCPs is provided in multiple locations in the Staff Report including Chapter 2, *Hydrology and Water Supply* (Section 2.7, *Existing and Future Water Rights in the Sacramento/Delta Watershed*), Section 7.2, *Description of Alternatives* (Section 7.2.3.2, *No Project Alternative*), and Section 7.24, *Environmental Analysis* (Section 7.24.2, *No Project Alternative*). These sections of the Staff Report explain that the State Water Board has approved multiple TUCPs in the past to modify water right requirements of the SWP and CVP included in D-1641 to meet flow and water quality requirements, including in 2014, 2015, 2016, 2021, 2022, and 2023 (petitions were also submitted in 2008/2009 but not approved).

The Staff Report describes the impacts of drought periods on fish and wildlife and acknowledges that during recent droughts the current minimum flow objectives were not achieved and temperature management concerns were significant, frequently resulting in poor conditions for native fish and wildlife (see Section 5.3, *Reason for the Proposed Plan Amendments*). Similarly, the Staff Report explains that the decline in population abundance of several native estuarine fish species, which was first observed by scientists in the early 2000s, continued and worsened during the 2012–2016 and 2020–2022 drought periods (see Staff Report Section 7.6.2.2, *Environmental Setting for Aquatic Biological Resources*). Impacts to fish populations during drought periods, specifically periods that included TUCPs, are also described in Chapter 3, *Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations* (see Sections 3.4, *Chinook Salmon*, 3.5, *Longfin Smelt*, and 3.9, *Starry Flounder*).

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TUCPs are additionally included in the Staff Report's description of the No Project Alternative, as further discussed in Common Response 6.2, *Baseline and No Project Alternative*. As described in Section 7.2.3.2, *No Project Alternative*, the definition of the No Project Alternative is the continuation of the Bay-Delta Plan as implemented by D-1641. Based on use of prior TUCPs, the No Project alternative reasonably assumes that flows and water quality conditions required under D-1641 could be temporarily relaxed or suspended at times by approval of a future TUCP. This could result in reduced Delta inflows and outflows that are lower than flows required under D-1641 and salinity levels that are increased or higher than levels allowed under D-1641. The evaluation of existing Bay-Delta Plan Delta outflows and the No Project Alternative explain, collectively, that unprotected flow could be diverted in the future from increased consumptive use demand, that TUCPs could at times reduce flows below D-1641 requirements, and acknowledges that flows below D-1641 requirements are not protective of fish and wildlife.

For additional details describing the evaluation of existing Bay-Delta Plan Delta outflow objectives, please refer to Section 3.14.1.1, *Achievement of Flow Thresholds*. Potential environmental impacts of the No Project Alternative are discussed in Section 7.24.2, *No Project Alternative*, and detailed comprehensively in Table F-1 in Appendix F, *Impact Summary Tables for Alternatives 1, 2, and 3*.

The Staff Report also evaluates Modular Drought Alternatives to assess the effects of possible Plan amendments designed to meet existing flow and flow-based water quality requirements and limit use of TUCPs while also responding to drought conditions. The modular drought alternatives include two possible implementation provisions that could be applied as part of the proposed Plan amendments, an Instream Flow Protection Provision (Alternative 5a) and a Shared Water Shortage Provision (Alternative 5b). Section 7.24, *Alternatives Analysis*, explains that the modular drought alternatives would be expected to avoid the future use of TUCPs and may help to maintain cold water storage needed to support fish populations. While the State Water Board has not elected to include Alternative 5a or 5b in the revised proposed Plan amendments, it may consider these or other approaches in the future.

As explained above, issues related to TUCPs were considered in the Staff Report. However, TUCPs were not quantitatively analyzed in hydrologic modeling due to the unique conditions under which TUCPs are submitted and approved. Including TUCPs in hydrologic modeling would require developing assumptions that predict what years and months the California Governor may declare a drought emergency and suspend Water Code 13247 (thus allowing the Board to approve a TUCP), the specific water quality requirements in D-1641 that would be relaxed or suspended, and the magnitude and duration of any relaxation or suspension. Each of these decisions is unique to the specific circumstances of drought periods including the severity of dry hydrologic conditions, intensity of consumptive use demand, and reservoir storage conditions. None of these factors can be predicted with sufficient accuracy for reliable hydrologic modeling.

2025 ROD and 2025 ITP and Other Regulatory Changes

Multiple comments discussed recent changes to the LTO ROD for the coordinated operations of the CVP and SWP and the ITP for SWP operations, and specifically recent changes to operational requirements included in the 2025 ROD that were made in response to Action 5 of Executive Order 14181 and other ITP changes that were made in 2025. The Action 5 operational changes and the ITP amendments (collectively referred to as 2025 ROD/ITP) relaxed Old and Middle River reverse flow requirements and fall X2 requirements, allowing higher export rates at the CVP and SWP export pumping facilities in the Delta. Additional details describing the specific operational changes

authorized by the 2025 ROD/ITP and effects on OMR flows and Delta outflows are available in Section 13.1, *Introduction*, and Section 13.4, *Changes in Hydrology and Water Supply*.

Multiple comments expressed concerns that the 2025 ROD/ITP contributes to and is evidence of an unstable project definition, because the VA pathway lacks a numeric minimum flow requirement and instead relies on shifting and uncertain base flows that will be reduced by the 2025 ROD/ITP and other water supply projects, including Sites Reservoir and the Delta Conveyance Project. The revised proposed Plan amendments provide a stable and finite project definition that is sufficiently defined and analyzed in the Staff Report and meets the legal requirements of CEQA. As described above and in Staff Report Section 13.3, *Revised Proposed Plan Amendments*, the project description and revised proposed Plan amendments include a regulatory pathway and VA pathway for achieving the purpose and goals of the Plan amendments including reasonable protection of fish and wildlife beneficial uses and flows, water quality, and other habitat conditions in the Sacramento/Delta that are sufficient to recover and maintain the natural production of viable native fish populations residing in and migrating through the Delta. Please see Section 7.1.3, *Purpose and Goals of the Sacramento/Delta Update to the Bay-Delta Plan*, for a detailed description of the purpose and goals of the revised proposed Plan amendments and Common Response 7.1, *General CEQA and Approach to the Analysis*, for a discussion of the adequacy of the project description.

Some comments expressed concerns that the VA pathway in combination with the 2025 ROD/ITP will reduce or eliminate the additive effect of HRL flow contributions and associated progress toward achieving the narrative fish and wildlife objectives. As described in Chapter 13.3.4.3, *HRL Flow Commitments,* HRL flows in the VA pathway are intended to be additive to base Delta outflows, which include D-1641 and flows resulting from implementation of the 2024 LTO BiOps and ROD. To address possible reductions in Delta outflows due to the 2025 ROD/ITP and possible future changes, the revised proposed Plan amendments include a new LTO base flow balancing provision to require commensurate increases in HRL flow commitments to make up for reductions in Delta outflows.

Please refer to Common Response 1.2, *Water Quality Control Planning Process*, for additional discussion of the reasonable protection of fish and wildlife and Common Response 7.1, *General CEQA and Approach to the Analysis*, for more information on the project description.

Multiple comments stated that the effects of the 2025 ROD/ITP changes should be analyzed in the Staff Report and recirculated for public comment. Chapter 13, *Revised Proposed Plan Amendments*, has been updated to include supplemental modeling that evaluates the 2025 ROD/ITP. Several sections have been updated with new modeling results and analyses that demonstrate the possible changes that could occur under the revised proposed Plan amendments in combination with the 2025 ROD/ITP, including Section 13.7.1, *Environmental Analysis Approach*, Section 13.4, *Changes in Hydrology and Water Supply*, Section 13.5, *Beneficial Environmental Effects*, and Section 13.7, *Environmental Analysis*. In addition, descriptions of possible outcomes that could occur as a result of the 2025 ROD/ITP have been added as appropriate in Section 13.7.21, *Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes*. These additional analyses of the 2025 ROD/ITP did not result in changes to any new or significantly more severe environmental impacts. Further, the baseflow balancing condition described above should prevent such changes. Accordingly, no recirculation is needed.

Some comments expressed concerns that the program of implementation for the narrative interior Delta flow objective would not reasonably protect beneficial uses because it relies on the LTO and

the associated requirements in the BiOps and ITP. The interior Delta flows objectives do not "rely entirely" on the LTO and the associated requirements in BiOps and the ITP; the objectives are also implemented by the existing numeric interior Delta flows objectives. In addition, the revised proposed Plan amendments provide for evaluating and adjusting implementation of the narrative interior Delta flows objective, which could occur in response to any changes to CVP and SWP Project operations. As appropriate, during the annual or periodic review of the Bay-Delta Plan and its implementation, the State Water Board will evaluate the effectiveness of the interior Delta flow objectives and implementation actions and any needed changes to the Bay-Delta Plan or its implementation to ensure the reasonable protection of fish and wildlife beneficial uses, including to provide for consistent operations of the CVP and SWP export facilities for the reasonable protection of fish and wildlife.

Other comments expressed support for the 2025 ROD/ITP and recommended that the revised proposed Plan amendments be consistent with efforts to maximize water deliveries from the Delta. Similar comments expressed opposition to provisions that would trigger updates to VA flow accounting if substantive provisions of Project operations, including the 2024 LTO ROD or BiOps, are modified in a manner that affects reference conditions. Please see the discussion above regarding the substance of the revised proposed Plan amendments.

Other Water Supply Projects

Multiple comments expressed general opposition or support for new water-supply projects that are under consideration by the Board or may be in the future as part of separate water right application and change petition processes before the Board. Some commenters were opposed to the revised proposed Plan amendments over concerns that they could result in restrictions on, and affect viability of, other projects. Other commenters opposed the possible approval of new water supply projects due to reductions in instream flows and Delta outflows and associated effects that could occur under those projects. A number of commenters provided comments on specific projects or specific water right proceedings that are currently pending before the State Water Board. Specific comments on pending water right proceedings are outside the scope of the planning process for the Bay-Delta Plan update and should instead be submitted and addressed though those other processes as those projects or water right proceedings are separate and not a part of the effort to update the Bay-Delta Plan. See Common Response 1.1, *General Comments*, for comments on other projects. Impacts of new water supply projects are evaluated in Section 7.22, *New or Modified Facilities*, and Sections 7.23, 9.7.21, and 13.7.21, each titled *Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes*. For responses to comments on cumulative impacts, see Common Response 7.23, *Cumulative Impact Analysis*.

Some commenters expressed concerns related to the adequacy of the Plan amendments in protecting the unregulated flows above the existing regulatory requirements and ability to achieve the ecological flow thresholds related to Delta outflow with new or expanded diversions.

The revised proposed Plan amendments contain flexibility to adaptively implement the flow and related requirements, which will allow the Plan to adjust in the future without having to start over with a lengthy update process. The program of implementation contains provisions to help ensure that water quality conditions, including existing flows, together with other measures in the watershed, continue to support and maintain natural production of viable native fish populations. New water supply projects would be subject to the regulatory pathway without water supply adjustments unless future modifications to the Plan are approved as part of periodic review based

on any necessary supporting environmental and scientific documentation. Substantive modifications to the list of HRL water rights or the application of WSAs to new supply projects could be considered for approval by the Board as part of the annual or periodic review process, along with any necessary supporting environmental and scientific documentation developed through a public process with opportunity for public review and comment. That documentation would need to evaluate the effects of possible new HRL proposals or application of water supply adjustments to new projects on Delta outflows and meeting the new narrative inflow and outflow objectives and other issues associated with reasonable protection of fish and wildlife.

In addition, the revised proposed Plan amendments direct the State Water Board to consider imposing additional requirements on new water supply projects, based on the record established during the administrative proceeding, including any hearing, to ensure that future authorizations for the diversion and use of water are consistent with and support the salmon protection, fish viability, inflow, inflow-based Delta outflow, and interior Delta flow objectives of the Bay-Delta Plan. Further, during the annual and periodic review process, the Board will evaluate the effectiveness of the water quality objectives and implementation provisions, including the interaction of those provisions with new projects. The State Water Board will also consider the combined effect of the VA pathway with new water supply projects, regulatory changes, TUCPs, and other issues when it considers whether to continue, modify, or terminate the VA pathway.

Many commenters argued that specific projects or actions have the potential to make conditions worse than the existing conditions. There are currently numerous infrastructure project proposals involving new or modified water diversions in the Sacramento/Delta watershed. New water supply projects could enhance California's water resiliency if designed and operated in a manner that does not exacerbate existing pressures on the Delta ecosystem.

The Staff Report recognizes that new and expanded water diversions, if approved, could affect tributary and Delta inflows and Delta outflows, and other related conditions. Section 2.7, *Existing and Future Water Rights in the Sacramento/Delta Watershed*, provides information on California's water right system and existing water rights and claims in the Sacramento/Delta watershed. In addition to the potential for water users to exercise existing water rights more fully, there are multiple pending water right applications for new water right permits and licenses within the Bay-Delta watershed that could result in increased diversions in the future. Section 2.7 discusses pending water right applications in the Bay-Delta watershed. Additionally, Table 7.24-1 summarizes the estimated change to Delta outflow that could occur as a result of various proposed water infrastructure projects if each project was fully constructed and operated consistent with the associated environmental analyses prepared for the projects.

Some commenters expressed concerns that modeling in the Staff Report does not adequately account for future water diversions, and impacts on fish and wildlife from those diversions. Commenters also asserted that the benefits analysis in the Staff Report does not account for potential effects of new or expanded water supply projects. Cumulative impacts of future water supply projects are adequately analyzed in Staff Report Sections 7.23, 9.7.21, and 13.7.21, each titled *Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes*. See Common Response 7.23, *Cumulative Impact Analysis*, for more information. Section 13.7.21, *Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes,* discusses the degree to which new projects could affect Delta outflows, which could in turn affect the benefits assumed in the Staff Report, depending on how any new projects are approved and whether they are approved and operational during the term of the VA

pathway. If implemented, these projects would be expected to reduce the benefits shown for the 55 w/WSAs scenario; the 45, 55, and 65 scenarios that could potentially be implemented; and the VA pathway. A higher proportion of Delta outflow is unprotected in wetter years, and these projects, as proposed, would generally reduce Delta outflow the most in wetter year types. However, benefits of the regulatory and VA pathway are generally higher in dryer and intermediate year types. Therefore, reductions in Delta outflows in wetter conditions would be expected to have less of an effect on the benefits than reductions in Delta outflow in intermediate or dryer conditions. The extent to which new water supply projects could affect the benefits would depend on the constraints imposed on those projects and the resulting levels of increased diversions and decreased Delta outflows. Section 5.2.3, *Discussion*, and Section 5.3.3.2, *Benefits of Increased Delta Outflow*, of the 2017 Scientific Basis Report (Staff Report Appendix B) present expected benefits of the flow scenarios based on Delta inflow and Delta outflow levels that do not include other unprotected flows and thus provide an informative bookend of the possible benefits under scenarios of increased diversions. In addition, the flow threshold analyses in Chapter 3, *Scientific Knowledge to Inform Fish and Wildlife Flow Recommendations*, and Section 13.5, *Beneficial Environmental Effects*, of the Staff Report evaluate the environmental conditions under the minimum required Delta outflows (MRDO). However, conditions imposed on new water supply projects consistent with the provisions described above and in Section 13.3.3.2, *Sacramento/Delta Tributary Inflows*, and Section 13.3.4.2, *Protection of Base Flows and LTO Base Flow Balancing Provision*, would prevent Delta outflow levels from being reduced to levels close to MRDO. More information on how benefits could be affected is provided in Section 13.5.5, *Range of Possible Benefits*.

Comments were raised related to specific projects before the Board for consideration, including the Delta Conveyance Project (DCP) water right change petition to add points of diversion to DWR's existing water rights for the SWP and the Sites Reservoir water right application. These projects are discrete projects separate from the update the Bay-Delta Plan. These projects are, however, considered in the Staff Report for the cumulative impact analysis in Staff Report Sections 7.23 and 13.7.21, each titled *Cumulative Impact Analysis, Growth-Inducing Impacts, and Significant Irreversible Environmental Changes*.

Multiple commenters asserted that DCP will have adverse impacts on the environment, native fishes and local economies. Commenters noted that DCP would increase diversions and result in substantial decreases in Delta outflow and would be in conflict with the goals of the Plan updates to increase Delta outflows and restore the Delta ecosystem. Commenters also claimed the Staff Report was biased because it overlooked the potential large-scale impacts from the Delta Conveyance Project. Multiple commenters also expressed concerns that the proposed Sites Reservoir Project would reduce flows in the Sacramento River, Delta inflows and outflows, particularly in winter and spring, which in turn would further degrade estuarine habitat conditions and promote HABs. Commenters raised concerns that unprotected flows could be significantly reduced or eliminated due to these and other new water supply projects.

The Staff Report provides a reasonable representation and an adequate description and analysis of the cumulative impacts due to possible new water supply projects, including DCP and Sites. The State Water Board will determine whether it should approve, subject to terms and conditions, the DCP water right petitions and the Sites Reservoir water right application. These projects would not be included in the VA pathway or include water supply adjustments unless the Bay-Delta Plan is updated as part of periodic review. Any update would need to be supported by appropriate scientific and environmental documentation evaluating effects on additive Delta inflows and outflows, consistency with the narrative objectives, and reasonable protection of fish and wildlife. Further,

the State Water Board will evaluate these issues as part of annual and periodic review processes and when determining whether to continue, modify, or discontinue the VA pathway.

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