SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

SANTA BARBARA CHANNELKEEPER, a California non-profit corporation, Petitioner, v. STATE WATER RESOURCES CONTROL BOARD, et al, Respondents.	Case No. 19STCP01176 Judge: Hon. William F. Highberger [PROPOSED] JUDGMENT AND PHYSICAL SOLUTION[1]
CITY OF SAN BUENAVENTURA, et al., Cross-Complainant, v. DUNCAN ABBOTT, an individual, et al., Cross-Defendants.	Action Filed: Sept. 19, 2014 Trial Date: July 1, 2026

[1] This Proposed Judgment and Physical Solution is submitted by the Casitas Municipal Water District, the City of San Buenaventura, the Meiners Oaks Water District, the Ventura River Water District, and the Wood-Claeyssens Foundation, in accordance with the Court's rulings on July 15, 2026.

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I. INTRODUCTION

The Court enters and imposes this **Judgment and Physical Solution** ("**Physical Solution**")[2] in this **Action** regarding the **Ventura River Watershed** ("**Watershed**")[3]. This Physical Solution establishes a comprehensive management structure, requires the implementation of specific **Immediate Management Actions** and requires the preparation of a **Fish Habitat Enhancement Plan** ("**FHEP**") to maintain and enhance suitable habitat for, and thereby to help support the recovery of, the **Ventura River Steelhead Population**, without the need to determine **Water** rights or adjudicate whether to limit Water **Production** in the Watershed. The Court has determined that this Physical Solution provides for the reasonable and beneficial use of the Water in the Watershed and avoids substantial injury, material expense, and waste of scarce Water resources in furtherance of Article X, section 2 of the California Constitution, and consistent with Code of Civil Procedure sections 830-852, as applicable, and California Water law and policy. The Court retains continuing jurisdiction to enforce this Physical Solution and to address future disputes.

The Court has concurrently issued a comprehensive **Statement of Decision** that sets forth the findings of fact and conclusions of law supporting the entry and imposition of this Physical Solution. The Court incorporates the Statement of Decision by this reference. Because this Physical Solution will control how the Watershed is managed for the foreseeable future, this Physical Solution focuses on setting forth the specific obligations of the **Bound Parties** to implement this Physical Solution. It first defines key terms used throughout the document. It next describes the two **Management Areas** in the Watershed and the powers of the two **Management Entities** who will assist the Court in implementing this Physical Solution. This Physical Solution sets forth specific Immediate Management Actions which certain **Responsible Parties** shall implement while the FHEP is prepared, approved and then implemented. It also establishes requirements for the FHEP, an initial **Monitoring Program**, and how this Physical Solution will be funded. It ends with general provisions, including, without limitation, a dispute

[2] Defined terms are bolded when first used. Definitions are found in Section II of this Physical Solution.

[3] The Watershed is generally depicted in Exhibit "A" to this Physical Solution.

resolution process and a description of the Court's retained jurisdiction to oversee implementation of this Physical Solution.

II. DEFINITIONS AND EXHIBITS

A. Definitions

The following definitions shall govern the construction of this Physical Solution. Other terms are defined within the body of the document.

1. **Action**. Los Angeles Superior Court Case No. 19STCP01176, *Santa Barbara Channelkeeper v. State Water Resources Control Board, et al. (original complaint); City of San Buenaventura v. Duncan Abbott et al. (cross-complaint).*
2. **AFY**. Acre feet per year.
3. **Arundo**. *Arundo donax.*
4. **Arundo Removal Program**. The comprehensive program established in this Physical Solution to remove Arundo from a target amount of approximately 130 acres of land in the Watershed in three phases. This target amount does not include approximately 95 acres of Arundo located on the Wood-Claeyssens Foundation Property that will be managed by that entity as provided in this Physical Solution.
5. **Basins**. The four **Groundwater Basins** located in whole or in part in the Watershed, as defined by the Court's Order Establishing Watershed and Basin Boundaries dated January 13, 2022 attached to this Physical Solution as Exhibit "B". These four Groundwater Basins are the **Upper Ojai Valley Basin**, the **Ojai Valley Basin**, the **Upper Ventura River Basin** and the **Lower Ventura River Basin**.
6. **Bound Parties**. All **Parties** and property bound by this Physical Solution and their successors. Bound Parties include, but are not limited to, all Persons in the Watershed who were served with a summons and all owners of property overlying the Basins, the **State Water Resources Control Board** ("**State Board**"), the **California Department of Fish and Wildlife** ("**CDFW**"), **Santa Barbara**

Channelkeeper ("**SBCK**") and any other **Person** joining this Action.

7. **Casitas MWD.** The Casitas Municipal Water District.

8. **CDFW.** The California Department of Fish and Wildlife.

9. **cfs**. Cubic feet per second.

10. **Day or Days.** A calendar day or calendar days unless a business day is otherwise specified in the Physical Solution. In computing any period of time for a deadline under this Physical Solution, where the last day would fall on a Saturday, Sunday, or state or federal holiday, the period runs until the close of business on the next business day.

11. **DWR.** The California Department of Water Resources.

12. **Exempt Parties**. Parties that **Produce** less than five (5) AFY of **Water** from the Watershed, as more fully defined in the Court's Interim Order Confirming An Exempt Cross-Defendant Class dated October 7, 2022 attached to this Physical Solution as Exhibit "C". The Court retains continuing jurisdiction over the Exempt Parties, consistent with its October 7, 2022 Order and Code of Civil Procedure section 833(d)(2). Except as expressly exempted in the Court's Interim Order, Exempt Parties remain Bound Parties subject to the obligations of this Physical Solution. In addition, Exempt Parties shall comply with all requirements under the **Sustainable Groundwater Management Act** ("**SGMA**"), the orders or directives of the **GSAs** under SGMA, other applicable SGMA reporting requirements, or other applicable requirements outside of this Physical Solution.

13. **Fish Habitat Enhancement Plan** or **FHEP**. The plan to be developed, adopted, and implemented as provided in this Physical Solution in furtherance of the **Management Objective**. Initially, the FHEP shall address conditions in the Watershed between entry of this Physical Solution and the completion of **Matilija Dam** removal. The FHEP shall be reviewed annually and updated as needed. The scope and contents of the FHEP shall be reassessed to address conditions existing after Matilija Dam removal.

14. **Groundwater**. Water beneath the surface of the earth within the zone below the water table, in which the soil is completely saturated with water, but not including water that flows in known and definite channels, as the term is defined in Code of Civil Procedure section 832(g) and Water Code section 10721(g).

15. **Groundwater Basin**. A basin or subbasin identified in DWR's Bulletin 118. The four Groundwater Basins at issue in this Action are the Basins as defined by the Court's Order Establishing Watershed and Basin Boundaries dated January 13, 2022.

16. **Groundwater Sustainability Agency** or **GSA**. An entity or entities that implement the provisions of SGMA as defined in Water Code section 10721(j). This Physical Solution is designed to work in concert with and support the implementation of SGMA. Nothing in this Physical Solution intrudes upon or changes the powers and duties of a GSA under SGMA, nor changes the process that shall be followed to review decisions made by a GSA under SGMA.

17. **Groundwater Sustainability Plan** or **GSP**. A plan developed by a GSA to manage a Groundwater Basin in accordance with SGMA, as defined in Water Code section 10721(k).

18. **Immediate Management Actions**. The **Management Actions** that certain Responsible Parties will implement starting in Phase 1 of this Physical Solution. These Immediate Management Actions may be reconsidered, revised and/or replaced as necessary based on the FHEP.

19. **Lower Ventura Basin**. The Groundwater Basin designated as Number 4-003.02 in DWR's Bulletin 118 and described therein as the Ventura River Valley-Lower Ventura River Subbasin. The boundaries of the Lower Ventura Basin are those established by the Court's Order Establishing Watershed and Basin Boundaries dated January 13, 2022.

20. **Mainstem**. That portion of the Ventura River extending from the Pacific Ocean to the confluence of North Fork and Matilija Creeks, excluding the **San Antonio**

Creek Management Area.

21. **Mainstem Management Area** or **Mainstem MA**. The portion of the Watershed outside of the San Antonio Creek Management Area, as depicted in Exhibit "A" to this Physical Solution. In general, the Mainstem MA includes the Mainstem and its tributaries (excluding San Antonio Creek) below Matilija Dam and surrounding lands that drain to them. The **WCF Property Specific Management Area** is expressly excluded from the Mainstem MA.

22. **Management Actions**. Specific activities to be implemented by Responsible Parties (or **Management Entities**, at their discretion) that collectively are designed to achieve the Management Objective.

23. **Management Areas** or **MAs**. The Mainstem Management Area and the San Antonio Creek Management Area, which are the two main distinct but interrelated portions of the Watershed. The Mainstem Management Area does not include the unique WCF Property Specific Management Area, and the WCF Property Specific Management Area is not a Management Area as defined herein and as used in this Physical Solution. The Management Areas are depicted in Exhibit "A" to this Physical Solution.

24. **Mainstem Management Entity.** The **Upper Ventura River Groundwater Agency** ("**UVRGA**") or its Court appointed successor.

25. **Management Entities** or **MEs**. The entities appointed by the Court to implement the Physical Solution in the Management Areas as "arms of the Court" within the Watershed. The MEs shall implement their powers in a neutral fashion, and the Court expressly retains the power to remove and replace an ME for good cause shown. As used herein, the term Management Entities does not include the unique WCF Property Specific Management Entity.

26. **Management Objective**. To maintain and improve suitable habitat for the Ventura River Steelhead Population to help support species recovery, while protecting existing reasonable and beneficial human uses of Water and water rights

in the Watershed.

27. **Matilija Dam**. An obsolete concrete arch dam in the upper portion of the Watershed that impounds the waters of Matilija Creek.

28. **Matilija Dam Ecosystem Restoration Project** or **MDERP**. A multi-million-dollar public-private partnership to remove the obsolete Matilija Dam and provide increased flood protection and ecosystem improvements to the Watershed.

29. **Monitoring Program**. The program, as may be amended, contained in Exhibit "D" to this Physical Solution.

30. **New Production**. Any **Production** from the Watershed by a Person who did not **Produce** Water from the Watershed prior to entry of the Physical Solution. New Production does not include replacement Groundwater or **Surface Water** Production facilities.

31. **Non-Exempt Party**. A Bound Party who does not qualify as an Exempt Party and who Produces Water in the Watershed.

32. **Non-Producer(s)**. A Person who owns real property within the Watershed who is not presently Producing Water and did not do so any time during the five years preceding entry of the Physical Solution, and who may claim the right to Produce Water from the Watershed.

33. **Notice of Dispute.** The notice a Bound Party must send to another Bound Party or a Management Entity to initiate the informal dispute resolution process required under this Physical Solution.

34. **Ojai Valley Basin Groundwater Management Agency** or **OBGMA**. The GSA for the Ojai Valley Basin and the entity that administers the **Ojai Valley Groundwater Basin Groundwater Sustainability Plan**.

35. **Ojai Valley Basin**. The Groundwater Basin designated as Number 4-002 in DWR's Bulletin 118 and described therein as the Ojai Valley Groundwater Basin. The boundaries of the Ojai Valley Basin are those established by the Court's Order Establishing Watershed and Basin Boundaries dated January 13, 2022.

36. **Ojai Valley Groundwater Basin Groundwater Sustainability Plan** or **Ojai Valley GSP**. The GSP for the Ojai Valley Basin, adopted by OBGMA, and approved by DWR with recommended corrective actions on or about October 26, 2023. This Physical Solution incorporates the description of the Ojai Valley Basin as set forth in the Ojai Valley GSP, as it may be amended from time to time.

37. **Party** or **Parties**. The parties to this Action and their successors. This may be a subset of Bound Parties depending on context and intent.

38. **Person**. Any natural person, firm, association, organization, joint venture, partnership, business, trust, corporation or public entity.

39. **Physical Solution**. This Judgment and Physical Solution entered and imposed by the Court in this Action.

40. **Produce** or **Production**. To pump, extract, or divert Surface Water or Groundwater.

41. **Producer(s)**. A Person who Produces Water.

42. **Production Inventories**. The inventories of Production that may be developed and maintained by the two Management Entities in accordance with this Physical Solution for their respective Management Areas.

43. **Production Report**. An annual report that a Non-Exempt Party may be required to submit to their Management Entity providing information on the Non-Exempt Party's Production.

44. **Responsible Party(ies)**. The Bound Party or Bound Parties who have agreed to take or are required to take specific actions under this Physical Solution, including the Party or Parties who must implement each Immediate Management Action.

45. **San Antonio Creek Management Area** or **SAC MA**. The geographic area of the Watershed in which Water drains to San Antonio Creek, as depicted in Exhibit "A" to this Physical Solution. The SAC MA generally commences upstream of the confluence of San Antonio Creek and the Ventura River and extends into the Ojai Valley Basin and portions of the Upper Ojai Valley Basin. It generally aligns

with the San Antonio Creek Sub-Watershed as identified in USGS HU-12 (180701010103).

46. **San Antonio Creek Management Entity** or **SAC ME.** Casitas MWD or its Court appointed successor.

47. **SBCK.** Santa Barbara Channelkeeper.

48. **Southern California Steelhead** or **Steelhead**. The Southern California distinct population segment of the steelhead/rainbow trout species (*Oncorhynchus mykiss or O. mykiss*) that has been listed as endangered under the Federal Endangered Species Act (anadromous) and the California Endangered Species Act (anadromous and resident) for its life history forms.

49. **Specific Funding Source.** A funding source that is not part of the Management Entities' annual budgets, generally anticipated to consist of voluntary funding by Responsible Parties, grant funding or other independent funding sources.

50. **State Board.** The State Water Resources Control Board.

51. **State Parties.** The State Board and CDFW.

52. **State Parties' Designated Liaison.** The person jointly designated in writing by the State Parties to attend and provide comments at the meetings of the Management Entities to promote communication and collaboration, as provided in Section III.B.2 of this Physical Solution. The State Parties may designate a different person to attend the meetings of the different Management Entities.

53. **Statement of Decision**. The Statement of Decision issued by the Court in connection with the entry and imposition of this Physical Solution.

54. **Surface Water**. All Water open to the atmosphere and subject to surface water runoff, including, but not limited to, a stream, lake or other water body, and water in subterranean streams flowing through known and definite channels, consistent with Water Code section 1200.

55. **Sustainable Groundwater Management Act** or **SGMA**. Part 2.74 of the Water Code, commencing at Section 10720, setting forth requirements for the sustainable

management of Groundwater Basins in the State of California.

56. **Uncontrollable Conditions**. Any unforeseeable circumstance arising from causes beyond the control of the Bound Party or the Management Entities, which delays or prevents the performance of any obligation under this Physical Solution, despite the Bound Party's or the Management Entities' best efforts to fulfill the obligation, which includes both taking steps to anticipate and avoid the circumstance and also taking steps to minimize the adverse impacts of the circumstance. "Uncontrollable Conditions" may include, without limitation, any act of God, war, fire, earthquake, flood, windstorm, or natural catastrophe, including wildfire and extreme, multi-year drought in the Watershed; criminal acts; civil disturbance, pandemic, vandalism, sabotage, or terrorism; restraint by court order or public authority or agency; or action or non-action by, or inability to obtain the necessary permits, authorizations or approvals from any governmental agency despite good faith and diligent efforts to secure such authorization or approval.

57. **Upper Ojai Valley Basin**. The Groundwater Basin designated as Number 4-001 in DWR's Bulletin 118 and described therein as the Upper Ojai Valley Groundwater Basin. The boundaries of the Upper Ojai Valley Basin are established by the Court's Order Establishing Watershed and Basin Boundaries dated January 13, 2022.

58. **Upper Ojai Valley Basin Autonomy Provisions**. The provisions under which Parties in the Upper Ojai Basin may self-manage their Production and Management Actions, subject to oversight by the San Antonio Creek Management Entity.

59. **Upper Ventura Basin**. The Groundwater Basin designated as Number 4-003.01 in DWR's Bulletin 118 and described therein as the Upper Ventura River Valley—Upper Ventura River Subbasin. The boundaries of the Upper Ventura Basin are those established by the Court in its Order Establishing Watershed and Basin Boundaries dated January 13, 2022.

60. **Upper Ventura River Groundwater Agency** or **UVRGA**. The joint powers agency formed in December of 2016 to serve as the GSA for the Upper Ventura Basin.

61. **Upper Ventura River Groundwater Sustainability Plan** or **UVR GSP**. The GSP for the Upper Ventura Basin adopted by UVRGA and approved by the DWR, with recommended corrective actions, on or about April 27, 2023. This Physical Solution incorporates the description of the Upper Ventura Basin as set forth in the UVR GSP, as it may be amended from time to time.

62. **Ventura.** The City of San Buenaventura.

63. **Ventura River Steelhead Population**. The population of Southern California Steelhead that occupies the Ventura River Watershed. Unless context indicates otherwise, references in this Physical Solution to Steelhead or *O. mykiss* are intended to be limited to the Ventura River Steelhead Population.

64. **Ventura River Watershed** or **Watershed**. The geographic area that drains to the Ventura River, and as defined by the Court in its Order Establishing Watershed and Basin Boundaries dated January 13, 2022. In its Order, the Court established the Watershed boundaries using the USGS HU-10 watershed. The USGS HU-10 watershed includes the following USGS HU-12 sub-watersheds: Matilija Creek, North Fork Matilija Creek, San Antonio Creek, Upper Ventura River, Coyote Creek and Lower Ventura River (including Canada Larga). This Physical Solution incorporates the general descriptions of the Watershed as contained in the Ojai Valley GSP and the UVR GSP.

65. **Water**. Unless the context indicates otherwise, both Groundwater and Surface Water.

66. **WCF Property Specific Management Area** or **WCF Management Area.** The property under the ownership and management of the **Wood-Claeyssens Foundation** ("**WCF**") as set forth in the Physical Solution.

67. **WCF Property Specific Management Entity** or **WCF Management Entity.**

WCF, as appointed in and subject to this Physical Solution. The WCF Management Entity has a unique role to manage the WCF Management Area and is not subject to the provisions of this Physical Solution applicable to the Management Entities.

B. Exhibits

Exhibit A – Map of Watershed and Management Areas

Exhibit B – Order Establishing Watershed and Basin Boundaries

Exhibit C – Interim Order Confirming an Exempt Cross-Defendant Class

Exhibit D – Monitoring Program

Exhibit D1 – Mainstem Monitoring Plan

Exhibit D2 – San Antonio Creek Monitoring Plan

Exhibit E – SAC ME Initial Budget

Exhibit F – Mainstem ME Initial Budget

Exhibit G – Mainstem ME Funding Plan

Exhibit H – Summary of Robles Diversion and Fish Passage Facility Protocols

Exhibit I – Steelhead Habitat Needs

Exhibit J – Contents of FHEP

III. MANAGEMENT AREAS, MANAGEMENT ENTITIES AND PHASES

This Physical Solution shall be implemented in a comprehensive manner to achieve the Management Objective through the appointment of two Management Entities to manage two separate but integrated Management Areas. This Physical Solution also appoints WCF to manage the unique WCF Property Specific Management Area. This Physical Solution shall be implemented in three defined phases. This Section of the Physical Solution describes the Management Areas, the powers of the Management Entities and the Court's oversight of the Management Entities, and the three implementation phases of this Physical Solution.

A. Management Areas and Management Entities

The Watershed is an integrated system that must be managed in a comprehensive manner. At the same time, different portions of the Watershed serve different functions and have unique

characteristics. Therefore, this Physical Solution divides the Watershed into two separate but integrated Management Areas—the San Antonio Creek Management Area and the Mainstem Management Area.

The Mainstem MA includes, in general, the Mainstem of the Ventura River from the Pacific Ocean to Matilija Dam, and surrounding land, as depicted in Exhibit "A" to this Physical Solution. The WCF Property Specific Management Area is expressly excluded from the Mainstem MA. The Mainstem MA includes the Upper and Lower Ventura River Basins, as depicted in Exhibit "A". The Mainstem MA will be most directly impacted by the sediment loading and other changes that will follow Matilija Dam removal. The UVRGA shall serve as the Management Entity for the Mainstem MA. While serving as the Management Entity for the Mainstem MA, UVRGA shall maintain its independent responsibilities under SGMA to exclusively manage Groundwater in the Upper Ventura Basin, including but not limited to managing interconnected Surface Water in the Upper Ventura Basin, in accordance with SGMA and the UVR GSP. As Management Entity, UVRGA shall implement this Physical Solution in a manner that supports and is not inconsistent with its management efforts under the UVR GSP and shall ensure that its management efforts under the UVR GSP support, as appropriate, implementation of this Physical Solution.

The San Antonio Creek Management Area covers the geographic area of the Watershed in which Water drains to San Antonio Creek, above the confluence with the Ventura River, as depicted in Exhibit "A" to this Physical Solution. The SAC MA includes the Upper Ojai Valley and Ojai Valley Basins (other than a portion of the Upper Ojai Valley Basin which drains to a different watershed). The SAC MA also includes two areas that overlap with the Upper Ventura Basin, as depicted in Exhibit "A". Casitas MWD shall serve as the Management Entity for the SAC MA; provided, however, that OBGMA shall maintain its independent responsibilities under SGMA to manage the Ojai Valley Basin in accordance with the Ojai Valley Basin GSP. As Management Entity, Casitas MWD shall coordinate with OBGMA so that implementation of this Physical Solution supports and is not inconsistent with the Groundwater management efforts of OBGMA and so that the Groundwater management efforts of OBGMA support, as appropriate,

implementation of this Physical Solution. In addition, UVRGA shall maintain its independent responsibilities under SGMA to manage the Upper Ventura Basin (including the two portions within the SAC MA) in accordance with the UVR GSP. As Management Entity, Casitas MWD shall coordinate with UVRGA so that implementation of this Physical Solution supports and is not inconsistent with the Groundwater management efforts of UVRGA and so that the Groundwater management efforts of UVRGA support, as appropriate, implementation of this Physical Solution.

The powers, manner of operating and process for the review of decisions of these two Management Entities are set forth below.

B. Powers, Manner of Operating and Review of Decisions of the Management Entities

The Court appoints UVRGA and Casitas MWD to serve as "arms of the Court" to manage the Mainstem MA and the SAC MA, respectively. The powers of the Management Entities as set forth in this Physical Solution derive from this Court's inherent authority to impose this Physical Solution on Bound Parties and to appoint entities to assist the Court in implementing this Physical Solution in accordance with existing law. Nothing in this Physical Solution limits or removes other powers that UVRGA or Casitas MWD possess through their organic law, SGMA or other applicable law. Nothing in this Physical Solution changes the Bound Parties' ability to challenge, a court's power to review, or the standard of review, applicable to, actions taken by UVRGA or Casitas MWD under these other sources of law. The Court's review of actions taken by the Management Entities under this Physical Solution shall be under the standards set forth in this document. As appointed "arms of the Court", the Court expressly retains the right to remove a Management Entity and appoint a new Management Entity after a noticed hearing and upon good cause shown.

The Management Entities shall have the powers set forth below within their respective Management Areas. The Management Entities shall implement these powers in an impartial manner without favor or prejudice to any Bound Party and shall act in a manner consistent with the terms of this Physical Solution to achieve the Management Objective of this Physical

Solution. When acting in their Management Entity roles, as opposed to when acting under their other organic laws, the Management Entities shall affirmatively implement this Physical Solution. The Management Entities shall also operate in an open and transparent manner, and their decisions are subject to Court review, as described below.

1. Oversee Implementation of the Physical Solution

The Management Entities shall administer this Physical Solution to assure its timely and effective implementation and shall ensure that Responsible Parties perform their obligations imposed in this Physical Solution. The Management Entities shall have the power to monitor performance of the obligations imposed in this Physical Solution to resolve, if feasible, any failures to perform these obligations, and to report all resolved or unresolved failures to perform to the Court for final action. The Management Entities shall use their powers within their respective Management Areas but shall also collaborate, as provided in this Physical Solution, to collectively manage the Watershed in a comprehensive manner. These powers include, but are not limited to, the power to file such motions or take such similar actions with this Court as are necessary to allow the Court to enjoin any conduct prohibited by this Physical Solution.

2. Open and Transparent Administration; State Parties' Designated Liaison Role

The Management Entities shall operate in an open and transparent manner that follows the requirements of the **Ralph M. Brown Act** (Government Code sections 54950 et seq. ("**Brown Act**")), except as otherwise provided herein. Although the Management Entities may convene closed sessions consistent with the Brown Act, all decisions of the Management Entities' governing bodies regarding implementation of this Physical Solution shall be made at an open and public meeting, with a written agenda and advance public notice. For regular and special meetings of the Management Entities, notice of the public meeting and agenda shall follow the Brown Act requirements. The Management Entities shall hold at least four regular meetings each year, with at least one regular meeting occurring during each quarter of the year. All final reportable decisions of the Management Entities' governing bodies shall be in writing.

Although the Management Entities shall operate in an open and transparent manner that

follows the requirements of the Brown Act, they are not "legislative bodies" under the Brown Act because they are appointed by and serve at the pleasure of the Court. Therefore, decisions of the Management Entities may not be challenged by Persons who are not Bound Parties to this Physical Solution. However, Bound Parties may challenge, by noticed motion, the decisions of the Management Entities, including the failure to conduct their business in an open and transparent manner, as required by this paragraph; provided, however, that the Bound Party seeking to challenge a decision shall first provide written notice to the Management Entity of the alleged violation and the Management Entity shall have forty-five (45) days to cure the violation.

Each Management Entity shall establish a **State Parties' Designated Liaison** role for their meetings to promote participation by a designated representative of the State Parties at each of the open session portions of their regular and special meetings. The State Parties' Designated Liaison for each Management Entity shall have the ability to reasonably provide input on each of the items on the Management Entity's public session agenda, without being limited to the otherwise applicable time limits for public comment. Participation by and comments from the Designated Liaison should be reflected in the meeting minutes. Because the Designated Liaison position is intended to promote direct communication and collaboration, the Designated Liaison should attend the meetings of the Management Entity in-person. At least twice a year, the Designated Liaison shall provide the Management Entity with an oral or written report on relevant activities of the State Parties in the Watershed, including, but not limited to, funding opportunities and non-privileged enforcement activities taken by the State Parties in the Watershed.

The Management Entities shall establish and maintain a public website or page on an existing website regarding the implementation of this Physical Solution. The public website or page should include agendas for the Management Entities' meetings, as well as other reports and documents required under this Physical Solution.

The State Parties shall jointly designate the Designated Liaison. The State Parties may designate a different person as the Designated Liaison for the different Management Entities. Prior to the first meeting of the Management Entities, the State Parties shall jointly designate in a

writing provided to the Management Entity the State Parties' Designated Liaison for each Management Entity. The Designated Liaison should have appropriate technical expertise to assist the Management Entity in implementing this Physical Solution. The State Parties may change the Designated Liaison for each Management Entity from time-to-time with reasonable written notice to the Management Entity, although the goal is to promote consistency through maintaining the same person in the Designated Liaison role for each Management Entity, as feasible.

3. Maintain a Notice List

The Management Entities shall maintain a current list of Bound Parties located within their respective Management Areas, including sufficient contact information such as mailing addresses, email addresses or phone numbers sufficient to allow for notice as required by this Physical Solution. Each Bound Party is required to provide the Management Entity with its current contract information including an email address for noticing purposes. Any Person may be added to the notice list by electronic written request. Whenever any parcel of property that is subject to this Physical Solution is transferred, the grantor of the property shall notify the grantee of the existence of this Physical Solution, and the grantee shall provide the applicable Management Entity with its current contact information.

The Management Entities shall use their respective lists of email addresses of the Bound Parties within their respective Management Areas to provide notice under this Physical Solution, unless this Physical Solution expressly provides for a different form of notice. Whenever this Physical Solution requires the Management Entities to provide "notice", notice through their email lists is sufficient unless this Physical Solution expressly provides for a different form of notice. Publication in a newspaper is not required, even when this Physical Solution calls for a "public hearing".

4. Maintain a Production Inventory

The Management Entities shall develop and maintain a Production Inventory documenting total Production of Water within their respective Management Areas, as each Management Entity may determine is necessary to achieve the Management Objective within their Management Areas. This Production Inventory could cover the entire Management Area or the parts of the

Management Area where the Management Entity determines maintaining a Production Inventory is necessary to achieve the Management Objective. The Management Entities shall review any Production Inventory annually as part of the Annual Report and amend the Production Inventory as they determine necessary to achieve the Management Objective.

The Management Entities may use any existing legally required Production Reports as the starting point for the development and maintenance of the Production Inventory. The County of Ventura will reasonably coordinate with the Management Entities upon request regarding current records of Groundwater Production (Annual Water Well Usage Statements) for wells located outside the GSA boundaries. If the Management Entity identifies Production by any Bound Party, other than an Exempt Party, that does not currently file any Production Report, the Management Entity shall have the power to require that Bound Party to file a Production Report in a format required by the Management Entity. While not required, the Management Entities shall have the power to require metering or measurement requirements if necessary for the development and maintenance of the Production Inventory.

5. Maintain an Exempt Party List

The Management Entities shall develop and maintain a list of Exempt Parties within their respective Management Areas. The Management Entities shall develop forms and procedures for Exempt Parties to certify their Exempt Party status, under penalty of perjury. Exempt Parties shall certify their exempt status within eighteen (18) months after entry of this Physical Solution, and report any changes in their Water Production that would render them a Non-Exempt Party in subsequent years. The Management Entities' procedures regarding Exempt Parties shall conform with the Court's Interim Order Confirming an Exempt Cross-Defendant Class dated October 7, 2022.

6. New Production Review

The Management Entities shall review and comment on all New Production within their Management Area for consistency with this Physical Solution. Any Bound Party seeking to commence New Production shall notify the applicable Management Entity in writing and the Management Entity shall have one hundred and twenty (120) days from the receipt of such notice

to perform this review and comment. The Management Entities shall assess whether the New Production would materially interfere with implementation of this Physical Solution and may make recommendations to the Party and any associated permitting agency regarding the New Production, consistent with implementation of this Physical Solution. The Management Entities may also notify the Court of any New Production that is found to materially interfere with the implementation of the Physical Solution and request Court consideration and appropriate action regarding the New Production.

7. Adoption of Administrative Budgets

The Management Entities shall each prepare proposed administrative budgets for each year covering each of their Management Entity operations. The Management Entities shall provide at least thirty (30) days public notice of a public hearing to consider adoption of the budget, including notice pursuant to the Notice List to all Bound Parties within their applicable Management Areas. The annual administrative budgets of the Management Entities shall be separate from any other budget(s) they maintain, although they can be adopted concurrently with such other budget(s). The annual administrative budgets shall include: (a) all the administrative and coordination activities required by this Physical Solution; (b) all the monitoring activities required by this Physical Solution; (c) all the reporting costs required by this Physical Solution; and (d) if sufficient funds are available, funding to support the implementation of Management Actions. Following adoption of the administrative budgets, the Management Entities may make expenditures consistent with their budgets in the exercise of the powers herein granted.

8. Financing of Management Entity Activities

Casitas MWD shall fund its Management Entity administration, monitoring and reporting activities and the Boulder Augmentation Pilot Project described in Section IV.B.1 for the SAC MA through Casitas MWD's water rates. Casitas MWD may implement other Management Actions through independently provided funding sources such as grants, donations or any other voluntary commitments obtained by Casitas MWD, consistent with its Annual Budget. For illustration purposes, a Casitas MWD Fisheries Budget for FY 2025-2026 is attached as Exhibit "E". Casitas MWD anticipates the need to hire one additional full-time employee to administer

the additional Management Entity responsibilities at a cost of $160,000 - $180,000 per year and that the currently identified Immediate Management Actions within the SAC MA can be implemented within its existing water rate structure. If Casitas MWD is removed as the Management Entity for the SAC MA, the replacement Management Entity for the SAC MA shall propose a funding plan to the Court for approval.

UVRGA, as the Management Entity for the Mainstem MA, shall, within ninety (90) days of entry of this Physical Solution, and at a noticed public meeting, adopt a plan to fund the administrative, monitoring and reporting activities required by this Physical Solution within its Management Area consistent with the requirements of this Physical Solution. This funding plan may include a proposed assessment on Groundwater Production, fixed contributions from Bound Parties within the Mainstem MA, a combination of a Groundwater Production assessment or fixed contributions, or other funding options. The funding plan shall address and account for inflation. For illustration purposes, an estimated initial Mainstem Management Entity budget is attached as Exhibit "F". A proposed Mainstem Management Entity initial funding plan to fund this estimated budget is attached as Exhibit "G". UVRGA shall use this initial estimate and proposed initial funding plan to prepare its funding plan. Any proposed assessment on Groundwater Production or any fixed contribution shall include a not-to-exceed amount for an initial three-year period to provide Bound Parties within the Mainstem MA with certainty regarding the amount of the assessment or fixed contribution. The adoption of the funding plan is subject to Court review as provided in this Physical Solution. The initial funding plan is intended to cover administrative, monitoring and reporting activities and not Management Actions. However, the Mainstem Management Entity may fund projects or other activities through grant funding or any other funding sources available to the Management Entity, including contingency funds from the assessment or fixed charges, as provided in its Annual Budget.

The Management Entities shall have the authority to develop and implement cost recovery fees for their review of New Production applications, for the processing of disputes under the dispute resolution process or for other specific activities that are triggered by individual Bound Parties. Such fees shall reasonably relate to the cost for providing the services to be performed by

the Management Entities.

9. Contracts and Insurance

The Management Entities may enter into contracts and agreements as necessary, appropriate and in furtherance of the Physical Solution and consistent with their adopted budgets. The Management Entities shall have the discretion and authority to employ, contract with or otherwise engage such administrative personnel, engineering, biological, legal, accounting or other specialty services and consulting assistants as may be deemed appropriate in carrying out the terms of this Physical Solution, including the FHEP, and consistent with their adopted budgets. The Management Entities shall have the power to purchase insurance as necessary to carry out the terms of this Physical Solution.

10. Monitoring

The Management Entities shall conduct monitoring within their respective Management Areas as set forth in Exhibit "D" of this Physical Solution. The Management Entities may, as needed, use Exhibit "D" to develop a more specific workplan for the monitoring within their respective Management Areas, and use that workplan for purposes of contracting for the implementation of the monitoring. The Management Entities shall coordinate the development of any workplan with their Management Entity TAC, and the workplan shall seek to avoid redundant monitoring and shall minimize duplication of effort. The Management Entities may retain or appoint one Person to conduct the monitoring throughout their entire Management Area, or throughout the Watershed. The Management Entity TACs may consider whether it is appropriate to update the Monitoring Plans set forth in Exhibit "D" of this Physical Solution following development of the FHEP, and propose any changes to the Management Entities for consideration. The Management Entities shall file any approved updates to the Monitoring Plans set forth in Exhibit "D" with the Court as part of the Annual Report, and implement any approved updates to the Monitoring Plans.

11. Approval and Implementation of FHEP

The Management Entities shall each consider and take action on the FHEP as provided in Section V of this Physical Solution. Once the FHEP is approved, each Management Entity shall

implement the FHEP as provided in Section V of this Physical Solution.

12. Adoption of Procedures, Policies and Forms

The Management Entities may adopt such additional procedures, policies and forms as necessary to implement this Physical Solution.

13. Biannual (Twice a Year) Coordination Meetings

The Management Entities shall hold at least biannual (twice a year) joint public meetings to coordinate their activities in their respective Management Areas at the Watershed level. The biannual joint public meetings shall include, without limitation, discussion of funding and Management Action priorities within the Watershed and ways in which the Management Entities may collaborate to collectively achieve those priorities. The Management Entities shall invite the members of the **Watershed Technical Advisory Committee** ("**Watershed TAC**") and other interested parties to the joint public meeting to support coordination of activities. The Management Entities may convene additional coordination meetings as needed, and are encouraged to convene such meetings as often as required to make sure they are coordinating the activities in their respective Management Areas in a manner that promotes comprehensive, Watershed-wide management.

14. Management Entity TACs

Each Management Entity shall have its own Technical Advisory Committee. Within one hundred and eighty (180) days of entry of this Physical Solution, each Management Entity shall establish a voluntary Management Entity Technical Advisory Committee ("**Management Entity TAC**") to provide input to the Management Entity regarding its activities as set forth in this Physical Solution. The Management Entity TAC for the SAC MA ("**SAC TAC**") shall consist of at least three (3) members, but no more than five (5) members, who shall have sufficient technical expertise regarding hydrology, geology, fisheries biology, ecology, geomorphology or similar specialties to meaningfully provide input to the SAC Management Entity. The SAC TAC is hereby identified as the City of Ojai, the County of Ventura, OBGMA, and the State Board and CDFW, who may designate one qualified representative each to participate on the SAC TAC. The designated representatives from the State Board and CDFW may be different people

depending on the particular area of expertise needed for the particular meeting.

The Management Entity TAC for the Mainstem Management Entity ("**Mainstem TAC**") shall consist of at least five (5) members, but no more than seven (7) members, who shall have sufficient technical expertise, as defined above, but the individual representatives on the TAC shall not also be Board Members of UVRGA. The Mainstem TAC is hereby identified as the City of Ventura, Casitas MWD, the County, the UVRGA Executive Director, a self-funded local non-profit representative selected by the other members of the Mainstem TAC, and the State Board and CDFW, who may designate one qualified representative each to participate on the Mainstem TAC. The initial self-funded local non-profit shall be OVLC, who shall serve for a two (2) year term, subject to reappointment. The designated representatives from the State Board and CDFW may be different people depending on the particular area of expertise needed for the particular meeting.

Each Management Entity shall establish rules and procedures for their respective Management Entity TACs. These rules and procedures shall encourage the TACs to seek consensus and if consensus cannot be achieved shall require that the TAC reflect majority, minority or individual views in their TAC's recommendations. These rules and procedures shall clarify the advisory role of the TACs and that the TACs shall provide recommendations only as directed by the Management Entity or as expressly provided in this Physical Solution. The Management Entities shall have the discretion to refer any technical matter to the TAC for recommendations. These rules and procedures shall clarify the role that a Management Entity representative will have to manage TAC meetings, including the ability to appoint a Management Entity representative as the chair for procedural purposes at TAC meetings. The Management Entities are encouraged to collaborate on the development of the rules and procedures to promote consistency. Members of the Management Entity TACs shall be compensated by and serve at the pleasure of their respective appointing entity.

The Management Entity TACs may hold both formal and informal meetings to develop their recommendations on the items referred to them. The Management Entity TACs shall establish a regular formal meeting cycle, and regular formal time and place to conduct meetings

at which their recommendations are finalized, which such formal meetings shall be open to the public. The Management Entity TACs shall post an agenda in advance of their formal meetings in substantial compliance with the Brown Act, although the Management Entity TACs are not "legislative bodies" under the Brown Act. The Management Entity TACs shall keep minutes of their formal meetings. In addition, the Management Entity TACs, or individual members thereof, may convene informal meetings to discuss technical issues and to promote a free and full discussion of technical matters. Such informal meetings will not be publicly noticed and are not open to the public.

15. Watershed TAC

The two Management Entity TACs, along with a qualified designated representative of WCF, shall also serve as a Watershed TAC. The members of the Watershed TAC shall therefore consist of one representative from the City of Ojai, the County, OBGMA, Ventura, Casitas MWD, WCF, the UVRGA Executive Director, the self-funded local non-profit representative (initially OVLC), and the State Board and CDFW, who may designate one qualified representative each to participate on the Watershed TAC.

The Watershed TAC shall draft the initial FHEP, and updates and amendments to the FHEP. The Watershed TAC shall participate in the biannual (twice a year) coordination meeting and such other coordination meetings as are convened during each year. The Watershed TAC shall perform other functions as called for in this Physical Solution or as directed by the Management Entities.

The Management Entities shall jointly establish rules and procedures for the Watershed TAC. These rules and procedures shall encourage the Watershed TAC to seek consensus and if consensus cannot be achieved shall require that the TAC reflect majority, minority or individual views in the Watershed TAC's recommendations. These rules and procedures shall clarify the advisory role of the Watershed TAC and that the Watershed TAC shall provide recommendations only as directed by the Management Entities or as expressly provided in this Physical Solution. These rules and procedures shall clarify the role that a Management Entities' representative(s) will have to manage Watershed TAC meetings, including appointing a Management Entities'

representative(s) as the chair for procedural purposes at Watershed TAC meetings.

The Watershed TAC may hold both formal and informal meetings to develop its recommendations on the items referred to it or as required by this Physical Solution. The Watershed TAC shall post an agenda in advance of its formal meetings in substantial compliance with the Brown Act, although it is not a "legislative body" under the Brown Act. The Watershed TAC shall keep minutes of its formal meetings. In addition, the Watershed TAC, or individual members thereof, may convene informal meetings to discuss technical issues and to promote a free and full discussion of technical matters. Such informal meetings will not be publicly noticed and are not open to the public.

16. Annual Report

The Management Entities shall prepare, approve and file with the Court an Annual Report that includes, at a minimum, the following information: (a) summary of Management Entity activities and actions in the prior year, including efforts to coordinate with the other Management Entity, a report regarding the activities of the Management Entity TACs, a report on the status of implementing the Immediate Management Actions, and the status of the development of the FHEP; (b) fiscal report of the preceding year's operations, including revenue and expenditures; (c) the general condition and trends regarding the habitat suitable for the Ventura River Steelhead Population as compared to prior years; (d) production reports for the Management Areas; (e) information about New Production; (f) once adopted, a summary discussing FHEP implementation; (g) information about public agency conservation programs; and (h) any other information necessary to assess implementation of the Physical Solution.

The Management Entities shall coordinate to file one Annual Report, although they may each prepare separate portions of the Annual Report focusing on their respective Management Areas. The Management Entities shall also coordinate with the WCF Management Entity to include information about the WCF Management Area in the Annual Report. The Management Entities shall prepare their respective portions of the Annual Report in coordination with their separate Management Entity TACs.

The Management Entities shall adopt the Annual Report at a noticed public hearing. Prior

to adoption of the Annual Report, the Management Entities shall convene a meeting of the Watershed TAC, shall consider any recommendations on the Annual Report made by the Watershed TAC, and shall provide written responses to any material comments from the Watershed TAC. The Management Entities shall also coordinate with the State Parties as described below. A draft of the Annual Report shall be posted on the Management Entities' websites at least thirty (30) days prior to the noticed public hearing regarding adoption of the Annual Report.

The first Annual Report shall be filed with the Court on or before October 1 of the year following the entry of this Physical Solution, and then annually thereafter on or before August 1 of each year. The Management Entities may propose a different filing date for the Annual Report to the Court.

17. Coordination with the State Parties on Annual Report

Prior to the public release of the Annual Report, the Management Entities shall meet with representatives of the State Board and CDFW to review the draft of the Annual Report, to discuss monitoring data and to receive recommendations from the State Board and CDFW. The Management Entities shall consider these recommendations as part of the adoption of the Annual Report. If the Management Entities do not accept a material recommendation from the State Parties, the Annual Report shall include a written explanation why the recommendation was not accepted. This coordination obligation may be satisfied through the meeting with the Watershed TAC required under Section III.B.16.

18. Coordination with State Parties on Projects

The Management Entities, or specific Responsible Parties implementing a specific habitat or flow related project under this Physical Solution, shall provide the State Board and CDFW with an opportunity to review and comment on the design, construction and assessment of performance of the project, if such project was not previously reviewed by a Management Entity TAC or the Watershed TAC. The Management Entities, or specific Responsible Parties involved, shall consider any written comments submitted by the State Board and CDFW on the project. For written comments not accepted, the Management Entities, or specific Responsible Parties

involved, shall provide a written response explaining why the recommendation was not accepted. The State Board and CDFW shall employ their technical knowledge in a manner supportive of achieving the Management Objective.

19. Review of Actions of the Management Entities

Any final decision of a Management Entity pursuant to this Physical Solution shall be subject to review by the Court on its own motion or on the timely motion of any Bound Party. The Court's power to review decisions of the Management Entity extends to any decision of the Management Entity made under this Physical Solution, but the Court's power under this Physical Solution does not extend to decisions made by the Management Entity outside of this Physical Solution and under their independent legal authority not derived from this Physical Solution.

a. Effective Date of Management Entity Decision

Any final decision of the Management Entity pursuant to this Physical Solution shall be deemed to have occurred on the date of the written order or written decision of the Management Entity made at an open and public meeting.

b. Time Period to Seek Review

A Bound Party seeking review of a Management Entity decision shall file a motion for review with the Court within ninety (90) days of the final decision.

c. Motion for Review

Any Bound Party may move the Court to review a final decision of the Management Entity pursuant to this Physical Solution by a noticed motion, with at least thirty (30) Days' notice. The motion shall be served on all Bound Parties and the Management Entity. Unless otherwise ordered by the Court on its own motion, or upon request of the moving party, any such motion shall not operate to stay the effect of any final decision which is challenged. To have standing to bring such a motion for review, a Bound Party shall have participated in the applicable administrative proceedings of the Management Entity regarding the final decision, or a Bound party shall make an adequate showing as to why such participation was impractical. If a Bound Party did not participate in the applicable administrative proceeding, the Bound Party shall be limited to the record before the Management Entity regarding that decision, unless good cause

is shown.

d. Standard of Review

The Court's review of final decisions of a Management Entity under this Physical Solution shall be de novo.

e. Decision

The decision of the Court in a proceeding to challenge a final decision of a Management Entity shall be an appealable supplemental order in this Action.

20. Resolution of Disputes Between Management Entities

The Management Entities shall coordinate their activities within their respective Management Areas to support a comprehensive management approach to the Watershed and implementation of this Physical Solution. If there are disputes between the Management Entities, they shall meet and confer in good faith to seek to resolve any such dispute. They shall also convene a meeting of the Watershed TAC to receive a recommendation about how to resolve the dispute. All staff level disputes between the Management Entities shall be acted on by the Management Entities' Boards in an effort to resolve the dispute prior to an impasse. If, after meet and confer, receiving the recommendation of the Watershed TAC and final Board consideration, the dispute remains unresolved, the Management Entities shall jointly move the Court to resolve the dispute.

21. Court Removal of Management Entities

The Court retains and reserves full jurisdiction, power and authority to withdraw its appointment of a Management Entity, for good cause, or when the Management Entity is no longer able or willing to continue performing the duties assigned herein, and to substitute a new entity as Management Entity.

C. WCF Property Specific Management Area

WCF is the sole Party located in the WCF Property Specific Management Area and has a unique role in managing the WCF Property Specific Management Area, although it is not subject to the provisions of this Physical Solution applicable to the Management Entities. As depicted in Exhibit "A", the WCF property is located in the lower portion of the Watershed, upstream of the

estuary. WCF shall perform, at its sole expense, all required activities to implement this Physical Solution within the WCF Property Specific Management Area. This work includes: (a) continuation of its Arundo removal program described in Section IV.A.6; (b) continuation of its trespasser notification and trash removal program on riparian lands; (c) continuation of its sustainable agriculture land management practices; (d) executing and reporting habitat and flow monitoring programs in the lower portions of the Ventura River consistent with the monitoring described in the relevant portions of Exhibit "D" of this Physical Solution as part of implementing this Physical Solution or the FHEP on WCF property; and (e) performing any additional activities in the WCF Property Specific Management Area required under the FHEP . WCF shall coordinate with the Management Entities regarding implementation of the Physical Solution in the WCF Property Specific Management Area, including attending the biannual coordination meetings and providing the Management Entities with an annual report of actions it has taken on the property to implement the Physical Solution. This annual report shall be made part of the Annual Report.

The Court retains and reserves full jurisdiction, power and authority to withdraw its appointment of WCF to manage the WCF Property Specific Management Area, for good cause and at a noticed hearing, or when WCF is no longer able or willing to continue performing the duties assigned herein, in which instance the Court shall appoint a new entity to assume management responsibility for the WCF Property Specific Management Area.

D. Upper Ojai Valley Basin Autonomy Provisions

Parties located within the Upper Ojai Basin may develop, and submit to the SAC Management Entity for approval, proposed self-management provisions for the Upper Ojai Valley Basin consistent with the Management Objective of this Physical Solution, Bulletin 118 and the hydrogeology of the Upper Ojai Basin, and SGMA. The SAC Management Entity shall consider and take action on any such proposed self-management provisions at an open and public meeting and shall make a written decision regarding them. If the SAC Management Entity approves any proposed self-management provisions for the Upper Ojai Basin, those minimum standards shall govern within the Upper Ojai Basin, subject to ongoing compliance oversight by

the SAC Management Entity.

E. Physical Solution Phasing

This Physical Solution shall be implemented in three phrases. Phase 1 shall commence upon entry of the Physical Solution and shall run until the adoption of the FHEP. In Phase 1, the Responsible Parties, or Management Entity, if applicable, shall implement the Immediate Management Actions, as identified in Section IV, and the Monitoring Program described in Exhibit "D", while the FHEP is being developed pursuant to Section V. It is anticipated that Phase 1 will last eighteen (18) months from entry of the Physical Solution.

Phase 2 of this Physical Solution shall commence upon adoption of the FHEP and shall continue until Matilija Dam removal is completed. During Phase 2, the Responsible Parties, or Management Entity, if applicable, shall: (1) continue to implement the Immediate Management Actions, or revised Management Actions; (2) continue to implement the Monitoring Program described in Exhibit "D"; and (3) implement the FHEP. It is anticipated that Phase 2 will last until approximately 2035, the target date for Matilija Dam removal.

Phase 3 of this Physical Solution shall commence upon completion of Matilija Dam removal. During Phase 3, the Watershed TAC shall reassess all Management Actions and the FHEP considering changes in the Watershed following Matilija Dam removal. This may require the reassessment of the scope and nature and continued need for the FHEP. Phase 3 shall continue until the Management Objective is achieved as determined by this Court, or until the Court takes other appropriate actions.

IV. IMMEDIATE MANAGEMENT ACTIONS

After entry of the Physical Solution, the specific Responsible Parties identified below shall implement the Immediate Management Actions set forth in this Section IV within the identified Management Areas or within the Watershed, on the timelines identified herein. Unless otherwise stated, the Immediate Management Actions shall be undertaken by the identified Responsible Party or Parties, and not by the Management Entities directly. Some of the Immediate Management Actions have expressly committed funding by one or more Responsible Party. Other Immediate Management Actions do not currently have funding and are subject to

the provisions of Section VI.D of this Physical Solution (Actions Subject to and Not Subject to Funding Availability). Implementation of the Immediate Management Actions and future Management Actions are also subject to Uncontrollable Conditions, regardless of whether Uncontrollable Conditions are expressly referenced in the description of the Immediate Management Action or future Management Actions.

A. Mainstem Management Area

The following Immediate Management Actions shall be undertaken within the Mainstem MA by the Responsible Parties identified and as overseen by the Mainstem Management Entity.

1. Foster Park Protocols

Upon entry of the Physical Solution, Ventura shall implement the following operational protocols at Foster Park. Ventura shall cease water extraction at Foster Park (including through its Nye Wells and its subsurface intake) when average daily streamflow at Foster Park falls below the shutoff thresholds in Table 1 for three consecutive days. Ventura shall measure average daily streamflow at the USGS Ventura R Nr Ventura gage 11118500. The Management Entity may consider and approve the use of a different gage located below Foster Park (but located no further downstream than global positioning system ("GPS") coordinates 34.349835, -119.302525) for measuring average daily streamflow at Foster Park, but shall hold a public hearing to consider the use of any different gage before approving such use.

Table 1 Foster Park Protocols

Water Month Type	Flow Threshold
Critically Dry	3 cfs
Dry	5 cfs
Below Normal	7 cfs
Above Normal	9 cfs
Wet	11 cfs

Ventura may resume water extraction at Foster Park once average daily streamflow at the Foster Park gage exceeds the applicable water-month-type threshold for three consecutive days, provided that resuming extraction will not cause the average daily streamflow to drop below the

applicable threshold within the next three consecutive days.

The water month type for implementation of the Foster Park Protocols (i.e., flow shutoff thresholds) shall be determined monthly by Ventura. Water month typing shall be completed on the first day of each month, unless the first of the month occurs on a weekend or holiday, in which case water month typing shall be completed on the next subsequent business day. The determined water month type shall be used until the next water month typing is completed.

Each business day, average daily streamflow of the previous day(s) shall be evaluated to determine whether shutoff thresholds were satisfied for three consecutive days. Any changes to operations, such as cessation of pumping, shall occur the following business day. As described above, extraction may resume after average daily streamflow has exceeded the applicable threshold for three consecutive days, provided that resuming extraction will not cause the average daily streamflow to drop below the applicable threshold within the next three consecutive days.

To determine the water month type for implementing the Foster Park Protocols, two steps are taken:

1. The previous 24 months of precipitation data from **Ventura County Watershed Protection District's** ("**VCWPD**") Ojai County Fire Station gage no. 030D are input into the Effective Precipitation Formula below, using the monthly weighted coefficients listed in Table 2 below.
2. Table 3 below is used to compare the formula's output to monthly Effective Precipitation thresholds to identify the water month type.

The effective precipitation formula used in the first step is as follows:

$$\mathbf{P_{Effective} = \alpha * \int P_{Current\text{-}WY\text{-}thru\_end\ of\ month\ N} + \beta * P_{Prev\text{-}WY} + \kappa * \int P_{12\text{-}N\ months\ of\ preceding\ WY}}$$

Where, "$P_{Effective}$" = *Effective Precipitation;*

"α", "β", and "κ" = monthly weight coefficients presented in Table 2;

"$P_{current\text{-}WY\text{-}thru\_end\ of\ month}$" = *Precipitation at VCWPD Gage No. 030D of the current water year through the end of the previous month (for October, this term is assumed to be zero in the calculation of the water month type);*

"$P_{Prev\text{-}WY}$" = *Precipitation at VCWPD Gage No. 030D of the previous water year;*

"$P_{12\text{-}N \text{ months of preceding } WY}$" = Precipitation at VCWPD Gage No. 030D for the portion of the preceding water year, that brings the total number of months in the formula used to 24 months; and

"N" = Number of the month within the water year.

Table 2. Effective Precipitation formula month weight coefficients

WY Month	Current WY weight, α	Previous WY weight, β	Antecedent WY 24-month weight, κ
Oct	0.000	0.73	0.270
Nov	0.080	0.64	0.280
Dec	0.100	0.39	0.510
Jan	0.650	0.05	0.300
Feb	0.670	0.2	0.130
Mar	0.720	0.18	0.100
Apr	0.825	0.165	0.010
May	0.870	0.12	0.010
Jun	0.900	0.1	0.000
Jul	0.900	0.1	0.000
Aug	0.850	0.15	0.000
Sep	0.860	0.13	0.010

Table 3. Five water month type thresholds for Effective Precipitation formula output

	Thresholds of Effective Precipitation Formula results (based on 24-month antecedent conditions) for determining Water Month Type[1]											
Water Month Type	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**
Critically Dry	5.72	8.39	8.59	11.11	11.38	11.79	11.99	12.21	11.99	12.90	11.23	10.71
Dry	8.50	11.00	12.50	15.90	16.37	16.75	16.90	17.50	17.00	17.50	17.00	16.00
Below Normal	11.50	15.56	19.00	25.00	25.20	26.00	26.00	26.00	26.00	29.00	26.16	23.10
Above Normal	13.00	18.11	23.95	35.00	36.00	37.50	37.80	37.00	38.00	35.00	31.00	26.00
Wet[2]	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Notes:
[1] For each water month type, the upper thresholds of Effective Precipitation are shown by calendar month. In other words, the water month type is determined by locating the calendar month that has just been concluded (vertical column), then locating the threshold that the calculated Effective Precipitation value falls beneath (horizontal row).
[2] n/a = Not applicable. Threshold values are not listed for "Wet" water month type because any Effective Precipitation output value higher than the "Above Normal" threshold is categorized as "Wet".

2. Foster Park Pipeline Relocation or Removal Project

Ventura, at its sole cost, which may include grant funding, shall construct its preferred alternative to relocate or remove the partially exposed pipe at Foster Park with a target completion date by the end of 2026, using the construction milestones listed herein. In the event Uncontrollable Conditions delay or prevent Ventura from achieving a construction milestone, Ventura shall, in addition to taking other steps required by this Physical Solution in Section VI.C, notify the Mainstem Management Entity, the State Parties and SBCK of any such unavoidable delays in achieving the below milestones within seven (7) days of learning of the delay to allow Ventura, the Mainstem Management Entity, the State Parties to discuss and agree on an amended deadline(s). The construction-related milestones include: (a) Complete final design and seek bids for the work by September 1, 2026; (b) Complete environmental permitting by September 30, 2026; and (c) Complete project by December 31, 2026. Ventura shall notify the Mainstem Management Entity of project completion for inclusion in the Annual Report to the Court.

3. Foster Park Fish Passage Notch Maintenance

Ventura shall, at its sole cost, which may include grant funding, maintain the Fish Passage Notch installed at Foster Park in 2022 consistent with the Restoration Management Permit (No. RMP-2025-0005-R5) issued by CDFW on August 8, 2025, including any future updates thereto.

The purpose of Restoration Management Permit No. RMP-2025-0005-R5 is to achieve volitional fish passage under all flow conditions by maintaining and clearing sediment from upstream and downstream areas directly adjacent to the Notch. Ventura shall perform maintenance as necessary, but primarily after high-flow events that cause channel migration and/or sediment deposition near the Notch. Ventura shall notify the Management Entity of any maintenance or other work performed under Restoration Management Permit No. RMP-2025-0005-R5 for inclusion in the Management Entity's Annual Report to the Court.

4. Ventura's Right to Ojai Valley Sanitary District Treated Wastewater

Ventura has a right to the treated wastewater discharged by the **Ojai Valley Sanitary District** ("**OVSD**") to the Mainstem Ventura River below Foster Park pursuant to a contract with OVSD. Ventura does not own or operate the OVSD treatment plant, nor hold the **National Pollutant Discharge Elimination System** ("**NPDES**") permit for the discharge. Ventura shall not exercise its rights to the treated wastewater discharged by OVSD to the Ventura River in such a way that Ventura causes the discharge to cease or be reduced. Ventura makes no representations and has no control over the treatment decisions of OVSD, which may, independent of actions by Ventura, and in response to new obligations imposed on OVSD by the State through the Los Angeles Regional Water Quality Control Board, cause the discharge to cease or be reduced. The Management Entity shall include in its Annual Reports to the Court a summary of flows discharged to the Ventura River from OVSD's facility highlighting any changes in OVSD's discharge, based on a review of OVSD's publicly filed discharge monitoring reports.

5. Robles Diversion Flow Protocols

Casitas MWD shall continue to maintain the flow protocols, summarized in Exhibit "H" to this Physical Solution, in the existing 2003 National Marine Fisheries Service Biological Opinion ("Biological Opinion") issued to the United States Bureau of Reclamation for the operation of the Robles Diversion and Fish Passage Facility. The technical support for these flow protocols is contained in the Biological Opinion. The Biological Opinion finds that with the implementation of the Robles Diversion Flow Protocols there is no jeopardy to the Southern

California Steelhead. Continued implementation of the Robles Diversion Flow Protocols under the Biological Opinion is consistent with this Physical Solution.

6. WCF Arundo Removal Program

WCF shall continue its pre-existing Arundo removal program on its property based on recommendations by the WCF financial and technical experts. The program aims to improve riparian habitat quality, reduce impairment by trespassers who reside in the Arundo, and reduce fire risk to the surrounding community. The goal of this program is to treat 5-10 acres of Arundo annually, until Arundo is removed or, if not feasible, is controlled within the WCF Management Area subject to the factors below.

Historically, this program has treated approximately 5-10 acres of Arundo annually since 2008, subject to limitations due to weather, permitting, access, safety, bird nesting season restrictions, density of accessible Arundo stands, financial resources, and the professional judgment of a qualified biologist. Because the WCF Management Area is located at the downstream end of the Watershed, the amount of removal depends upon these factors as well as Arundo reinfestation. Additionally, several other invasive woody plant species are opportunistically removed in accordance with applicable permits, including tree tobacco (*Nicotiana glauca*), castor bean (*Ricinus communis*), and tamarisk (*Tamarix spp.*).

Arundo removal activities within the WCF Management Area will likely continue into Phase 3 of this Physical Solution. WCF's technical team shall continue to map Arundo distributions, remove Arundo in accordance with permit requirements, and monitor and maintain treated areas within the WCF Management Area. WCF shall describe its Arundo removal activities in its annual reporting to the Management Entities for inclusion in the Annual Report.

7. Additional Management Actions to Seek to Increase Flow in the Mainstem Ventura River to Support *O. mykiss*

Within ninety (90) days of entry of this Physical Solution, the Mainstem Management Entity shall coordinate the establishment of the **Mainstem Flow Augmentation Committee** . At a minimum, the Mainstem Flow Augmentation Committee shall include the members of the Mainstem TAC (Ventura, Casitas MWD, the County, the self-funded local non-profit

representative (initially OVLC, a technical representative of UVRGA, the State Board and CDFW, who may designed one qualified representative each to participate) and one qualified technical representatives each from MOWD and VRWD. Other interested parties may designate a representative with technical expertise in flow augmentation to serve on the Mainstem Flow Augmentation Committee, subject to Mainstem Management Entity approval. A Mainstem Management Entity representative may chair the meetings of the Mainstem Flow Augmentation Committee and prepare its agendas.

The Mainstem Flow Augmentation Committee shall work with the Mainstem Management Entity to assess whether it is technically feasible and beneficial to *O. mykiss* to develop and implement additional flow augmentation within the Mainstem Management Area at or near the confluence of San Antonio Creek and the Mainstem Ventura River to produce a material increase in flow under low-flow conditions that enhance conditions for *O. mykiss*. This assessment shall be coordinated with, and shall not conflict with, the ongoing efforts under the UVR GSP to assess management actions to address impacts of indirect depletion on interconnected surface water under SGMA. Each Party with a representative on the Mainstem Flow Augmentation Committee shall be responsible for the costs of their representative's participation.

The immediate goal of the flow augmentation shall be to provide for increased connectivity and suitable habitat quality to support appropriate lifestages of *O. mykiss* between the confluence of San Antonio Creek with the Mainstem Ventura River downstream through Foster Park, during low-flow conditions, without causing adverse impacts to the Watershed or water rights that outweigh the benefits of flow augmentation. This immediate goal may be refined and updated based on the FHEP. The Mainstem Flow Augmentation Committee shall complete the assessment and transmit a report ("**Assessment Report**") describing its conclusions regarding flow augmentation to the Mainstem Management Entity within one year of formation of the Flow Augmentation Committee. If the Mainstem Flow Augmentation Committee concludes that there are flow augmentation options that are technically feasible and beneficial without adverse impacts to the Watershed or water rights that outweigh the benefits of flow

augmentation, the Assessment Report shall include a proposed pilot project or projects. Any such pilot project shall specify the source of water to be used for augmentation, appropriate flow triggers for augmentation, provide an estimated cost to implement the project or projects, identify Specific Funding Sources, and an assessment of whether the augmentation project would affect water rights of Bound Parties. Any such pilot project shall include a specific monitoring plan to assess any potential benefits or impacts of the pilot project.

The Mainstem Management Entity shall have final approval authority regarding selection and oversight of any Mainstem flow augmentation pilot project(s) implemented under the Physical Solution. Upon receiving the Assessment Report from the Mainstem Flow Augmentation Committee, the Mainstem Management Entity shall place the Assessment Report and consideration of any proposed pilot project(s) on the agenda for a regularly scheduled meeting of the Mainstem Management Entity within ninety (90) days of receiving the Assessment Report. Within thirty (30) days of this meeting the Mainstem Management Entity shall determine whether to proceed with any proposed flow augmentation pilot project(s) and issue its final decision in writing. If the Mainstem Management Entity approves any flow augmentation pilot project(s), and subject to obtaining funding and all necessary permits for any such pilot project(s), the Mainstem Management Entity shall coordinate with the Mainstem Flow Augmentation Committee and with Parties who agree to participate in the pilot project(s) to initiate flow augmentation, as applicable based on flow triggers for augmentation, within three years of entry of the Physical Solution.

After three years from commencement of any flow augmentation pilot project, the Mainstem Flow Augmentation Committee shall evaluate: (a) if flow augmentation produced a material increase in flow to support connectivity in the reach between the confluence of San Antonio Creek and the Mainstem downstream to Foster Park and avoided adverse impacts on conditions in the Watershed that outweigh benefits; and (b) what, if any, changes in flow augmentation are appropriate. The evaluation shall consider all available information, including information collected through implementation of the Initial Monitoring Plans and development and, if applicable, implementation of the FHEP. The Mainstem Management Entity may

determine, in consultation with the Mainstem Flow Augmentation Committee, that it is appropriate to defer evaluation of the flow augmentation pilot project(s) beyond three years to assess its efficacy during a broader range of hydrologic conditions.

If the evaluation of the pilot project demonstrates that flow augmentation is feasible and beneficial, the Mainstem Management Entity will consider this information to expand the pilot project and/or develop additional Management Actions. If the evaluation recommends any necessary changes to the flow augmentation pilot project, the Mainstem Management Entity shall consider implementing those changes. If the evaluation demonstrates that flow augmentation is not feasible or beneficial, or if the Mainstem Management Entity does not approve any flow augmentation pilot project, the Mainstem Management Entity shall make a written determination of whether additional Management Actions should be implemented to achieve the anticipated goals of the Assessment Report.

8. Other Self-Funded Projects

Any Party may propose a habitat improvement project for consideration by the Mainstem TAC and Mainstem Management Entity. Such proposals shall be based on sound scientific principles, describe the project in detail, including required permits, project partners or sponsoring entities, projected benefits, timeline for implementation, a well-developed budget and identified source of funding.

B. San Antonio Creek Management Area

The following Immediate Management Action shall be undertaken within the SAC MA:

1. Boulder Augmentation Pilot Project

Casitas MWD shall install and maintain boulders or other functionally equivalent material to create habitat complexity features, among other benefits, at locations in San Antonio Creek to enhance juvenile and adult *O. mykiss* rearing habitat, improve protection and cover from predation, increase structural diversity of habitat, and increase holding habitat as a velocity refuge at higher flow, and over-summer rearing at lower flows. The design and location of the habitat features shall be approved in advance by CDFW and VCWPD. Casitas MWD shall implement the Pilot Project using the following milestone: Design and bid project within 18 months of entry

of this Physical Solution. Generally, this project is considered a streambed modification and will require one or more permits from regulatory agencies; it is subject to and is therefore contingent on securing regulatory approvals and subject to Uncontrollable Conditions, including but not limited to, the inability to obtain the necessary permits, authorization or approvals from any governmental agency despite good faith and diligent efforts to secure such authorization or approval.

Based on the performance of the Pilot Project, Casitas MWD shall consider whether additional habitat enhancement projects in the San Antonio Creek Sub-Watershed are technically and financially feasible and warranted.

2. Low Flow Survey and Coordination with CDFW

The San Antonio Creek Management Entity shall monitor flow in San Antonio Creek at Camp Comfort, and when it appears that flows may drop below 0.5 cfs, the Management Entity shall conduct a survey for stranded Steelhead and shall report the findings of the survey to CDFW to assist in rescue and relocation operations.

3. San Antonio Creek Voluntary Flow Augmentation Efforts and Pilot Project(s)

Some Bound Parties within the SAC MA currently perform voluntary actions, or have plans to perform voluntary actions, that are designed to increase flows in San Antonio Creek. These Bound Parties within the SAC MA are encouraged to continue to pursue these voluntary efforts. These Bound Parties who pursue these voluntary actions shall report their voluntary efforts to the SAC TAC, and the SAC TAC is directed to track and assess these voluntary efforts. The SAC TAC shall provide an annual report of these voluntary efforts to the SAC Management Entity and identify specific voluntary efforts that appear to be successful in increasing flows in San Antonio Creek.

In addition, these Bound Parties have potential direct flow augmentation concepts that may provide increased flows in San Antonio Creek under certain hydrological conditions. These Bound Parties are encouraged to present these conceptual projects to the SAC TAC, and the SAC TAC is directed to assist the Bound Party to assess the conceptual project, identify permit

requirements for the conceptual project, explore funding options for the conceptual project and otherwise support the efforts of these Bound Parties to develop the conceptual project into a pilot project that could be recommended to the SAC Management Entity for approval.

The SAC Management Entity shall reasonably consider all such pilot projects recommended by the SAC TAC. Any such pilot project shall be based on sound science, include a detailed project description, identify a specific source of water to be used for augmentation, a funding source and well-developed budget, permitting requirements, willing project partners or sponsors, timeline for implementation, projected benefits and a monitoring plan. Additionally, the project shall not affect the water rights of any Bound Party nor violate Ordinances of the OBGMA.

As noted on OVLC's website (https://ovlc.org/arundo?rq=arundo) removal of Arundo may provide several benefits related to the Management Objective. These are: increase in native riparian habitat, and reductions in adverse impacts otherwise caused by Arundo, including flood hazards, wildfire risk, streambank erosion, and water consumption (estimated to be up to 20 Acre-Feet per acre per year on a statewide basis, subject to refinement for local conditions). And as reported in the 2026 Ventura County Grand Jury Report (https://venturacounty.gov/grand-jury/fiscal-year-2025-2026/#docaccess-836043d6e41dec0b81321eaca6b1c07d), Arundo removal may prevent waste of groundwater resources and result in flow augmentation.

4. Other Self-Funded Projects

Any Party may propose a habitat improvement project for consideration by the SAC TAC and SAC Management Entity. Such proposals shall be based on sound scientific principles, describe the project in detail, including required permits, project partners or sponsoring entities, projected benefits, timeline for implementation, a well-developed budget and identified source of funding.

C. Watershed-Wide Management Actions

The following Immediate Management Actions shall be undertaken within both Management Areas, as applicable, by the Responsible Parties identified and as overseen by the Management Entities as applicable to their respective Management Areas:

1. Arundo Removal Program

This Physical Solution includes an Arundo Removal Program. The Arundo Removal Program has the following goal: approximately 70 acres of Arundo removal on Lion Creek, San Antonio Creek, and the Ventura River at and upstream of Foster Park, including 36 acres treated from September 2025 through January 2026, to occur in Phase 1; approximately 60 acres in the Mainstem from Foster Park to the Pacific Ocean in Phase 2; and any remaining acres on the Mainstem in Phase 3.[4] These acreage goals do not include approximately 95 acres of Arundo located in the WCF Management Area, which WCF shall separately address under Section IV.A.6 of this Physical Solution.

The program consists of three elements: (a) assessment of the presence and distribution of Arundo on properties throughout the Watershed, updating mapping that OVLC undertook in 2020 and 2023; (b) removal of Arundo and related invasive plants, including tree tobacco, castor bean, and tamarisk; and (c) removal work, and monitoring and maintenance following such treatment.

OVLC shall administer the Arundo Removal Program, subject to its securing necessary funding as described below, and in coordination with the Management Entities, as needed. Ventura County/VCWPD will actively cooperate in the implementation of this program. By March of each year, OVLC shall report to the Management Entities on program implementation, including overall progress towards the Arundo Removal Program's goal, the status of funding, permits, access agreements with Bound Parties, and work performed compared to work identified in workplans, for the prior calendar year.

Other than WCF, whose Arundo removal program is described in Section IV.A.6 above, Bound Parties (including, without limitation, all Exempt Parties) shall actively cooperate in the implementation of this program on their respective properties. They shall provide access on reasonable terms to OVLC or its designee to undertake an assessment of Arundo presence on their respective properties, followed by removal, monitoring and maintenance, for any property where Arundo is present. In the alternative, a Bound Party may undertake such work under a workplan approved by OVLC or its designee. A Bound Party that elects to undertake such work

[4] These acreage estimates are based on 2023 data compiled by OVLC.

may apply to OVLC for a grant of funds. Bound Parties may seek relief from the Court regarding this obligation, but the Court has jurisdiction to order a Bound Party to provide reasonable access to its property or to undertake (or permit OVLC or its designee to undertake) such work, subject to reasonable terms and conditions, and for good cause shown.

OVLC has received more than $7 million in grants from CAL FIRE and CDFW to fund Arundo removal efforts. OVLC represents that it shall expend $6,920,000 in remaining grant funds to support Arundo removal in the SAC MA and Mainstem MA. OVLC shall seek additional grant funds as necessary to implement the program consistent with the Arundo Removal Program's goal.

Ventura, MOWD, VRWD, and Rancho Matilija shall collectively contribute $75,000 to OVLC to support this program in the first year following Court approval of this Physical Solution. This funding may continue for an additional two years, for a potential total of three years following entry of this Physical Solution. These Parties shall meet annually in March to consult with OVLC on funding needed for the coming year. If the work described in the prior year was completed satisfactorily, and these Parties agree that the proposed work plan is aligned with the Arundo Removal Program's goals, these Parties may commit to funding for an additional one-year term at a time. This funding is specifically designed to help OVLC build capacity to identify and obtain additional funding commensurate with the Arundo Removal Program's goal.

The Bound Parties shall support efforts to seek and secure funding, as well as permits, to implement the program consistent with the Arundo Removal Program goal. The Ventura County Resource Conservation District holds CDFW Restoration Management Permit 2025-0013-R5, which may cover Responsible Parties for such work through 2036. OVLC is seeking approval from the U.S. Fish and Wildlife Service for a proposed Habitat Conservation Plan that would provide such coverage under the Federal Endangered Species Act section 10.

2. Non-Native Fish Management

As part of the development of the FHEP, CDFW shall consider any non-native fish management plan proposed by the Parties. If such a non-native fish management plan is approved by CDFW, CDFW shall coordinate with the Management Entities and Parties to

support implementation of the plan in the Ventura River Watershed. Implementation of the plan shall be subject to identification of Specific Funding Sources.

3. Stranded Fish Rescue Plans and Procedures

CDFW shall use its existing authorities to evaluate rescue and relocation operations for stranded steelhead in the Watershed when CDFW is notified of such stranded *O. mykiss*. Within one year after entry of this Physical Solution, CDFW shall establish a procedure for parties to report stranded steelhead in the Watershed for CDFW to evaluate rescue and relocation operations. During development of the FHEP, the Watershed TAC shall consider whether to identify and evaluate additional options to rescue and relocate stranded Steelhead.

4. Fishing Prohibition Signage and Population Protection Proposals

Within one year after entry of this Physical Solution, CDFW shall develop a plan to increase and replace signage in key locations in the Watershed about fishing prohibitions and to better publicize existing procedures for notifying CDFW of illegal fishing via CALTIP (Californians Turn in Poachers and Polluters). Implementation of the plan is subject to identification of a Specific Funding Source for the increased or replacement signage. In addition, within one year after adoption of the FHEP, CDFW shall consider any additional population protection proposals in the FHEP, which may include additional fish relocation operations, increased enforcement of current fishing regulations in the Watershed, and other similar actions identified in the National Marine Fisheries Service's 2012 Southern California Steelhead Recovery Plan[5].

5. Human Encampments and Other Similar Anthropogenic Impacts

All Parties having jurisdictional authority[6] or control over specific public or private property in the Watershed shall support actions and funding to limit new human encampments, remove human encampments in the Watershed that may negatively impact Watershed conditions, and address other similar anthropogenic impacts. All interested parties that have jurisdictional

[5] See https://www.fisheries.noaa.gov/resource/document/southern-california-steelhead-recovery-plan.

[6] Such parties include those with specific statutory or police power authority to address encampments, including, but not limited to Ventura, Ventura County/VCWPD, and CDFW.

authority or control over specific private or public properties in the Watershed shall meet to discuss methods for achieving this objective and develop a plan for a coordinated approach to abate human encampments that are negatively impacting Watershed conditions related to Steelhead recovery. This initial meeting shall be held within ninety (90) days after entry of this Physical Solution. A plan for a coordinated approach shall be developed within 18 months after entry of this Physical Solution, submitted to the Court for approval and implemented thereafter. Implementation shall occur within 18 months of final plan approval by the Court. The Plan shall be assessed and updated as appropriate as part of updates to the FHEP and adaptive management under this Physical Solution. As part of its WCF Management Entity commitments, WCF shall also continue a trespasser and trash removal program within WCF Management Area. This program consists of periodic removal of trespassers, illegal encampments, and trash from WCF property, subject to limitations due to weather, safety, access and availability of City and Ventura County law enforcement. Effective abatement will require coordination among property owners and public safety officials.

6. Conservation Efforts

Each Bound Party to this Physical Solution shall implement all legally required water conservation measures. For public agency Bound Parties, the water conservation measures shall be no less than those required by existing laws, ordinances and agreements applicable to them. Public agency Bound Parties shall provide their applicable Management Entities with an annual update on their conservation programs, and the Management Entities shall include a summary of this information in the Annual Report. Agricultural Bound Parties shall implement industry standard agricultural water conservation measures. Other Bound Parties shall comply with all applicable water mandatory conservation measures, and should consider taking other voluntary water conservation measures as appropriate to their situation. This provision does not address nor impair in any manner the water rights claims of the Bound Parties and does not specify a specific water consumption amount for Bound Parties. This provision also does not bar any Bound Party from voluntarily implementing additional water conservation measures beyond what is legally required or beyond industry standards.

7. Barrier Assessment & Future Remediation

Within ninety (90) days of entry of this Physical Solution, CDFW shall coordinate the establishment of a voluntary committee ("**Fish Passage Barrier Committee**") of interested Parties to perform an assessment of existing complete, partial, and temporal barriers to *O. mykiss* passage in the Watershed. Any interested Party may designate a representative with technical expertise in fish passage issues to serve on the Fish Passage Barrier Committee, subject to CDFW's reasonable approval. The Fish Passage Barrier Committee shall use existing surveys and professional judgment to prepare a list of existing barriers describing the following for each barrier:

- Whether the barrier is complete, partial, temporal, or does not constitute a fish passage barrier. The report shall specify the nature of each complete, partial, and temporal barrier; if the Fish Passage Barrier Committee determines no barrier exists in a particular location, it shall explain the basis for this determination.
- The options for and feasibility of barrier remediation, including anticipated eligibility for streamlined permitting (e.g., the Statutory Exemption for Restoration Projects ("**SERP**") and Statewide Restoration General Order ("**SRGO**") and the estimated timeline for barrier remediation.
- Estimated costs and funding options for barrier remediation.
- Environmental benefits of barrier remediation, including the amount of habitat that will be provided by remediation of the barrier for specific *O. mykiss* life stages.
- Environmental and community impacts of barrier remediation.

The Fish Passage Barrier Committee shall complete a written report of its work (the "**Fish Passage Barrier Assessment Report**" or "**Report**"), including a prioritization list, within one year of entry of this Physical Solution. Prioritization shall be based on consideration of the bullet points listed above. Based upon the prioritization list in the Report, the Fish Passage Barrier Committee shall (a) select two barriers to be remediated within eight years of entry of this Physical Solution, and (b) identify Specific Funding Sources for remediation of the two prioritized barriers.

The Fish Passage Barrier Committee shall forward its assessment to the Management Entities for consideration and recommended approval. The Management Entities shall have final approval authority regarding implementation of the selected barrier remediation projects. Subject to obtaining funding and all necessary permits for the two prioritized barrier remediation projects, the Fish Passage Barrier Committee shall seek to work with the Management Entities, in coordination with the owners of the barriers, in an attempt to complete the two prioritized barriers within eight (8) years of the Court's entry of this Physical Solution.

8. Matilija Dam Ecosystem Restoration Project

The Bound Parties generally recognize that removal of Matilija Dam is an important step toward *O. mykiss* habitat restoration and a significant feature of MDERP. MDERP, however, is not currently fully-defined, will require years of study, planning and permitting and is estimated to cost tens of millions of dollars. For these and other reasons, the MDERP is a standalone project separate from this Physical Solution and is not a compliance requirement under this Physical Solution. Because the MDERP is a standalone project separate from this Physical Solution, this Physical Solution does not change the legal rights of Bound Parties as to the MDERP. VCWPD shall provide bi-annual updates on the status of MDERP planning, permitting and financing efforts on a public website and to the Management Entities.

Parties having permitting authority over the reconstruction of water infrastructure in the Watershed that may be damaged by Matilija Dam removal shall prioritize the issuance of permits supporting the timely reconstruction of the water-related infrastructure.

9. Optional Development of Flow Analysis by the State Parties and Annual Assessment by the Management Entities

Within one year of entry of this Physical Solution, the State Parties may develop, in coordination with the Management Entity TACs, and transmit to the Management Entities flow analysis describing key flows for different life stages of *O. mykiss* ("**Flows**") at: (a) the Mainstem at Foster Park (as measured at USGS Gage no. 11118500) and (b) San Antonio Creek near its confluence with the Ventura River (as measured at VCWPD Gage no. 605A). The State Parties shall provide a technical memorandum explaining the basis for the State's Flows including the

science-based facts specific relevant to the Ventura River Watershed. The Management Entities shall review and assess the scientific validity of the States flow analysis, consider and assess as part of the Annual Report. Once validated, the Management Entity shall consider the Flows as part of the adaptive management process and in connection with the selection of future Management Actions in coordination with the FHEP. The State Parties may update their Flows in coordination with the Management Entity TACs, and transmit revised Flows to the Management Entity, with a revised technical memorandum, based on new information. The State Parties' Flows shall not be enforceable flow criteria and shall not be treated as such. Neither the State Parties' Flows nor the Management Entities' consideration and assessment of the Flows shall be used to determine whether any Bound Party is complying with this Physical Solution.

V. FISH HABITAT ENHANCEMENT PLAN

A. Purpose and Need for the FHEP

The Ventura River Steelhead Population and the Population's habitat needs have been studied for decades by multiple local, state and federal entities, including, without limitation, by Casitas through its implementation of the Biological Opinion for the Robles Fish Passage Facility Project, by CDFW through its ongoing Coastal Monitoring Program and previous Habitat and Instream Flow Evaluation for Steelhead in the Ventura River, Ventura County, and by the National Marine Fisheries Service through the listing, critical habitat and recovery plan process under the federal Endangered Species Act. As reflected in Exhibit "I" to this Physical Solution, the habitats needs of the Ventura River Steelhead are generally understood. However, a plan that identifies and assesses this existing body of information related to the Ventura River Steelhead Population is needed for this Physical Solution. To create this document from these existing sources, the Parties shall develop and implement the FHEP as described in this Section V of this Physical Solution. The FHEP shall focus on the period between entry of this Physical Solution and the completion of Matilija Dam removal. The FHEP shall be reviewed annually as part of the Annual Report process and the adaptive management process. It may also be amended and updated on a cycle to be specified in the FHEP.

B. Contents of the FHEP

The specific contents of and guidelines for preparing the FHEP are set forth in Exhibit "J" to this Physical Solution. As described in Exhibit "J", the FHEP shall be prepared using the existing body of information related to the Ventura River Steelhead Population and shall include: goals and objectives; assessment of existing information; proposed management actions; recommendations regarding current and potential future monitoring; adaptive management; and a proposed budget and timeline.

After Matilija Dam removal, the Management Entities shall reevaluate the scope and content of the FHEP and the continued necessity of the FHEP.

C. FHEP Preparation

The FHEP shall be prepared by the Watershed TAC. The cost of each member of the Watershed TAC to participate in drafting the FHEP shall be borne by each entity appointing a member to the Watershed TAC. Each entity appointing a member to the Watershed TAC may also retain consultants, at their sole cost, to support the effort to prepare the FHEP. In addition, the Watershed TAC may collectively retain consultants to support the effort to prepare the FHEP if the Watershed TAC concludes that retaining consultants will be more cost effective or will cause the timely completion of the FHEP. The entities appointing members to the Watershed TAC may pool their collective resources to fund the cost of such consultants or may work with the Management Entities and Bound Parties to seek funding for such consultants. Upon completion of the draft FHEP, the Watershed TAC shall submit the draft FHEP to the Management Entities for consideration and recommended approval.

D. Schedule for Completion of the draft FHEP

The draft FHEP shall be prepared and submitted to the Management Entities for recommended approval within 18 months of the entry of this Physical Solution.

E. Management Entity Consideration and Action on the FHEP

Upon receipt of the draft FHEP from the Watershed TAC, the Management Entities shall have thirty (30) days to conduct a staff level review of the FHEP. Based on this staff level review, the Management Entities may request clarifications or corrections to the draft FHEP from

the Watershed TAC. The Watershed TAC shall have thirty (30) days to consider these requests for clarifications or corrections and return the draft FHEP to the Management Entities. If the staff level review does not result in requested clarifications or corrections to the draft FHEP, or upon the return of the draft FHEP to the Management Entities after consideration of the requested clarifications or corrections, the Management Entities shall promptly post the draft FHEP on their websites, provide notice of the draft FHEP to their email distribution lists and solicit public comments on the draft FHEP to be submitted within forty-five (45) days of the notice. At the end of the 45-day comment period, and unless extended for good cause by the Management Entities, the Watershed TAC shall prepare and submit to the Management Entities written responses to comments received on the draft FHEP. After receiving the Watershed TAC's written responses, the Management Entities shall schedule open and public meetings to consider a final FHEP. After the open and public meetings, the Management Entities shall, in writing: (a) approve the FHEP; (b) approve the FHEP with specified conditions; or

(c) disapprove the FHEP. If the FHEP is approved by the Management Entities, the decision of the Management Entities may be subject to Court review as provided in this Physical Solution. If the FHEP is approved with specified conditions or is disapproved, the Watershed TAC shall have sixty (60) days to seek to address any conditions or deficiencies noted by the Management Entities, and resubmit the revised FHEP for consideration by the Management Entities. If the Watershed TAC timely resubmits a draft FHEP to the Management Entities, the same process and timelines as described above for initial consideration of the FHEP shall be repeated. If the Watershed TAC does not timely resubmit the draft FHEP, or if the Management Entities do not approve the resubmitted proposed FHEP, the actions of the Management Entities may be subject to Court review as provided in this Physical Solution. Future amendments or updates to the FHEP, including the Final FHEP, shall follow this same process and timeline.

F. <u>Implementation of the FHEP</u>

Once approved, the Management Entities shall consider actions to implement the FHEP as part of their actions to implement this Physical Solution.

G. Updates and Amendments to the FHEP

The Management Entities shall annually review the FHEP as part of developing their Annual Report and consistent with the adaptive management process in the FHEP. The FHEP shall also establish cycles for other periodic updates to the FHEP by the Watershed TAC. If the Matilija Dam removal is delayed beyond the schedule contemplated in this Physical Solution, the FHEP may need to be updated prior to Dam removal. After Dam removal, the Management Entities, with input from the Watershed TAC, shall evaluate whether a continued FHEP is necessary (and if so consider a comprehensive FHEP revision).

VI. GENERAL PROVISIONS

A. Continuing Jurisdiction

The Court retains and reserves full jurisdiction, power and authority, upon motion of a Bound Party, to make such further or supplemental order as may be necessary or appropriate to interpret, enforce, administer, or carry out this Physical Solution, and to provide for such other matters that are not addressed by this Physical Solution, which might occur in the future, and which if not provided for would defeat the purpose of this Physical Solution. The quantification of individual water rights and the declaration of relative priorities among the Bound Parties is expressly reserved, without prejudice, for future determination as may be required by the Court at a later date, as necessary to maintain and implement this Physical Solution.

B. Dispute Resolution Process

Except as otherwise expressly provided in this Physical Solution, the Bound Parties shall attempt to resolve all disputes arising under this Physical Solution through informal negotiations. The dispute shall be considered to have arisen when a Bound Party sends a written **Notice of Dispute** to another Bound Party or Management Entity. Such Notice of Dispute shall state clearly the factual and legal basis of the dispute. The period of informal negotiations shall not exceed thirty (30) days from the date of receipt of the Notice of Dispute to the Bound Party or Management Entity, unless that period is modified by written agreement of all Parties participating in the informal negotiations. If a dispute cannot be resolved through informal negotiations, the Bound Party that initiated the dispute may file a written request with the

applicable Management Entity or Entities to consider a disputed issue through an open and public process.

Upon receipt of the written request to consider a disputed issue, the applicable Management Entity or Entities shall cause the disputed item to be placed on the agenda for the next regularly scheduled meeting of the Management Entity occurring within sixty (60) days, or, if requested by the party initiating the dispute, consider calling a special meeting for the purpose of providing a full consideration of the dispute, and providing interested Bound Parties with notice and an opportunity to be heard. However, a Management Entity shall not consider any dispute unless and until informal negotiations under the above paragraph have occurred and have been unsuccessful at resolving the dispute. No later than forty-five (45) days following the conclusion of the Management Entity or Entities meeting at which the dispute is considered, the Management Entity or Entities shall issue a written decision that is dispositive of the dispute and that is supported by written findings. Any Bound Party may seek review of a decision of the Management Entity or Entities on a disputed issue in accordance with the provisions of this Physical Solution in Section III.B.19 (Review of Actions of the Management Entities).

This section does not apply to any dispute wherein a Party seeks a determination of any matter resolved by the Judgment and Physical Solution, including, without limitation, the rights and relative priority rights to Water in the Watershed or to establish a comprehensive adjudication of Water rights in the Watershed, which shall be resolved by the Court. This Physical Solution does not determine water rights and does not grant the Management Entities any authority to do so.

This section also does not apply when the State Board or CDFW contends that there is an immediate and irreparable risk of injury to *O. mykiss* in the Watershed.

The Management Entities may coordinate to develop additional processes designed to resolve written requests prior to the consideration and final decision of the Management Entity.

C. <u>Uncontrollable Conditions Process</u>

If a Bound Party determines that an Uncontrollable Condition has arisen that will delay or prevent achievement of an action required by this Physical Solution, the Bound Party shall notify

the applicable Management Entity of the Uncontrollable Condition within thirty (30) days of the date the Bound Party first knew of the Uncontrollable Condition, unless the Uncontrollable Condition prevents the Bound Party from providing such notice within thirty (30) days, in which case the Bound Party shall provide the notice as soon as feasible thereafter. The Bound Party's notice shall include: (a) an explanation and description of the alleged Uncontrollable Condition and its effect on the Bound Party's performance of its obligation(s) under this Physical Solution; (b) a description and schedule of all actions taken or to be taken to prevent or minimize the delay and/or other adverse effects of the alleged Uncontrollable Condition; (c) if applicable, a proposed extension of time for the Bound Party to complete a requirement under this Physical Solution; (d) the Bound Party's rationale for attributing such delay to the alleged Uncontrollable Condition; and (e) any available evidence supporting the claim that the delay was attributable to the alleged Uncontrollable Condition.

The applicable Management Entity shall hold a noticed and public hearing regarding the Uncontrollable Condition within sixty (60) days of notice from the Responsible Party, or as soon as feasible thereafter given the nature of the Uncontrollable Condition. The applicable Management Entity may confirm the Bound Party's determination, reject it or modify or adjust the required action in question to preserve as feasible the original intent of the action. Modifications or adjustments may include, but are not limited to, revised compliance timelines or modifications of the obligation in question. During the pendency of the Management Entity's review, the obligation or timeline is stayed. The Management Entity's decision is subject to Court review as provided in this Physical Solution.

If the Uncontrollable Condition prevents or delays the Management Entity's ability to perform an obligation under this Physical Solution, the Management Entity shall hold a noticed and public hearing within sixty (60) days of the date it knew or should have known of the Uncontrollable Condition, and shall make a determination regarding the existence of the Uncontrollable Condition and any required modifications of the applicable requirement. If the Uncontrollable Condition prevents the Management Entity from holding the noticed and public hearing within the sixty (60) day period, the Management Entity shall hold the hearing as soon as

feasible thereafter. The decision of the Management Entity is subject to review by the Court as provided in this Physical Solution.

D. Actions Subject to and Not Subject to Funding Availability

This Physical Solution identifies specific actions that shall be taken by specific Responsible Parties under the direction of the Management Entities. Some of the specific actions include express funding commitments by specific identified Responsible Parties. For example, the following specific actions required by specific Responsible Parties contain express funding commitments by one or more Responsible Parties:

- Foster Park Protocols (Section IV.A.1);
- Foster Park Pipeline Relocation or Removal Project (Section IV.A.2);
- Foster Park Notch Project (Section IV.A.3);
- Robles Diversion Flow Protocols (Section IV.A.5);
- WCF Arundo Removal Program (Section IV.A.6);
- Participation in the Mainstem Flow Augmentation Committee Process (but not implementation of augmentation) (Section IV.A.7)
- Design and Permitting of the San Antonio Creek Pilot Project (Section IV.B.1);
- Initial portions of the Watershed Arundo Removal Program (Section IV.C.1);
- Rescue Plans and Procedures (Section IV.C.3); and
- Conservation Efforts (Section IV.C.6).

While still subject to the Uncontrollable Conditions provisions, performance of these actions shall be funded and undertaken by the specific identified Responsible Parties.

Similarly, this Physical Solution identifies specific actions to be taken and directly funded by the Management Entities, including the administrative tasks set forth in Sections III.B.1-7, 9, 11-18 and 20, as well as the monitoring required by Section III.B.10 of this Physical Solution. The respective Management Entities shall fund these actions, with the San Antonio Creek Management Entity funding its obligations through Casitas MWD's water rates and the Mainstem Management Entity funding its obligations through charges, fixed contributions or combination of funding sources to be developed and approved by the Mainstem Management Entity. While

subject to the Uncontrollable Conditions provisions, performance of these specific actions by the Management Entities shall be funded and undertaken by the Management Entities. Nothing in this provision prohibits the Management Entities from agreeing to fund other activities beyond the administrative and monitoring tasks addressed herein. Any such additional funding shall be reflected and implemented through their Annual Budgets. However, the only express funding obligation of the Management Entities is as specified herein.

All other actions of this Physical Solution are subject to and contingent on obtaining a Specific Funding Source to pay for their implementation, in addition to being subject to the Uncontrollable Conditions provisions. To assist in obtaining such needed funding, all Bound Parties shall reasonably support efforts to obtain Specific Funding Sources to implement the unfunded actions in this Physical Solution, including by applying for grants when eligible and appropriate. However, unless and until a Specific Funding Source is obtained for an unfunded project, no Bound Party is obligated to implement the unfunded project.

E. Actions Subject to and Not Subject to CEQA

All individual projects called for in this Physical Solution or implemented under the FHEP, which have not already complied with CEQA as of the date the Court enters this Physical Solution and that shall be implemented by one or more Responsible Parties who are subject to CEQA, shall be reviewed for required CEQA compliance. However, nothing related to the procedural implementation of this Physical Solution (including development of the FHEP), nor the decisions of any entity acting under the authority of this Physical Solution, including the Management Entities, shall be deemed a "project" subject to CEQA. (See e.g., *California American Water v. City of Seaside* (2010) 183 Cal.App.4th 471, and *Hillside Memorial Park & Mortuary v. Golden State Water Co.* (2011) 205 Cal.App.4th 534). No Management Entity, board, or committee formed under this Physical Solution shall be deemed a "public agency" subject to CEQA. (See Public Resources Code § 21063.)

F. Designation for Notice and Service

Each Bound Party shall designate a name, address, and email address to be used for purposes of all subsequent notices and service herein, either by its endorsement on this Physical

Solution or by a separate designation to be filed within thirty (30) days after entry of this Physical Solution. A Bound Party may change its designation by filing a written notice of such change with the appropriate Management Entity. If no designation is made, a Bound Party's designee shall be deemed to be, in order of priority: (a) the Bound Party's attorney of record; (b) if the Bound Party does not have an attorney of record, the Bound Party itself at the address specified on the appropriate Management Entities' list.

G. Transfer of Real Property

Any Bound Party transferring any real property subject to this Physical Solution shall notify the transferee of the existence of this Physical Solution and its binding effect on the real property; provide grantee with a copy of this Physical Solution; and notify the appropriate Management Entity of the transfer and file a written notice of transfer within ten (10) days after the transfer of the real property, stating the name, address, email address, and other contact information of the transferee. Transferee shall become a Bound Party, and if necessary, Ventura shall substitute the transferee as Cross-Defendant pursuant to Code of Civil Procedure section 368.5.

H. Service of Documents

Unless otherwise ordered by the Court, delivery to or service to any Bound Party by the Court or any Bound Party of any document required to be served upon or delivered to any Bound Party, or notice required to be given by the Management Entities or any Bound Party, pursuant to this Physical Solution shall be deemed made if by electronic service using the Notice List maintained by the Management Entities. All notices or service of documents pursuant to this Physical Solution by Management Entities or any Bound Party shall be made by electronic mail to the greatest extent feasible. Service or notice shall be deemed sufficient if the service or notice is provided using the current Notice List maintained by the Management Entities.

I. No Abandonment of Rights; Reservation of Rights

In the interest of the Watershed, and consistent with the Constitutional principles of reasonable and beneficial use, no Bound Party shall use more water than is reasonably required. Failure to use all of the water from the Watershed to which a Bound Party is entitled shall not, in

and of itself, be deemed or constitute an abandonment of such Bound Party's right, in whole or in part. All Bound Parties reserve all of their respective water rights claims and all defenses of any nature, including public trust. This Physical Solution does not determine water rights, priority, or allocate water, and the Bound Parties reserve all such claims and defenses related thereto.

Although all Bound Parties reserve all of their respective water rights claims and defenses of any nature, Ventura agrees to one express restriction on the potential future affirmative assertion against any Bound Party of the water rights alleged in its Third Cause of Action in the Third Amended Cross-Complaint (Declaratory Relief—Pueblo and/or Treaty Water Rights). With regard to this alleged water rights claim only, Ventura agrees that it shall not assert this claim affirmatively and unilaterally against any Bound Party in an effort to eliminate or obtain a higher level of priority against a Bound Party. However, if a Bound Party seeks to affirmatively attack, curtail, subvert or eliminate Ventura's water rights claims, Ventura reserves the right to assert the claims alleged in the Third Cause of Action, in addition to any others, against the specific party challenging Ventura's water rights claims. This defense shall not be extended to any party that has not affirmatively sought to attack, curtail, subvert or eliminate Ventura's water rights claims. As an example, should a party on the Ventura Mainstem ever attack Ventura's water rights claims, Ventura shall not assert pueblo or treaty rights claims against any party in the SAC Sub Watershed.

J. Default Judgment

As more fully explained in the Statement of Decision, this Physical Solution constitutes a Default Judgment against all Defaulted Parties.

K. Intervention after Entry of Physical Solution

Any Person who is not a Bound Party or successor to a Bound Party and who proposes to Produce water from the Watershed, other than the federal government, is required to seek to become a Party subject to this Physical Solution through a noticed motion to intervene in this Physical Solution prior to commencing any Production. Thereafter, if approved by the Court, such intervener shall be a Bound Party in this Physical Solution. At its election, the federal government may become a Bound Party to this Physical Solution through a noticed motion to

intervene in this Physical Solution.

L. Physical Solution Binding on Successors

Subject to the specific provisions contained in this Physical Solution, this Physical Solution applies to, and is binding upon, and inures to the benefit of the Bound Parties to this Action and all their respective heirs, successors-in-interest, and assigns.

M. Costs and Fees

Except subject to any existing court orders, each Bound Party shall bear its own costs and attorney's fees arising from the Action.

N. Heading and Section References

Headings and section references appearing in this Physical Solution are inserted solely as reference aids for ease and convenience; they shall not be deemed to define or limit the scope or substance of the provisions they introduce, nor shall they be used in construing the intent or effect of such provisions.

O. No ThirdParty Beneficiaries

There are no intended third-party beneficiaries of any right or obligation of the Bound Parties.

P. Severability

Except as specifically provided herein, the provisions of this Physical Solution are not severable.

Q. Cooperation and Further Acts

The Bound Parties shall fully cooperate with one another and shall take any additional acts or sign any additional documents as may be necessary, appropriate or convenient to attain the purposes of this Physical Solution.

R. Limited Exception for Certain Oil and Gas Wells

This Physical Solution does not apply to oil production-related wells that extract waters that have been determined not to be underground sources of drinking water in accordance with the Safe Drinking Water Act, or are otherwise exempted from protection pursuant to 40 Code of Federal Regulations section 146.4 and the California Public Resources Code section 3131, or are

otherwise regulated by the California Department of Conservation, Geologic Energy Division, including under a Permit to Conduct Well Operations and a Notice of Intent. This limited exception does not relieve a Bound Party who operates such oil production-related wells from compliance with other applicable terms of this Physical Solution with respect to wells that do not fall within this limited exception.

S. Compliance with Physical Solution

Each and every Bound Party, its officers, directors, agents, employees, successors, and assigns is enjoined and restrained from violating the terms of this Physical Solution and shall comply with all provisions of this Physical Solution, and with all final rules and decisions of the Management Entities.

T. Exhibits and Other Writings

Any and all exhibits, documents, instruments, certificates or other writing attached hereto or required or provided for by this Physical Solution, shall be part of this Physical Solution and shall be considered set forth in full at reach reference thereto in this Physical Solution.

U. No Limitation on Statutory Authority.

This Physical Solution is not a permit, or a modification of any permit, under any federal, State or local laws or regulations. The Bound Parties remain responsible for compliance with all applicable federal, State or local laws, regulations and permit. Except as expressly provided in this Physical Solution, this Physical Solution does not affect or limit the authority of any Bound Party to fulfill its constitutional, statutory, regulatory, or contractual responsibilities under applicable law, including, but not limited to, the exercise of statutory or regulatory authority by the State Board under the Water Code, by CDFW under the Fish and Game Code (including without limitation, the California Endangered Species Act and Fish and Game Code section 1600,

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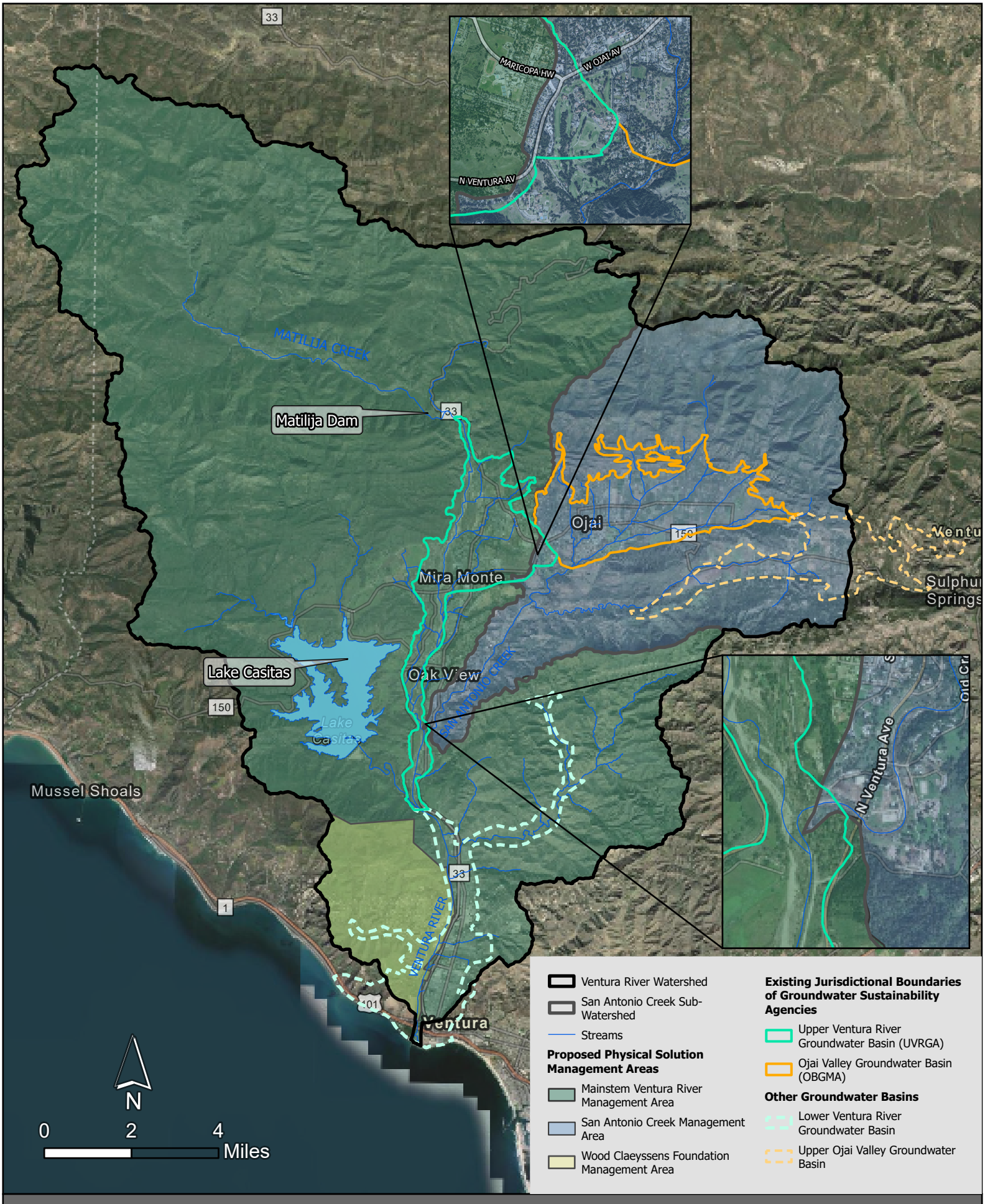
et. seq.), by the Ventura County Watershed Protection District in implementing Ordinance No. WP-2, and by any public agency under SGMA or its implementing regulations; provided, however, that no Bound Party shall use its authorities to violate this Physical Solution.

Dated: _____, 2026 BY: _____
JUDGE OF THE SUPERIOR COURT

Exhibit A – Map of Watershed and Management Areas



Ventura River Watershed Proposed Management Areas

Exhibit B – Order Establishing Watershed and Basin Boundaries

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CITY OF SAN BUENAVENTURA

Exempt From Filing Fees Pursuant to Cal. Gov't Code § 6103

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

SANTA BARBARA CHANNELKEEPER, a California non-profit corporation,

Petitioner,

v.

STATE WATER RESOURCES CONTROL BOARD, etc., et al.,

Respondents.

CITY OF SAN BUENAVENTURA, etc.,

Cross-Complainant

v.

DUNCAN ABBOTT, an individual, et al.

Cross-Defendants.

Case No. 19STCP01176

Judge: Honorable William F. Highberger

~~[PROPOSED]~~ ORDER ESTABLISHING WATERSHED AND BASIN BOUNDARIES

Dates: December 9, 2021 and December 13, 2021
Times: 2:30 p.m. and 4:00 p.m.
Dept: 10

Action Filed: Sept. 19, 2014
Trial Date: Feb. 14, 2022

~~[PROPOSED]~~ ORDER

PLEASE TAKE NOTICE that on December 9, 2021 at 2:30 p.m. and on December 13, 2021 at 4:00 p.m., in Department S10 of the Los Angeles County Superior Court, this Court held Order to Show Cause hearings as to why the Court should not issue an order establishing (1) the boundaries of the Ventura River Watershed (Watershed), as defined by the U.S. Geological Survey (USGS) National Hydrography Dataset and Watershed Boundary Dataset and (2) the boundaries of the Watershed's four groundwater basins, as defined by the California's Department of Water Resources (DWR) in Bulletin 118, in advance of the Phase 1 Trial.

THIS COURT ORDERS as follows:

1. Watershed Boundaries. The boundaries of the Ventura River Watershed (Watershed) are the boundaries defined by the U.S. Geological Survey (USGS) National Hydrography Dataset and Watershed Boundary Dataset as 10-digit Hydrologic Unit Code (HUC) 1807010101 – Ventura River Watershed as of the date of this order. USGS may adjust these boundaries from time to time, and the Court may amend this order in the future to adjust the Watershed boundaries based on new or additional information, as necessary. This order is without prejudice to any party arguing that the Court needs to consider the adjacent Santa Clara River Watershed before making any final determination in Phase 1 Trial.
2. Groundwater Basin Boundaries. There are four DWR-defined groundwater basins and subbasins (basin numbers 4-1, 4-2, 4-3.01, and 4-3.02) located wholly or partially within the Watershed, and their lateral boundaries are defined by DWR's Bulletin 118 as of the date of this order and as more fully set forth below. DWR may adjust these boundaries from time to time through updates to Bulletin 118 or through the process set forth in Code of Civil Procedure section 841. This order is without prejudice to any party arguing that the Court needs to consider the adjacent Santa Clara River Watershed before making any final determination in Phase 1 Trial.

a. The boundaries of basin 4-1 the Upper Ojai Valley Groundwater Basin (Upper Ojai Basin) are the boundaries defined by DWR in Bulletin 118. The Bulletin 118 – Update 2020 basin boundaries description, including a map, for the Upper Ojai Basin is attached hereto as Exhibit 1.

b. The boundaries of basin 4-2, the Ojai Valley Groundwater Basin (Ojai Basin) are the boundaries defined by DWR in Bulletin 118. The Bulletin 118 – Update 2020 basin boundaries description, including a map, for the Ojai Basin is attached hereto as Exhibit 2.

c. The boundaries of basin 4-3.01, the Ventura River Valley – Upper Ventura River Subbasin (Upper Ventura Basin) are the boundaries defined by DWR in Bulletin 118. The Bulletin 118 – Update 2020 basin boundaries description, including a map, for the Upper Ventura Basin is attached hereto as Exhibit 3.

d. The boundaries of basin 4-3.02, the Ventura River Valley – Lower Ventura River Subbasin (Lower Ventura Basin) are the boundaries defined by DWR in Bulletin 118.[1] The Bulletin 118 – Update 2020 basin boundaries description, including a map, for the Lower Ventura Basin is attached hereto as Exhibit 4.

IT IS SO ORDERED.

[1] The Court is only making a determination as to the lateral boundaries of the groundwater basins as defined in Bulletin 118 and is not making any specific determination as to the definition in Bulletin 118 regarding the depth or definable bottom, if any, of the Lower Ventura Basin. The Court is expressly reserving issues raised by Cross-Defendant Aera Energy LLC regarding the connectivity of the Lower Ventura Basin with geologic formations employed for oil and gas-related operations and the "exempt aquifer" below the Lower Ventura Basin as defined by the California Department of Conservation Geologic Energy Management Division and the U.S. Environmental Protection Agency under the federal Safe Drinking Water Act. Such questions shall be reserved for future phases of the trial, if not otherwise addressed by stipulation of the parties.

Dated: 01/13/2022

William F. Highberger / Judge

JUDGE OF THE SUPERIOR COURT

EXHIBIT 1

EXHIBIT 1

4-001 UPPER OJAI VALLEY

Basin Boundaries Description

2003

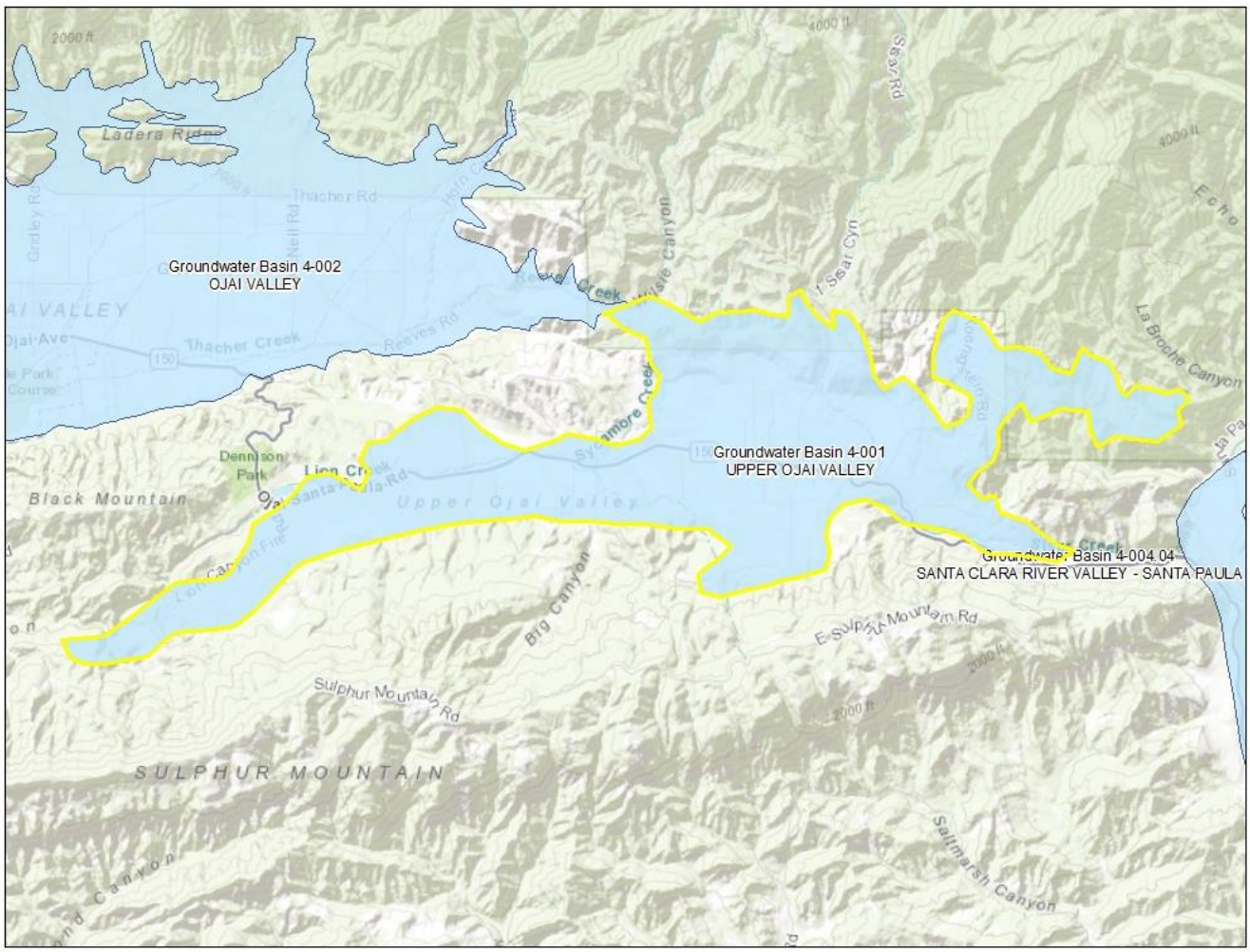
- County: Ventura
- Surface Area: 3,800 acres (5.9 square miles)

Summary

The Upper Ojai Valley Groundwater basin is bounded by the Ojai Valley Groundwater Basin on the north, the Topatopa Mountains on the east, Sulfur Mountain on the south, and near impermeable rocks of the Santa Ynez Mountains elsewhere. The valley is drained westward by Lion Canyon into San Antonio Creek and eastward by Sisar Creek to Santa Paula Creek.

Map

4-001 – OJAI VALLEY



Map Link

References

This table contains the reference listings for the citations noted in the Summary. Each reference contains the name of the reference and the publication date. For more information, email sgmps@water.ca.gov.

Citation	Pub Date

EXHIBIT 2

EXHIBIT 2

4-002 OJAI VALLEY

Basin Boundaries Description

2016

Summary

The Ojai Valley groundwater basin is located in the central-western portion of Ventura County. The basin is bound on the north by consolidated rocks of the Topatopa Mountains. The easternmost portion of the basin is separated from the adjacent Upper Ojai Valley groundwater basin by the San Cayetano fault. The basin is bound on the south by the Santa Ana fault and the consolidated rocks of Black Mountain. A surface water divide and a subsurface bedrock ridge that forms a groundwater divide separates the basin from the adjoining Upper Ventura River subbasin to the west. South of the Santa Ana fault, thin terrace deposits underlain by bedrock and lacking direct subsurface hydraulic connection with the basin are excluded from the basin. These alluvial terrace deposits have little to no significant groundwater storage capacity. The boundary is defined by 13 segments detailed in the descriptions below.

Segment Descriptions

This table describes each line segment composing the basin boundary polygon for this basin. It includes fields describing the segment label, segment type, segment description, and cited reference. For more information, email sgmps@water.ca.gov.

Segment Label	Segment Type	Description	Ref
1-2	- Alluvial	Begins from point (1) and crosses the Quaternary alluvium to point (2).	{a}
2-3	E Alluvial	Continues from point (2) and follows the contact of Quaternary alluvium with various Tertiary sedimentary rocks to point (3).	{b}
3-4	- Alluvial	Continues from point (3) and crosses Quaternary alluvium to point (4).	{a}
4-5	E Alluvial	Continues from point (4) and follows the contact of Quaternary alluvium with Tertiary Cozy Dell Shale to point (5).	{b}
5-6	- Alluvial	Continues from point (6) and follows the contact of Quaternary alluvium with various Tertiary sedimentary rocks to point (7).	{b}
6-7	E Alluvial	Continues from point (5) and crosses Quaternary alluvium to point (6).	{a}
7-8	- Fault	Continues from point (7) and follows the San Cayetano fault to point (8).	{c}
8-9	E Alluvial	Continues from point (8) and follows the contact of Quaternary alluvium with various Tertiary sedimentary rocks to point (9).	{b}
9-10	- Fault	Continues from point (9) and follows the Santa Ana fault to point (10).	{a}

10-11	E Alluvial	Continues from point (10) and follows the contact of Quaternary alluvium with Sespe Formation to point (11).	{d}
11-12	I Groundwater Divide	Continues from point (11) and follows a subsurface bedrock ridge and a surface divide to point (12).	{a}
12-1	E Alluvial	Continues from point (12) and follows the contact of Quaternary alluvium with various Tertiary sedimentary rocks and ends at point (1).	{d}
13-13	E Alluvial	Island within the basin boundary: begins from point (13) and follows the contact of the Quaternary alluvium with Coldwater Sandstone and Cozy Dell Shale and ends at point (13).	{b}

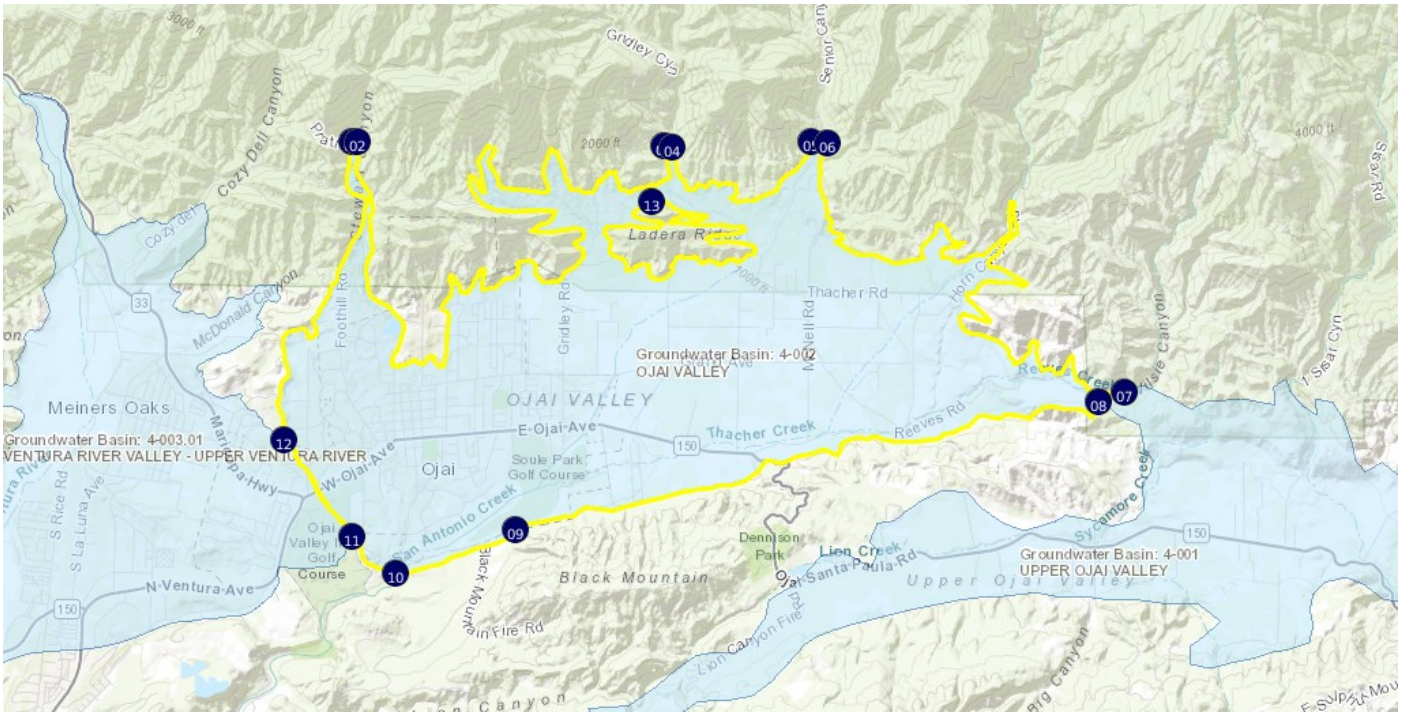
Significant Coordinates

This table contains the latitudes and longitudes of all the beginning and ending points of each segment comprising the basin boundary polygon for this basin. For more information, email sgmps@water.ca.gov.

Point	Latitude	Longitude
1	34.478450793	-119.254761878
2	34.478452261	-119.253960199
3	34.478005123	-119.215409106
4	34.477954846	-119.214341855
5	34.478460727	-119.196917412
6	34.478300258	-119.19480887
7	34.452385212	-119.157425748
8	34.451419976	-119.160576289
9	34.438199307	-119.234069884
10	34.433549061	-119.249251927
11	34.437432018	-119.254670854
12	34.44740611	-119.263274675
13	34.472303032	-119.216908514

Map

4-002 OJAI VALLEY



Map Link

References

This table contains the reference listings for the citations noted in the segment description table. Each reference contains the name of the reference, in addition to the publication date. For more information, email sgmps@water.ca.gov.

Ref	Citation	Pub Date	Global ID
{a}	BBMRS	varies	45
{b}	California Department of Conservation, California Geologic Society (CGS), Geologic Map of the Ojai 7.5' Quadrangle, Ventura County, California: A Digital Database, Version 1.0, 1:24,000, S.S. Tan, P.J. Irvine, C.I. Gutierrez.ftp://ftp.consrv.ca.gov/pub/dmg/rgmp/Prelim_geo_pdf/Ojai_prelim.pdf	2005	78
{c}	California Geological Survey (CGS), Geologic Atlas of California Map No. 008, Los Angeles Sheet, , 1:250,000, Charles W. Jennings and Rudolph G. Strand.URL: http://www.quake.ca.gov/gmaps/GAM/losangeles/losangeles.html	1969	33
{d}	California Geological Survey (CGS), Geologic Map of the Matilija Quadrangle, 1:24,000, S.S. Tan and T.A. Jones.URL: http://www.conservation.ca.gov/cgs/rghm/rgm/Pages/preliminary_geologic_maps.aspx	2006	51

Footnotes

- I: Internal
- E: External

EXHIBIT 3

EXHIBIT 3

4-003.01 VENTURA RIVER VALLEY – UPPER VENTURA RIVER

Basin Boundaries Description

2016

Summary

The Upper Ventura River groundwater subbasin is located in central-western Ventura County. The subbasin is bound on the north by impermeable rocks of the Santa Ynez Mountains. A subsurface bedrock ridge and groundwater divide separates the subbasin from the adjacent Ojai Valley groundwater basin to the east. The subbasin is bound on the southeast and the west by consolidated Tertiary sediments. The subbasin extends south in the Ventura River Valley to where it meets the Lower Ventura River subbasin at a narrow portion of the valley and at the approximate location of the Red Mountain fault. The subbasin boundary is defined by eleven (11) segments detailed in the descriptions below.

Segment Descriptions

This table describes each line segment composing the basin boundary polygon for this basin. It includes fields describing the segment label, segment type, segment description, and cited reference. For more information, email sgmps@water.ca.gov.

Segment Label	Segment Type	Description	Ref
1-2	E Alluvial	Begins at point (1) and generally follows the contact of Quaternary alluvium with various Tertiary sedimentary rocks to point (2).	{a}
2-3	I Groundwater Divide	Continues from point (2) and follows a subsurface bedrock ridge, a groundwater divide, and a surface divide to point (3).	{b}
3-4	E Alluvial	Continues from point (3) and follows the contact of Quaternary alluvium with Sespe Formation to point (4).	{a}
4-5	- Fault	Continues from point (4) and follows an unnamed fault to point (5).	{c}
5-6	E Alluvial	Continues from point (5) and follows the contact of active alluvium and colluvium with lower permeability older alluvium to point (6).	{b}
6-7	- Fault	Continues from point (6) and follows the Santa Ana Fault to point (7).	{a}
7-8	E Alluvial	Continues from point (7) and follows the contact of active alluvium with older alluvium and various Tertiary sedimentary rocks to point (8).	{d}
8-9	I Alluvial	Continues from point (8) and crosses the alluvium of the Ventura River valley at the Casitas Vista bridge to point (9).	{b}

9-10	E Alluvial	Continues from point (9) and generally follows the contact of Quaternary alluvium with various Tertiary sedimentary rocks to point (10).	{d}
10-11	E Alluvial	Continues from point (10) and crosses the older alluvium, excluding an area of thin alluvium and Sespe Formation in the west and including areas of thick alluvium in the east, to point (11).	{b}
11-1	E Alluvial	Continues from point (11) and generally follows the contact of Quaternary alluvium with various Tertiary sedimentary rocks and ends at point (1).	{d}

Significant Coordinates

This table contains the latitudes and longitudes of all the beginning and ending points of each segment comprising the basin boundary polygon for this basin. For more information, email sgmps@water.ca.gov.

Point	Latitude	Longitude
1	34.483285737	-119.296538818
2	34.44740611	-119.263274675
3	34.437432018	-119.254670854
4	34.434436555	-119.256415077
5	34.434229067	-119.263895252
6	34.429193615	-119.26953361
7	34.423808356	-119.299086585
8	34.352634947	-119.30500381
9	34.352287913	-119.310520285
10	34.425195196	-119.311964195
11	34.435726436	-119.308534536

Map

4-003.01 VENTURA RIVER VALLEY - UPPER VENTURA RIVER

Map Link

References

This table contains the reference listings for the citations noted in the segment description table. Each reference contains the name of the reference, in addition to the publication date. For more information, email sgmps@water.ca.gov.

Ref	Citation	Pub Date	Global ID
{a}	California Geological Survey (CGS), Geologic Map of the Matilija Quadrangle, 1:24,000, S.S. Tan and T.A. Jones.URL: http://www.conservation.ca.gov/cgs/rghm/rgm/Pages/preliminary_geologic_maps.aspx	2006	51
{b}	BBMRS	varies	45
{c}	Minor, S.A., and Brandt, T.R., 2015, Geologic map of the southern White Ledge Peak and Matilija quadrangles, Santa Barbara and Ventura Counties, California: U.S. Geological Survey Scientific Investigations Map 3321, 34 p., 1 sheet, 1:24,000, https://dx.doi.org/10.3133/sim3321.	5/26/2015	96
{d}	California Geological Survey (CGS), Geologic Compilation of Quaternary Surficial Deposits in Southern California, T.L. Bedrossian, P. Roffers, C.A. Hayhurst, J.T. Lancaster, and W.R. Short.URL: http://www.conservation.ca.gov/cgs/fwgp/Pages/sr217.aspx	2012	50

Footnotes

- I: Internal
- E: External

EXHIBIT 4

EXHIBIT 4

4-003.02 VENTURA RIVER VALLEY – LOWER VENTURA RIVER

Basin Boundaries Description

2003

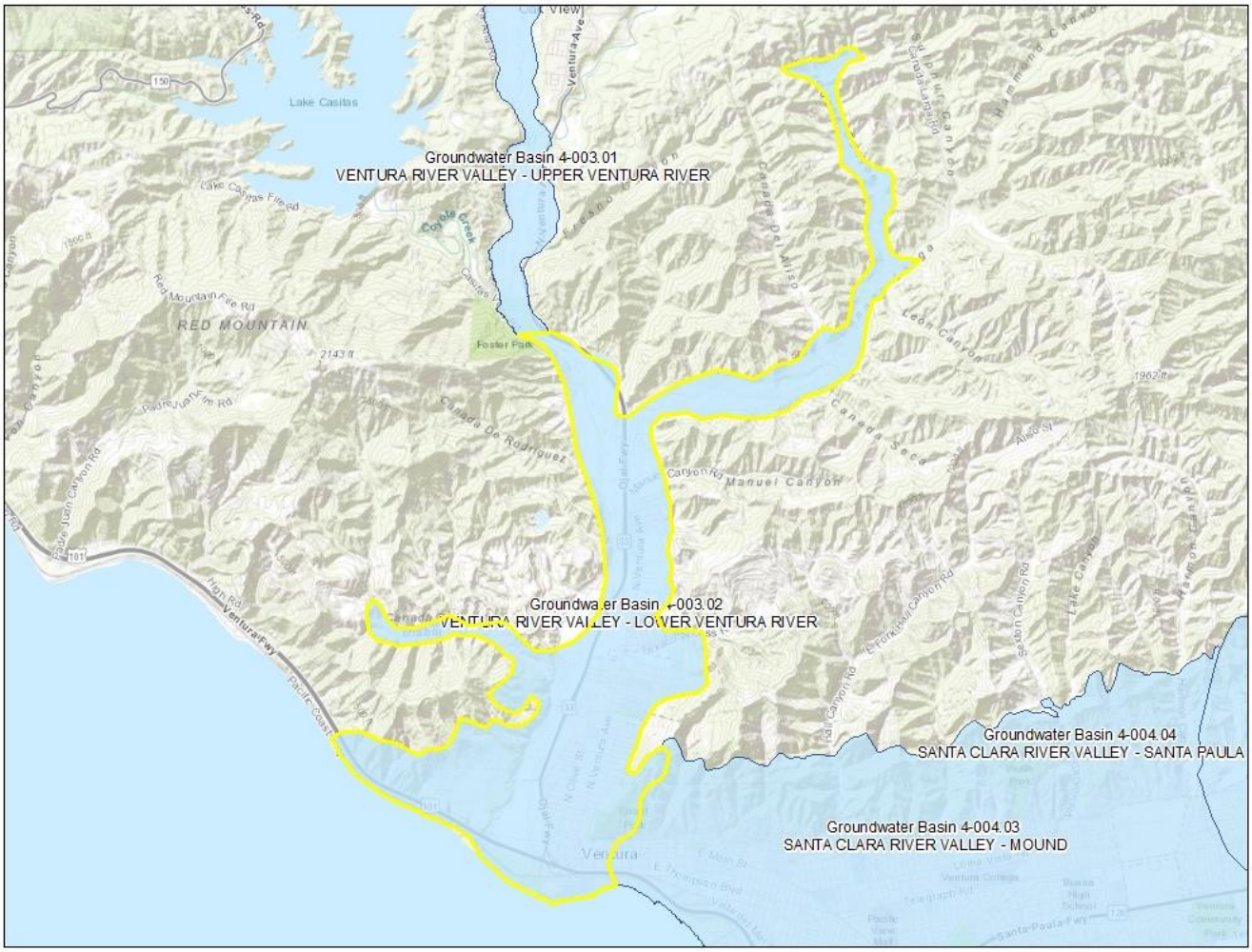
- County: Ventura
- Surface Area: 5,300 acres (8.3 square miles)

Summary

The Lower Ventura River Subbasin is bounded on the north by the Upper Ventura River Subbasin, on the south by the Pacific Ocean and Mound Subbasin of the Santa Clara River Valley Groundwater Basin, and elsewhere by near impervious rocks of the Santa Ynez Mountains (DPW 1933; Panaro 2000). The valley is drained by Canada Larga and the Ventura River.

Map

4-003.02 – VENTURA RIVER VALLEY – LOWER VENTURA RIVER



Map Link

References

This table contains the reference listings for the citations noted in the Summary. Each reference contains the name of the reference and the publication date. For more information, email sgmps@water.ca.gov.

Citation	**Pub Date**
California Department of Public Works, Division of Water Resources (DPW). 1933. *Ventura County Investigation.* Bulletin 46.	1933
Panaro, D. 2000. Fox Canyon Groundwater Management Agency: Written Communication to R.R. Davis (DWR), March 21, 2000.	2000

Exhibit C—Interim Order Confirming An Exempt Cross-Defendant Class

SUPERIOR COURT OF THE STATE OF CALIFORNIA

COUNTY OF LOS ANGELES

SANTA BARBARA CHANNELKEEPER, a California non-profit corporation, Petitioner, v. STATE WATER RESOURCES CONTROL BOARD, et al, Respondents.	Case No. 19STCP01176 Judge: Hon. William F. Highberger ~~[PROPOSED]~~ INTERIM ORDER CONFIRMING AN EXEMPT CROSS-DEFENDANT CLASS
CITY OF SAN BUENAVENTURA, et al., Cross-Complainant, v. DUNCAN ABBOTT, an individual, et al., Cross-Defendants.	Action Filed: Sept. 19, 2014 Trial Date: Not Set

~~[PROPOSED]~~ ORDER

The Court, having considered the request of Defendant and Cross-Complainant the City of San Buenaventura (Ventura), and Cross-Defendants the Casitas Municipal Water District (Casitas), the City of Ojai (Ojai), and the East Ojai Group (East Ojai Group) (collectively Initial Mediating Parties or IMPs), for an interim order confirming an exempt Cross-Defendant class consisting of Cross-Defendants who currently self-identify as diverting or extracting less than five (5) acre-feet per year (AFY) of water from the Ventura River Watershed, and hearing no objections thereto, FINDS AND ORDERS AS FOLLOWS:

1. The request is GRANTED on the terms and conditions set forth in this Order. Subject to the Court's continuing jurisdiction to address changed circumstances and enforce the terms and objectives of any final judgment entered, and subject to the other terms and conditions set forth in this Order, the Court confirms the existence of an exempt Cross-Defendant class consisting of Cross-Defendants who currently self-identify as diverting or extracting less than five (5) acre-feet per year (AFY) of water from the Ventura River Watershed (Exempt Cross-Defendant Class).

2. ~~This Court has broad authority to confirm the Exempt Cross-Defendant Class~~ pursuant to its powers under Article X, section 2 of the California Constitution. (*National Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 442; *Environmental Defense Fund v. East Bay Municipal Water Dist.* (1980) 26 Cal.3d 183, 200; Code Civ. Proc., § 849.) In accordance with the Court's authority under Article X, section 2 of the California Constitution, the Court confirms the Exempt Cross-Defendant Class because it will protect the claimed rights of the Exempt Cross-Defendant Class without impairing the claimed rights of the non-exempt parties. It will relieve the Exempt Cross-Defendant Class from future obligations in the litigation but will allow the Court to maintain continuing jurisdiction over them to address changed circumstances. In confirming the Exempt Cross-Defendant Class, the Court is not making a finding regarding the consistency of

any individual water use with the requirements of Article X, section 2 of the California Constitution.

3. This Court also has specific authority to grant the request under applicable statutes and Rules of Court. (See Code of Civil Procedure sections 830 *et seq.;* Water Code sections 2500 *et seq.*, and California Rules of Court, Rule 3.400(a).) Code of Civil Procedure section 833, subdivision (d) provides as follows: "If the court finds that claims of right to extract or divert only minor quantities of water, not to exceed five acre-feet of water per year, would not have a material effect on the groundwater rights of other parties, the court may exempt those claimants with respect to those claims of only minor quantities of water, but a person who is exempted may elect to continue as a party to the comprehensive adjudication." In accordance with Code of Civil Procedure section 833, subdivision (d), the Court hereby finds, based on the representation of IMPs and without objection, that confirming the Exempt Cross-Defendant Class "would not have a material effect on the groundwater rights of the other parties" and, therefore, the Court elects to use its discretion under Section 833, subdivision (d) to exempt the claims of the Exempt Cross-Defendant Class as provided in this Order, but any member of the Exempt Cross-Defendant Class may nevertheless elect to participate as a party in future proceedings associated with this comprehensive adjudication.

4. This case has been designated as complex pursuant to California Rules of Court, 3.400(a). Consistent with that designation and the powers of this Court associated with complex cases, the Court finds that confirming the Exempt Cross-Defendant Class will promote the efficient processing of this complex case by limiting the number of active parties while protecting the rights of all parties, subject to the continuing jurisdiction of this Court to address changed circumstances.

5. The Court's confirmation of the Exempt Cross-Defendant Class is subject to the following specific terms and conditions:

a. The Exempt Cross-Defendant Class consists of any Cross-Defendant who currently self-identifies as directly diverting or extracting a total of less than five (5) acre-feet per year (AFY) of water from the Ventura River Watershed. At this time, Cross-Defendants are not required to file evidence of self-certification with the Court, but may elect to do so if desired. A Cross-Defendant who self-identifies as a member of the Exempt Cross-Defendant Class may continue extraction or diversion activities consistent with the criteria for class members, subject to the Court's continuing jurisdiction and subject to other applicable law and regulations, including, but not limited to, requirements, restrictions or prohibitions of applicable public entities, including but not limited to, groundwater sustainability agencies. As part of a final judgment, Cross-Defendants will be required to file a certification with the Court or the Court's designee confirming their qualifications for membership in the Exempt Cross-Defendant Class and will have an obligation to report changes in their diversions or extractions to the Court or the Court's designee.

b. Persons who have been served in this case through the notice process and who have not appeared will be presumptively placed in the Exempt Cross-Defendant Class, subject to the Court's continuing jurisdiction and future evidence regarding any extraction or diversion activities of these Cross-Defendants.

c. To protect public safety, water extracted or diverted for use in active fire suppression will not count toward the five AFY limit for membership in the Exempt Cross-Defendant Class. As used herein, active fire suppression means direct use to extinguish a fire or its embers.

d. Cross-Defendants who self-identify as being in the Exempt Cross-Defendant Class are relieved of any further obligation to file papers, make

appearances or otherwise participate in this case until further notice from the Court, but may elect to file papers, make appearances, and/or otherwise participate in this case. All Cross-Defendants, including members of the Exempt Cross-Defendant Class, will continue to receive notices of all rulings in the action.

e. As part of this Order, and as part of any final judgment, the Court retains and will retain continuing jurisdiction over members in the Exempt Cross-Defendant Class to address changed circumstances and effectuate the terms and obligations of any final judgment entered in this case.

f. The Exempt Cross-Defendant Class shall be incorporated into any final judgment in this case, whether that judgment occurs through settlement or after trial. The final judgment will contain more detail on the reporting obligations of the Exempt Cross-Defendant Class consistent with the terms and conditions of this interim order of the Court. The final judgment, or a future interim order, will, for example, require members of the class to identify themselves as members of the class, and will provide a process for doing so.

10/07/2022

JUDGE WILLIAM F. HIGHBERGER

Exhibit D – Monitoring Program

Exhibit D1 – Mainstem Monitoring Plan

Monitoring is an essential, science-based, element of evaluating the performance of the proposed Physical Solution and adaptive management program, enabling managers to test assumptions, measure effectiveness, and refine strategies as the program is being implemented. The monitoring program is designed to track progress towards achieving the implementation and measurable objectives outlined in the Physical Solution and has been organized into three categories: compliance, validation, and long-term trend assessment. These categories are adapted from the CDFW Ecosystem Performance Measures website and can be further explained as follows:

- Compliance monitoring includes administrative metrics from the Physical Solution such as compliance with the schedule for implementing a particular program element (e.g., site-specific passage impediment remediation project), or progress on planning or feasibility studies.

- Validation monitoring includes physical monitoring of instream flows, depth, velocity, water temperatures, area of enhanced habitat, jump height and pool depth for passage impediments, habitat mapping to assess suitability for various lifestages of *O. mykiss*, validating flow-habitat relationships per the habitat suitability indices (HIS) metrics, and other elements of the program.

- Long-term trend monitoring includes evaluation of ecosystem responses to management actions and/or natural drivers, including monitoring adult fish abundance, juvenile fish density/migration, genetics, and species composition.

Monitoring data provides the scientific foundation for adapting and refining management to changing and uncertain circumstances. Primary objectives of the Monitoring and Reporting Program are:

- **Testing Assumptions:** It allows managers to compare actual outcomes against predicted model results, identifying if management actions are performing as expected.
- **Reducing Uncertainty:** Monitoring data informs management strategies, reduces data gaps, and provides information used to assess the environmental responses to management actions.
- **Measuring Effectiveness:** Monitoring data are used to evaluate whether specific management objectives are being met, facilitating necessary, scientific data-driven program refinements.
- **Detecting Change:** Long-term monitoring tracks trends in habitats and species that can be used to inform implementation of preventative or corrective actions.
- **Informing Future Decisions:** Monitoring feeds back into the decision-making cycle, improving long-term performance, refining management strategies, and a foundation for designing future habitat enhancement actions within a Watershed, and
- **Accountability:** Monitoring data is used to verify the performance of management actions in achieving goals of the Physical Solution.

Outlined below are the basic framework and elements of the proposed Ventura River Mainstem Physical Solution monitoring program, for a study area including the Ventura River Mainstem and North Matilija Creek. When more fully developing the specific monitoring program elements for the Physical Solution, coordination and data sharing between existing monitoring programs within the Watershed may be leveraged to avoid duplication of efforts.

1. <u>Water Quality and Hydrology Monitoring</u>

Water temperature is a primary habitat consideration for successful *O. mykiss* spawning, over-summering and rearing. Water temperature in the Ventura River Watershed is known to vary with season, streamflow, pool depth, and distance downstream from headwaters. Water quality monitoring will focus on North Matilija Creek and the Mainstem downstream of the confluence with North Matilija Creek to the lagoon. Water quality and hydrologic monitoring on the

Mainstem and tributaries will be used to characterize and assess long-term seasonal trends in water temperature and instream flows. Water quality monitoring activities will be modified and expanded upon, as needed, to address specific management-oriented hypotheses. For example, vertical arrays (multiple loggers deployed evenly to depth) may be deployed to assess vertical stratification of water temperature and dissolved oxygen concentration in selected pool habitats.

The purpose of the water quality and hydrologic monitoring program is to characterize instream flows, temperature, and dissolved oxygen conditions necessary to assess habitat suitability and the health of the Ventura River *O. mykiss* population. Monitoring includes measurement of both air and water temperature, conductivity, and where relevant, dissolved oxygen concentration at or near locations where either sensitive habitat exists or where habitat enhancement projects associated with the Physical Solution are being planned or implemented.

Task 1: Instream Flow Monitoring

Instream flow monitoring is divided into two portions: a regional monitoring effort and a site-specific monitoring effort. A regional monitoring effort will involve downloading data from active USGS, City of Ventura, Casitas MWD, UVRGA, or other public entity gages to evaluate the larger scale flows in the Watershed. Currently, there are two permanent gages on the Mainstem that monitor and report average daily flows: the USGS gage at Foster Park (USGS gage 11118500) and the City of Ventura's gage above Foster Park (City of Ventura gage VR-1). There are four active gages on Ventura River tributaries that record daily flows and are operated by the VCWPD: gage 605A on San Antonio Creek, gage 603A on Matilija Creek, gage 616 on San Antonio Creek at Camp Comfort, and gage 604 on North Fork Matilija Creek. Although USGS and VCWPD data is collected automatically on a 15-minute delay basis, and is available online, the 15-minute and daily data are considered preliminary for extended periods of time after collection. Rating curves are updated on an ongoing basis, so values are subject to change, and the final approved data are typically not available for three to four months after collection. Preliminary data may be used and identified as such. Once final data are acquired, they will be reviewed for completeness, and the flow data will be aggregated on a monthly and annual basis.

In addition to the regional instream flow monitoring, a site-specific instream flow

monitoring program is proposed for areas where critical habitat elements are located and/or at locations where Physical Solution conservation measures with flow components are proposed or implemented, if existing permanent stream gages are insufficient to monitor such areas. The intent of these seasonal gages is to provide detailed site-specific streamflow data during lower flow seasons and to characterize flows at or near locations of implemented habitat enhancement actions. The site-specific program may involve establishing a gaging station early in each post-storm season, ideally one in each reach where conditions permit. These gaging stations will allow for the collection of continuous water level and water temperature data, such as from a removable stilling well installed in the river channel outfitted with a recording temperature and pressure transducer.

Once installed, transect surveys will be performed perpendicular to the river to collect surface-water velocity and water depth data that will be used to develop a rating curve. Using this rating curve, discharge values can be calculated for any period of time that depth data was recorded by the transducers. The transducers will be programmed to collect depth and temperature data on an hourly basis with data downloaded monthly. Supplemental depth and velocity surveys to update the rating curve would also be conducted as needed. Each season will typically conclude in late fall or while dry and low flow conditions persist. At the conclusion of each season, the data will be tabulated and classified and compared to the seasonal biological observations.

Currently, seasonal stream gage deployments are conducted by UVRGA using pressure transducers at five sites in the Mainstem (1) upstream and (2) downstream ends of Foster Park, (3) upstream and (4) downstream ends of San Antonio Creek Confluence area, and (5) at Camino Cielo Bridge. UVRGA conducts monthly transect surveys for rating curve development and gage calibration. Data from these five Mainstem seasonal gages may be used for the Mainstem monitoring program.

Instream flow (discharge) data will be synthesized for use in environmental analyses of production, survival, and migration as well as validating various flow-habitat metrics such as water depths suitable for juvenile rearing.

Task 2: Water Temperature Monitoring

Water temperature is a primary habitat consideration for the successful over-summering and rearing of juvenile *O. mykiss*. Water temperature in the Watershed is known to vary with season, streamflow, pool depth, shade cover, ambient air temperature, variations in solar radiation (cloudiness), and inputs by both surface water and groundwater accretions. Instrumentation for monitoring water temperature is readily available either as standalone programmable temperature recorders (e.g., Onset temperature data loggers) or as multiparameter data sondes to measure water temperature, dissolved oxygen concentration, electrical conductivity, and other water quality parameters. This instrumentation would be deployed to monitor conditions in the Mainstem and appropriate portions of the tributaries. Units will be accessed for performance checks and data downloads on a periodic basis, typically monthly or quarterly, depending on instrumentation specifics and site factors (e.g., potential for tampering). Depending on durability and logistical considerations of specific equipment, deployments may target low-flow periods when there is a lower risk of damage from high flows. All instrumentation will be tested for accuracy annually before deployment, as recommended by manufacturer specifications, and recalibrated as needed.

Water quality monitoring sites will be located at areas potentially supporting *O. mykiss* over-summering and where management actions relating to instream flow or other habitat enhancements are expected to improve conditions. Mainstem monitoring sites for water temperature will be focused on Foster Park and the San Antonio Creek confluence areas, with additional water temperature sites in the upper Mainstem (below the Matilija Creek confluence) and in North Fork Matilija Creek.

Currently, UVRGA monitors water temperature at the upstream and downstream ends of Foster Park and the San Antonio Creek confluence areas, and UVRGA has planned to implement additional targeted continuous water quality monitoring within refuge pools of the Foster Park and SAC Confluence Mainstem areas during low-flow conditions. Casitas also conducts water temperature monitoring at sites in the Mainstem and North Fork Matilija Creek. These UVRGA and/or Casitas data will be used for the Mainstem monitoring program.

Task 3: Dissolved Oxygen Concentration and pH Monitoring

Dissolved oxygen (DO) concentration is a critical measure of the suitability of surface waters for fish habitat. DO measurements are routinely made during fishery and habitat surveys to assess habitat suitability instantaneously using handheld meters (e.g., grab sampling), and continuously (e.g., with loggers or multiparameter data sondes) to evaluate long-term trends and diel variation (e.g., changes between night and day) at critical spawning/rearing and refuge habitat locations. Handheld portable multiparameter water quality monitoring units are available for use in making instantaneous water quality measurements (grab sample measurements) associated with snorkel surveys and other *O. mykiss* population and habitat monitoring efforts. Sondes continuously record multiple parameters, such as water temperature, DO, pH, turbidity, total dissolved solids/total suspended solids, and specific conductance, among others.

As described above, water quality monitoring sites will be located at areas potentially supporting *O. mykiss* over-summering and where management actions relating to instream flow or other habitat enhancements are expected to improve conditions. Mainstem monitoring sites for DO concentration and pH will be located at Foster Park and the San Antonio Creek confluence area. Currently, UVRGA monitors DO concentration and pH upstream and downstream of Foster Park and the San Antonio Creek confluence area, and UVRGA has planned to implement additional targeted continuous water quality monitoring within refuge pools of the Foster Park and SAC Confluence Mainstem areas during low-flow conditions. These UVRGA continuous water quality monitoring data may be used for the Mainstem monitoring program.

Water quality monitoring equipment will be deployed seasonally during the late spring or summer through early fall when stream flows are typically low and do not threaten loss of equipment. In shallow habitats, sondes or thermographs are deployed on the streambed. In deeper pools, vertical arrays of sondes or thermographs can be deployed to record measurements of vertical stratification between bottom, mid-column, and surface waters. Sondes and thermographs are typically programmed to record measurements hourly or more frequently, depending on the duration between data downloads and objectives of monitoring at a specific location. Units are

downloaded approximately monthly. All instrumentation will be tested for accuracy annually before deployment, as recommended by manufacturer specifications, and recalibrated as needed.

2. Biological (Fishes and Non-Native Species) Monitoring

A. Core *O. mykiss* Population Monitoring

The Ventura River *O. mykiss* monitoring program has been developed to document habitat conditions, abundance, lifestages and fish condition, and distribution of Southern California *O. mykiss* in the Ventura River Mainstem below Matilija Dam and in North Fork Matilija Creek. The primary objective of the monitoring program is to develop technical information on the *O. mykiss* population and habitat in the lower Ventura River Watershed for use in managing habitat conditions and evaluating the performance of management actions identified in the Physical Solution for the benefit of *O. mykiss*. The purposes of the monitoring program are to:

- Detect and evaluate the effects of implementing the proposed Physical Solution and document other factors that may affect the *O. mykiss* population;
- Determine the effectiveness and benefits to *O. mykiss* of the instream flows, passage impediment improvements, and other conservation actions described in the proposed Physical Solution; and
- Assess trends in the health and condition of individual *O. mykiss*, the *O. mykiss* population, and the community of fish inhabiting the Watershed.

To accomplish these objectives, a multifaceted monitoring program has been developed that includes biologically based monitoring of the status and trends in juvenile *O. mykiss* abundance, distribution, survival, and adult abundance. The monitoring protocols follow those identified and described in several California Department of Fish and Wildlife (CDFW) documents, including *California Salmonid Stream Habitat Restoration Manual* (Flosi et al. 2002; 2010 updated Fourth Edition), and as later reflected in CDFW California *Fish Bulletin 180, California Coastal Salmonid Population Monitoring: Strategy, Design and Methods (Adams et al. 2011)* which has recently been updated by Boughton et al. (2022: Fish. Bulletin 182). The monitoring plan also includes consideration of factors that affect *O. mykiss* production and

survival, including monitoring changes in habitat conditions, instream flow, water quality (with the primary focus on water temperature as a limiting factor), and lagoon and estuary breaching, which affects both juvenile and adult *O. mykiss* migration opportunities.

Task 4: Snorkel Surveys

Snorkel surveys were selected as the preferred monitoring method to eliminate incidental take of juvenile *O. mykiss*. Snorkel surveys will be used to:

- Characterize the size and geographic distribution of juvenile and adult *O. mykiss*;
- Develop estimates of juvenile production (number of juveniles per spawning adult), density (number of juveniles per 100 square meters [m^2]) for each reach surveyed, and an index of *O. mykiss* abundance for each study reach;
- Annually monitor the geographic distribution, health and condition, and size classes of *O. mykiss* in North Fork Matilija Creek and the Mainstem;
- Assess changes in juvenile abundance and distribution between the spring and fall (a rough estimate of reproductive success and over-summering survival) and changes in size distribution (a rough estimate of juvenile growth); and
- Annually monitor the species compositions, abundance, geographic distribution, and size classes of native and non-native fish observed in the snorkel surveys in the tributaries and the Ventura River Mainstem .

Snorkeling (direct observation) is an effective monitoring method when depths are sufficient for divers to efficiently navigate through the entire sampling unit (e.g., pools and most flatwater habitat). Snorkel surveys generally progress from downstream study sites to upstream sites with the majority of surveys occurring during the low-flow period in spring and again in the fall. The species composition, abundance, geographic distribution, and size classes (e.g., 0-3, 3-6, 6-9 inches, etc.) of *O. mykiss* and all other fish species (e.g., bass, catfish, carp, etc.) observed will be recorded during snorkel surveys.

Surveys will be conducted in designated survey reaches where access is permitted and will include pool, riffle, and run habitats. Snorkel surveys will primarily be conducted during the spring to assess over-wintering success and fall to assess over-summering success. Survey

reaches will be selected based on habitat conditions and functions (e.g., spawning, juvenile rearing), locations where management actions are being implemented or habitat enhancement measures are being developed (baseline surveys) and after construction, and control reaches for comparison to reaches where habitat enhancement measures have been implemented. Survey locations and frequency will initially be based on results of prior snorkel surveys by Allen (2015), UVRGA and Casitas.

Currently, UVRGA conducts routine snorkel surveys in the Mainstem at Foster Park and the SAC confluence areas. Originally, snorkel surveys were planned to occur at least four times per year (once during winter and at least three times during summer/fall); however, to better aim limited resources at evaluating low-flow conditions, the seasonal timing of snorkel surveys has been revised to occur once in the winter, and then again after flows receded below 12.7 cfs, between 5.0 to 7.0 cfs, and between 3.0 to 5.0 cfs. Casitas also conducts snorkel surveys at *O. mykiss* presence/absence index sites in the Mainstem and North Fork Matilija Creek. These UVRGA and/or Casitas snorkel survey data may be used for the Mainstem monitoring program. Existing snorkel survey efforts may be supplemented by additional sites for wider spatial coverage in the Mainstem and North Fork Matilija Creek, and/or by additional surveys to address both spring and fall seasons, if needed.

Additional snorkel surveys may be performed prior to, and after, completion of fish passage and habitat enhancement projects to provide data for evaluation of site-specific habitat enhancement project performance.

Task 5: Adult Migration Monitoring

Adult steelhead monitoring will be conducted using the existing Vaki RiverWatcher employed by Casitas Municipal Water District located in the Robles Diversion fish ladder. Adult monitoring will follow the same methods and protocols as currently used by Casitas Municipal Water District.

Task 6: Redd Surveys

O. mykiss redd surveys will be conducted to document the presence, numbers, timing and geographic location of *O. mykiss* spawning sites. Redd surveys will be conducted with a focus on

identifying spawning nests (redds), particularly in suitable portions of the Mainstem and in tributaries like North Matilla Creek, following winter rains. Biologists use snorkeling, walking surveys, and drone photography during the winter/early spring spawning season to locate and count redds and assess fish passage. The redd surveys will be done on an opportunistic schedule when instream flows and turbidity allow safe and effective surveys. When water clarity is suitable for visual observations, redd surveys will focus on areas with suitable gravel and tail-outs of pools. Sites where adult steelhead/rainbow trout spawning activity (e.g., adult fish showing mating behavior, redd construction as indicated by removal of algae and substrate disturbance) will be identified, then flagged and a GPS location recorded so that the site can be documented and revisited with a snorkel survey later in the season. Data recorded during each redd survey will include: survey date, stream reach, redd location, redd length, redd width, water depth, substrate size and composition, associated cover and habitat conditions, fish observations, water quality, and photographs of the site.

Casitas conducts redd surveys in the Mainstem and North Fork Matilija Creek at spawning index sites, specifically at representative locations where suitable spawning gravels have been observed. Surveys are conducted biweekly from January through June. These Casitas redd survey data may be used by the Mainstem monitoring program. Additional spawning survey sites may be implemented to supplement Casitas' spawning index survey sites in the Mainstem and North Fork Matilija Creek.

3. Physical Habitat Monitoring

Task 7: Wet-Dry Mapping

Mapping of the presence and continuity of surface water (i.e., "wet-dry mapping") through the Mainstem of the Ventura River will be performed at least monthly between May–October, or seasonally longer when during low-flow flow conditions persist. Casitas and UVRGA regularly conduct wet-dry mapping (also called "visual stream monitoring") of the Ventura River Mainstem approximately monthly during low-flow conditions to track progression of intermittent conditions. Reported results from Casitas and/or UVRGA will be incorporated into the Mainstem

monitoring program.

Task 8: Habitat Monitoring and Mapping for Inventory Surveys

Habitat monitoring and mapping for inventory surveys will be conducted in order to:

- Periodically (e.g., 5-year interval or following channel altering bank full flood flows) conduct habitat inventories within study sub-reaches of North Fork Matilija Creek and the Mainstem river to characterize changes in river and tributary conditions; and
- Synthesize data on daily flows and hourly water temperatures (collected as part of the water quality and hydrologic monitoring program) within North Fork Matilija Creek and the Mainstem for use in environmental analyses of wild *O. mykiss* production, survival, and migration.

Habitat suitability of a stream reach for various lifestages of *O. mykiss* is determined, in part, by the distribution, abundance, and quality of mesohabitats (i.e., pool, riffle, and run), and how these are utilized by the various age classes of *O. mykiss*.

Quantitative habitat inventories (i.e. "habitat mapping" as commonly used in fisheries studies) will be conducted periodically in study sub-reaches of the Mainstem and North Fork Matilija Creek after substantial channel-altering flow events (bank full flood flows), or at approximately 5-year intervals. Habitat conditions and suitability for *O. mykiss* will be documented so that changes over time may be monitored. CDFW habitat inventory methodology will be followed per CDFW's 2010 Stream Habitat Restoration Manual, Section III.

CDFW has determined that subsampling 10 percent of the length of a stream reach is sufficient to accurately describe stream habitat. The Mainstem from the mouth of Matilija Creek/North Fork Matilija Creek confluence and North Fork Matilija Creek will be initially habitat typed using Level 2 data collection following CDFW methods (e.g., riffle, pool, and flatwater categories). Selected Mainstem and tributary stream sections will be subsampled following CDFW methods for data collection at Level 4, which classifies habitat units into 24 specific habitat types within the riffle, flatwater, and pool categories. Subsampling for Level 4 data collection will focus on Mainstem reaches expected to benefit from flow-related management actions (e.g., Foster Park and San Antonio Creek confluence), any other specific

habitat enhancement project sites, and additional sites necessary to reach 10 percent of the stream reach. Subsequent repeat surveys will be conducted after channel-altering flood events or at least once every 5 years at Level 2 data collection of the entire Mainstem and North Fork Matilija Creek, and at Level 4 data collection at the subsampled sites.

UVRGA completed initial habitat mapping (following CDFW habitat inventory methods) within Foster Park and SAC confluence Mainstem areas and conducts subsequent habitat mapping following channel-altering events. The initial mapping was completed in Fall 2022, and then re-surveyed in summer 2023 following the January flood event that year. UVRGA's habitat mapping data could be used for portions of the Mainstem monitoring program, supplemented by additional portions of the Mainstem and North Fork Matilija Creek in the initial habitat mapping effort.

Task 9: Habitat Quality - Photo Points

Photo points will be established at habitat enhancement sites and where passage barriers and impediments have been remediated in addition to control sites. In addition to photos taken during habitat surveys and to document habitat enhancement projects, general reference photos will be taken annually from specific locations throughout the Watershed to document visible habitat changes over time. This effort will occur annually in the fall prior to the adult migration and spawning period. Photos may be taken within and from outside of stream channels, depending on the photo point location and the subject of interest (e.g., stream channel or reach, passage impediment/project, developing riparian corridor).

UVRGA implements "repeat ground photography" and Casitas implements "photographic monitoring sites" as part of their ongoing monitoring programs, with at least biannual photo point collections. Existing photo point data collection by UVRGA and Casitas in the Mainstem and North Fork Matilija Creek may be used for the Mainstem monitoring program, and these data may be supplemented by additional monitoring locations.

Additionally, UVRGA, OVLC, and other public entities conduct regular (e.g., quarterly and annual) drone-based high resolution aerial imagery collection of portions of the Mainstem.

These datasets may be used by the Mainstem monitoring program to inform changes in habitat, such as following large-scale disturbances (e.g., flood and drought).

Task 10: Lagoon and Estuary Breaching

Monitoring of the lagoon and estuary sand bar status will be used to determine migratory access between the river and ocean. Monitoring of lagoon and estuary passage conditions and breaching of the sand bar includes periodic biweekly visual observations from November 1 through June 30 each year following the methods currently used by Casitas Municipal Water District to determine dates of sandbar breach and lagoon and estuary closure.

In addition to periodic visual observations a self-contained water depth recorder may be located in the lagoon to provide a continuous record of when the sand bar is breached and when it re-closes, if determined to be feasible and not at high risk of tampering or loss due to high stream flows. Based on the date of berm breaching, data on the tide levels and wave and swell height and period for the preceding 24 hours can be obtained from National Oceanic and Atmospheric Administration marine weather data. Estuary inflow from the USGS streamflow gage downstream of Foster Park data and water surface elevation measurements will be used in conjunction with ocean condition data to develop a better understanding of estuary-ocean connectivity dynamics.

Task 11: Performance Assessment Monitoring for Habitat Enhancement Actions

Performance monitoring will be conducted in North Fork Matilija Creek and the Ventura River Mainstem wherever habitat enhancement features are installed. In general, monitoring will be conducted using snorkel surveys for fish distribution, species composition, relative abundance, size distribution, and observations of fish condition. The fish surveys will be complemented by periodic habitat mapping, visual surveys, photo-documentation, and GPS methods for evaluating habitat enhancement actions, such as gravel augmentation, all of which will be assessed through adaptive management techniques. Performance assessments will also include habitat suitability metrics such as water depth, velocity, substrate, cover, passage criteria at impediments, and water quality. Comparisons will be made of the *O. mykiss* densities within an enhanced habitat area and

adjacent areas where enhancement has not been made to assess habitat utilization.

4. Reporting

Task 12: Annual Reporting

Annual monitoring reports will present a tabular and graphic summary of monitoring results of each year's activities. The annual report format will be standardized. The aquatic monitoring report would serve as input, and may be included as an attachment, to the annual Management Entity report on overall program performance.

Exhibit D2 — San Antonio Creek Monitoring Plan

The Physical Solution includes management actions that will enhance the quality and quantity of suitable habitat for Steelhead migration, spawning and egg incubation, and juvenile rearing within the San Antonio Creek Sub-Watershed including this Monitoring and Reporting Program (**SAC Monitoring Plan**). Information developed through the San Antonio Creek Monitoring Plan serves as a fundamental element in the evaluation, implementation and success of the Physical Solution. The general metrics, monitoring methods, and reporting included in the Monitoring Plan follow, when applicable to the San Antonio Creek Sub-Watershed, guidance from:

- California Coastal Monitoring Plan (CMP; Adams et al. 2011) for salmon and Steelhead developed by CDFW and NMFS (available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=30284&inline)
- Integration of Steelhead Viability Monitoring, Recovery Plans and Fisheries Management in the Southern Coastal Area (Boughton et al. 2022: available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=199225&inline)
- Allen 2015. Steelhead Population and Habitat Assessment in the Ventura River / Matilija Creek Basin 2006-2012 FINAL REPORT (available at: [TITLE] (matilijadam.org))
- Many other similar habitat restoration and enhancement efforts to benefit *O. mykiss* in California and the Pacific Northwest.

Baseline information on existing habitat conditions and their function for different lifestages of *O. mykiss* within San Antonio Creek, species composition and geographic distribution of native fish, and limiting factors affecting habitat quality, availability, and access, as well as variation in species abundance, is a critical foundational element of this Physical Solution. Baseline information is available from prior habitat and fish surveys such as those by Allen (2015) and Casitas MWD (2008-present). The baseline habitat surveys proposed as part of this Monitoring Plan are based on a census survey design focused on those stream reaches accessible by Steelhead. This SAC Monitoring Plan is based on methods and results of prior surveys that have proven to be successful in San Antonio Creek. Consideration in developing this

SAC Monitoring Plan was also given to the monitoring methods proposed by CDFW and NMFS by Adams et al. (2011) and Boughton et al. (2022), where feasible and applicable to the San Antonio Creek conditions, for steelhead populations. The SAC Monitoring Plan will be responsive to management actions implemented under the Physical Solution, as well as environmental conditions like seasonal hydrologic conditions, changes in land use, and floods or droughts, that can impact habitat conditions and fish populations on a regional scale. The SAC Monitoring Plan design and data will be periodically reviewed and may be refined, if appropriate, as new reliable and relevant information becomes available.

The Physical Solution includes a multi-element Monitoring Plan that will be conducted each year. The SAC Monitoring Plan includes three basic categories, similar to the 3-stage monitoring program identified by Boughton et al. (2022), that are (1) compliance monitoring, (2) validation monitoring, and (3) long-term trend monitoring. These monitoring categories are adapted from the CDFW Ecosystem Performance Measures website and can be further explained as follows:

- Compliance monitoring includes administrative metrics from the Physical Solution such as compliance with the schedule for implementing a particular program element (e.g., a site-specific habitat improvement project, preparation of the annual technical documentation reports, etc.), budget expenditures, progress on planning or feasibility studies, and other similar administrative elements.
- Validation monitoring includes physical monitoring such as instream flows, water depth and velocity, water temperatures, area of enhanced habitat, jump height and pool depth for potential passage impediments, habitat mapping to assess suitability for various lifestages of *O. mykiss,* and validating flow-habitat relationships.
- Long-term trend monitoring includes evaluation of ecosystem responses to management actions and/or natural drivers, including monitoring adult *O. mykiss* abundance, juvenile fish density and geographic distribution, and species composition (e.g., fish community characteristics, fish species composition, relative abundance, size distribution, and condition). This monitoring will provide trend data over an extended

period of time. It should be noted that depending on the numbers of juvenile and adult *O. mykiss* detected each year, uncertainties exist for detecting and evaluating these metrics. As a result of the large natural population cycles and difficulties in determining causal mechanisms, population metrics will not be used as the only basis to determine overall performance of the Physical Solution.

Developing, permitting, implementing, and reporting on the Monitoring Plan activities will be the responsibility of the Management Entity.

The SAC Monitoring Plan will build on existing experience and monitoring infrastructure (such as the USGS hydrologic monitoring network and standard methods), water quality monitoring (e.g., water temperature monitoring network), habitat monitoring (e.g., habitat surveys), and fish monitoring (e.g., snorkel surveys) implemented by Casitas MWD, CDFW, GSAs, and others (Allen 2015) over the past two decades.

The SAC Monitoring Plan includes a variety of collection and analysis methods such as habitat surveys, streamflow measurements, and *O. mykiss* snorkel surveys. The proposed SAC Monitoring Plan also includes, but is not limited to, water temperature monitoring and direct observations of fish health and condition. The SAC Monitoring Plan also includes status and trends monitoring of the *O. mykiss* population, periodic habitat surveys, and the biological response or expected habitat function (e.g., habitat use by target species, physical habitat suitability, etc.) for *O. mykiss*. Observations of adult passage and juvenile rearing provide insight into habitat function.

F.1 Water Quality and Hydrology Monitoring

The purpose of the water quality and hydrology elements of the SAC Monitoring Plan is to assess habitat suitability for steelhead/rainbow trout population in San Antonio Creek. Monitoring includes measurement of both air and water temperature, conductivity, and, where relevant, dissolved oxygen at representative locations of key habitat or where habitat enhancement projects associated with the Physical Solution are being implemented.

1. Water Temperature

Water temperature is a primary habitat consideration for the successful over-summering and rearing of *O. mykiss*. Water temperatures in the Watershed naturally vary with season, streamflow, pool depth, shade cover, ambient air temperature, variations in solar radiation (cloudiness and fog), and inputs by both surface water and groundwater. Instrumentation for monitoring water temperatures is readily available, either as standalone programmable temperature recorders (e.g., Onset temperature data loggers or similar temperature monitoring units) or as multiparameter data sondes to measure water temperature, electrical conductivity, and other water quality parameters. This instrumentation would be deployed to monitor conditions in representative portions of San Antonio Creek.

2. Dissolved Oxygen

Dissolved oxygen (DO) is a critical measure of habitat suitability for *O. mykiss*. Dissolved oxygen measurements will be made during biological and habitat surveys to assess habitat suitability. DO data may also be acquired to assess diel variation between night and day at critical rearing and refuge habitat locations over periods of time long enough to characterize the habitat. All instrumentation will be tested for accuracy and calibrated as recommended by manufacturer specifications**.**

3. Flow Monitoring

The instream flow monitoring for San Antonio Creek will be divided into two portions. A regional monitoring effort will involve downloading data from active VCWPD or other gages to evaluate flows in the Watershed. Currently, there are two active gages on San Antonio Creek that record daily flows and are operated by the VCWPD: gage 605A located just upstream of the confluence with the Ventura River and gage 616 located at Camp Comfort. Although VCWPD data are collected automatically on a 15-minute delay basis and available from the VCWPD website, the instantaneous and daily data are considered preliminary for extended periods of time after collection. Rating curves are updated on an ongoing basis, so values are subject to change and the final approved data are typically not available for three to four months after collection. Once final data are acquired, they will be reviewed for completeness, and the flow data will be

aggregated on a monthly and annual basis.

In addition to the regional instream flow monitoring, a site-specific instream flow Monitoring Plan is proposed for areas where critical habitat elements are located and/or at locations where Physical Solution conservation measures are proposed or implemented. The intent of these gages is to provide detailed site-specific streamflow data during lower flow seasons, and to characterize flows at or near locations of implemented habitat enhancement actions. The site-specific streamflow monitoring will involve establishing temporary gaging stations early in each post-storm season. These gaging stations, or similar instrumentation, will allow for the collection of water level data from a removable stilling well, installed in the river channel, outfitted with a recording pressure transducer.

Once the supplemental streamflow measurement locations are identified and installed, periodic transect surveys will be performed following standard protocols, oriented perpendicular to the river to collect surface-water velocity and water depth data that will be used to develop a site-specific stage-discharge rating curve for each of the flow monitoring locations. Using the rating curves, discharge values can be calculated for any period of time that depth data was recorded by the transducers. The transducers will be programmed to collect depth data on an hourly or more frequent basis with data downloaded monthly or quarterly during the lower-flow spring, summer, and fall months. Supplemental depth and velocity surveys to update the rating curve would also be conducted on a periodic basis, as needed. Supplemental instream flow measurement equipment will be removed from San Antonio Creek prior to the high-flow winter period. Instream flow data collected each year will be analyzed, summarized, and compared to the biological observations for each annual technical documentation report.

F.2 Fish and Habitat Monitoring

This SAC Monitoring Plan has been developed to document habitat conditions, abundance, life history stages, fish condition, and distribution of *O. mykiss* and other fish in San Antonio Creek. The monitoring efforts will be used to develop technical information on the *O. mykiss* population and habitat in San Antonio Creek for use in managing habitat conditions and evaluating the performance of management actions for the benefit of *O. mykiss*. The SAC

Monitoring Plan objectives include:

- Detect and evaluate the effects of implementing the Physical Solution and document other factors that may affect the *O. mykiss* population.
- Determine the effectiveness and benefits to *O. mykiss* (of or from) the restoration/enhancement actions described in the Physical Solution.
- Refine and develop monitoring efforts and management actions based on the best available scientific data.

To accomplish these objectives, this multifaceted SAC Monitoring Plan includes biologically based monitoring of status and trends for *O. mykiss* life history stage abundance and distribution. The monitoring protocols follow, where applicable and feasible, those identified and described in several CDFW documents, including *California Salmonid Stream Habitat Restoration Manual* (Flosi et al. 2002; 2010 updated Fourth Edition), and as later reflected in CDFW California *Fish Bulletin 180, California Coastal Salmonid Population Monitoring: Strategy, Design and Methods* (Adams et al. 2011) which has recently been updated by Boughton et al. (2022: Fish. Bulletin 1821). The fish monitoring activities also include consideration of factors that affect and limit *O. mykiss* production and survival, including monitoring changes in habitat conditions, instream flow, water quality, and lagoon and estuary breaching, which affects both smolt and steelhead migration opportunities. As discussed below, fish monitoring includes juvenile *O. mykiss* snorkel surveys, adult *O. mykiss* monitoring, *O. mykiss* population genetic evaluation, and periodic assessment of the quality and availability of habitat suitable for migration by adult and juvenile *O. mykiss*, spawning and egg incubation, and juvenile rearing.

1. O. mykiss Monitoring

Snorkel surveys were selected as the preferred monitoring method to eliminate incidental take of *O. mykiss* during the early phases of Physical Solution implementation. As the Physical Solution improves habitat conditions, and the *O. mykiss* population becomes more robust, refinements or additions to the SAC Monitoring Plan, such as the addition of electrofishing as recommended by Boughton et al. (2022), may be considered. Snorkel and redd surveys will be used to:

- Characterize the abundance, life history stages, geographic distribution of *O. mykiss population in San Antonio Creek.*
- Develop estimates of production (e.g., number of juveniles per spawning adult), density (e.g., number of juveniles per 100 square meters [m^2]) for each reach surveyed, and an index of *O. mykiss* abundance for each study reach.
- Annually monitor the species compositions, abundance, geographic distribution, and size classes of native and non-native fish observed in the snorkel surveys in San Antonio Creek.

Snorkeling (i.e., direct observation) is an effective monitoring method when depths are sufficient to observe enough of a sample habitat unit (e.g., pool, glide, and riffle habitat) that statistical estimates can be calculated. For application to the Physical Solution at this time, sampling of *O. mykiss* by direct observation is the preferred methodology. Sampling will generally progress from downstream study sites to upstream sites with the majority of surveys occurring during the critical low-flow periods, and supplemental sampling as needed to characterize the *O. mykiss* population in relation to the Physical Solution.

Snorkel surveys will be conducted in reaches of San Antonio Creek that are legally accessible and have a reasonable potential to support, or recently quantified, rearing of *O. mykiss* Survey reaches will be selected based on habitat conditions and functions (e.g., spawning and rearing), locations where habitat enhancement measures are being developed (baseline surveys for pre/post evaluations), and control reaches for comparison to reaches where habitat enhancement measures have been implemented. Survey locations and frequency will initially be based on results of prior snorkel surveys by Allen (2015) and Casitas MWD (2008 to present).

The species composition, abundance, geographic distribution, and life history stage categories of *O. mykiss* and all other fish species (e.g., bass, chub, carp, stickleback, etc.) observed will be recorded during snorkel surveys. Surveys will be conducted in designated survey reaches where access is permitted and will include representative habitat units identified during baseline surveys (e.g., pool, riffle, and glide habitats). Additional snorkel surveys may be performed prior to, and after, completion of habitat enhancement projects to provide data for

evaluating site-specific habitat enhancement project performance.

- ***O. mykiss Population Genetic Evaluation***

As part of the baseline evaluations, a comprehensive *O. mykiss* genetic evaluation will be performed that includes basin-wide population genetic structure, adaptive genetic analysis, and riverscape genetic analysis. These components will be used to inform current and future actions with respect to the resident and anadromous life history strategies of *O. mykiss*.

- ***Habitat Monitoring***

Periodic habitat monitoring will be conducted as part of implementing and evaluating the Physical Solution in order to:

- Periodically (e.g., 5-year interval) conduct habitat surveys within San Antonio Creek to characterize significant changes; and
- Quantify the enhancement (e.g., change in suitable area) in habitat quality, spawning and rearing habitat before and after site-specific habitat enhancement projects are completed. Measurements of water depths, velocities, substrate characteristics, availability of instream and over-head cover, and other habitat attributes will be made before and after site-specific projects have been implemented as part of the Physical Solution. Snorkel surveys will also be used to document habitat usage before and after habitat enhancement actions have been completed and to compare relative densities and species composition between enhancement sites and control sites where habitat enhancement actions have not been implemented.

Habitat suitability of a stream reach for various lifestages of *O. mykiss* can be determined, in part, by the distribution, abundance, and quality of mesohabitats (e.g., pool, riffle, and glide), and how these are utilized by the various lifestages of *O. mykiss*. Quantitative habitat surveys will be conducted periodically in San Antonio creek, after substantial channel-altering flow events, or at approximately 5-year intervals. Habitat conditions and suitability for *O. mykiss* will be documented so that changes over time may be monitored. The standard CDFW habitat inventory methodology will be followed per CDFW's 2010 Stream Habitat Restoration Manual, Section III.

Information on habitat conditions and functions for *O. mykiss* collected following implementation of Physical Solution actions, in addition to baseline habitat surveys of currently existing habitat conditions conducted as part of this Monitoring Plan, will be used to select representative reaches for subsequent water quality, habitat, and fish distribution and abundance monitoring. Data will be collected at Level 4, which classifies habitat units into 24 specific habitat types within the riffle, flatwater, and pool categories.

- **Photo Points**

Photo points will be established at habitat enhancement sites and control sites. In addition to photos taken during habitat surveys and to document habitat enhancement projects, general reference photos will be taken annually from specific locations in San Antonio Creek to document visible habitat changes over time. This effort would occur at least annually depending on specific project objectives. Photos may be taken within or outside of stream channels, depending on the photo point location and the subject of interest (e.g., stream channel or reach, developing riparian corridor).

- **Lagoon and Estuary Breaching**

Monitoring lagoon and estuary sandbar status may be used to determine migratory access between the river and ocean. Monitoring lagoon and estuary passage conditions and breaching of the sandbar would include periodic visual observations from November 1 through June 30 each year following the methods currently used by Casitas MWD to determine dates of sandbar breach and lagoon and estuary closure.

F.3 Performance Assessment Monitoring for Habitat Enhancement Features

Site-specific performance monitoring will be conducted in San Antonio Creek wherever habitat enhancement features are installed. In general, monitoring will be conducted using snorkel surveys for fish micro-habitat distribution, species composition, relative abundance, size distribution, and observations of fish condition. The fish surveys will be complemented by periodic habitat surveys, visual surveys, and photo-documentation, for restoration/enhancement feature installations. Performance assessments will also include habitat suitability metrics such as water depth, velocity, substrate, cover, and water quality during pre- and post-project surveys.

Comparisons will be made of the pre- and post-project *O. mykiss* densities within an enhanced habitat area and control areas where enhancement has not been made to assess habitat utilization.

F.4 Reporting

Annual technical monitoring reports documenting hydrologic, water quality, fish, and habitat monitoring and enhancement results will be prepared in draft form and made available for public review and comment at least thirty (30) days before being approved in final at a meeting of the Casitas MWD Board of Directors. The annual technical reports will present a summary of monitoring results of each year's activities. The annual report format will be standardized.

Exhibit E—SAC ME Initial Budget

Casitas Municipal Water District
FY 2025-2026 Budget Worksheet
Fisheries

Labor			Hourly Rate		Amount
Position		Regular Hours	Regular	Overtime	Total Annual Salary
	Total	9320			$490,715.40

Account #	Account Description	Department Total	Capital Project Total	Total
5001	Regular Salary	$414,802	$0	$414,802
5003	Overtime Pay	15,000	-	15,000
5005	Stand-by	3,000	-	3,000
5006	Vacation Pay	35,603	-	35,603
5007	Jury Duty Pay	390	-	390
5008	Sick Pay	16,875	-	16,875
5009	Holiday Pay	20,045	-	20,045
5010	Seasonal Pay	-	-	-
5079	CalPERS Pension PEPRA	14,064	-	14,064
5081	CalPERS Pension CLASSIC	132,103	-	132,103
5082	Social Security	31,354	-	31,354
5083	Medicare	7,333	-	7,333
5078	Insurance-Employee Assistance Program	119	-	119
5084	Insurance-Group Life	1,997	-	1,997
5085	Insurance-Group Health	55,950	-	55,950
5086	Insurance-Group Dental	1,996	-	1,996
5087	Insurance-Group Vision	891	-	891
5089	Insurance- Long Term Disability	-	-	-
	Subtotal Salary & Benefits	**$751,523**	**$0**	**$751,523**

Account #	Account Description			
5011	District Equipment	$4,600	$0	$4,600
5012	Service & Supplies	15,000	-	15,000
5028	Computer Upgrades - Hardware	5,000	-	5,000
5029	Computer Upgrades - Software	1,000	-	1,000
5040	Outside Services	20,000	-	20,000
5041	Clothing & Personal Supplies	1,500	-	1,500
5042	Comm. - Radio & Telephones	3,000	-	3,000
5044	Memberships & Dues	250	-	250
5045	Printing & Binding	250	-	250
5046	Books & Publications	300	-	300
5048	Postage	1,000	-	1,000
5050	Licenses & Permits	500	-	500
5051	Advertising & Legal Notice	-	-	-
5055	Private Vehicle Mileage	1,000	-	1,000
5056	Travel Expense	10,000	-	10,000
5059	Education & Training Safety	60	-	60
5060	Education & Training/Seminars	3,000	-	3,000
5062	Pre-Employment Screening	100	-	100
5066	OPEB Expense	-	-	-
5067	GASB 68 Pension Exp	-	-	-
	Sub Total Other Costs	**$66,560**	**$0**	**$66,560**
	TOTAL	**$818,083**	**$0**	**$818,083**

Total by Object

Account Code	Subprogram	Total Hours	Total Amount
2800	General Department	9320	$818,083
		9320	$818,083

Exhibit F—Mainstem ME Initial Budget

Expenses	Estimated ME Costs	
	Year 1	Future Years*
Management Entity Meetings	$10,896	$5,616
Technical Advisory Committee Meetings	$10,896	$7,488
Review Party Implementation Progress	$5,448	$7,488
Annual Parcel Database Updates	$3,632	$3,744
Tracking Production	$7,264	$5,616
Annual Budgeting	$14,528	$5,616
Annual Reporting	$10,896	$11,232
New Production Review and Approval	$7,264	$7,488
Procedures and Policy Development	$10,896	-
Contracted Legal Services	$45,000	$25,000
Contracted Accounting Services	$20,000	$20,000
Monitoring Costs	$210,000	$210,000
TOTAL	$356,720	$309,288

*includes 3% increase for estimated labor rate

Exhibit G—Mainstem ME Funding Plan

The Initial Funding Plan is based on the Mainstem Management Entity (ME) implementing a combination of Fixed Contributions from several parties and Production Assessments from remaining parties in the Mainstem Management Area (and The Wood Claeyssens Foundation). Fixed Contributions are as follows:

Party	Amount
City of San Buenaventura	$168,000
Casitas Municipal Water District	$50,000
Ventura River Water District	$55,000
Meiners Oaks Water District	$35,000
Rancho Matilija Mutual Water Company	$10,000
The Wood-Claeyssens Foundation	$5,000
Aera Energy	$10,000
Ventura County Watershed Protection District	$10,000
Total	**$343,000**

For other parties in the Mainstem Management Area not listed above, it is anticipated there will be a Production Assessment on any groundwater and/or surface water produced (groundwater extractions and surface water diversions) from the Mainstem Management Area at a rate of $60 per acre-foot. With estimated production of 297 acre-feet per year, this would amount to $17,820 in revenue.

This brings the total revenue to **$360,820**.

As shown in the Mainstem ME Budget, estimated ME costs for Year 1 are $356,720, which means approximately **$4,100** in net revenue. Additionally, in Year 1 it will take time to issue the Monitoring Program contract and begin incurring monitoring costs, so additional net revenue is anticipated in Year 1. For Future Years after Year 1, estimated ME costs are $309,288, which means approximately **$51,532** in net revenue. Any net revenue remaining after any year will be carried over in a reserve account to be available for any unanticipated expenses and to build up to serve as a potential matching funds for project grant applications.

This Funding Plan establishes adequate funding for administration of the Physical Solution, Mainstem Monitoring costs, and reserve funding for unanticipated expenses and potential matching funds for project grant applications.

Exhibit H — Summary of Robles Diversion and Fish Passage Facility Protocols

The 2003 Casitas Biological Opinion consists of lengthy and complicated flow operating criteria, as provided and described extensively in that document. In general, the Robles Diversion Dam has a required minimum bypass flow of 30 cubic feet per second (cfs) once a peak occurs and requires bypass flows of 30-171 cfs for 10-12 days within the fish passage season (January 1 – June 30).

Operational criteria outside the fish passage season revert back to the historic Trial Operating Criteria (Casitas Municipal Water District, 1959), meaning that flows up to 20 cfs are generally released downstream to protect prior rights of downstream users. The 2003 Biological Opinion also provides for critical drought protection measures involving modified fish flow operations "to ensure that fish operations at the Robles Facility minimize effects on Lake Casitas water storage during a critical long-term drought period".

Exhibit I – Steelhead Habitat Needs

The FHEP shall consider the following general habitat needs of the Southern California Steelhead (*Oncorhynchus mykiss* or *O. mykiss*) Distinct Population Segment (DPS).

- Anadromous adult steelhead require sufficient water depth for a sufficient duration of time and frequency to safely migrate from the ocean to spawning habitat.
- Successful spawning, egg incubation, and emergence from eggs requires adequate quantity and quality of water, suitable water temperatures, and spawning substrate.
- Smolts migrating downstream require sufficient water depth and surface flow for a sufficient duration of time to safely migrate to the estuary and eventually the ocean.
- Rearing juvenile *O. mykiss* need access to habitat refugia to survive and grow through the dry season. Habitat refugia consists of adequate quantity (i.e., water depth, water volume) and quality (i.e., water temperature, dissolved oxygen, food sources, instream cover). Southern California *O. mykiss* populations have evolved and adapted to highly variable hydrologic and water temperature conditions within the region which is important when assessing habitat suitability in systems such as the Ventura River Watershed.
- The expression of the steelhead life cycle is tied to seasonal and interannual variations in precipitation, climate, and instream flow. Therefore, habitat requirements of the population also vary seasonally and interannually. Many of these factors, such as seasonal precipitation, oceanic conditions, and climate change cannot be controlled in the Ventura River Watershed.
- In addition to instream flow, other environmental factors impact habitat suitability and *O. mykiss* population dynamics such as impediments to access suitable upstream spawning and rearing habitat, predation and competition by other native and non-native species, sediment dynamics within the Watershed, smolt-to-adult survival in the ocean, and many others.
- A viable population of steelhead requires a sufficient number of spawners per generation to preserve population diversity and protect against extreme environmental variation.

Stock-recruitment relationships are an important factor impacting the production of juveniles and the species population dynamics.

- Life history diversity, including resident *O. mykiss* population, is important to maintain population resiliency and the ability to recover from adverse environmental conditions.
- Population response (and eventual recovery) of the Southern California Steelhead DPS is expected to take place over many steelhead generations. The population will likely fluctuate over time and the overall trend of steelhead population and life stage dynamics in the Ventura River Watershed will need to be assessed long-term.

Exhibit J – Contents of FHEP

COMPONENTS OF A VENTURA RIVER WATERSHED FISH HABITAT ENHANCEMENT PLAN

This Exhibit provides an overview of the purpose of the **Fish Habitat Enhancement Plan** ("**FHEP**") and its key components to inform the development of the FHEP under the Physical Solution. Capitalized terms not defined in this Exhibit are defined in the Physical Solution.

The FHEP shall develop a watershed-specific approach to attain its goal of enhancing the quality and increasing the quantity and availability of habitat within the Watershed to support the recovery of and contribute to the long-term persistence of a viable, self-sustaining population of Southern California steelhead/rainbow trout (*Oncorhynchus mykiss* or *O. mykiss*) in the Watershed. This will be done based on guidance provided by the National Marine Fisheries Service's ("**NMFS**") *Southern California Steelhead Recovery Plan* (NMFS 2012), other peer-reviewed scientific literature, and relevant studies and monitoring data collected in the Watershed. Development of the FHEP shall be a collaborative process.

The FHEP is intended to be a living document through the adaptive management process. The FHEP's initial focus shall be on the period between entry of the Physical Solution and completion of the removal of Matilija Dam (i.e., Phases 1 and 2 of the Physical Solution). At a minimum, after the removal of Matilija Dam, the Management Entities, with input from the Watershed TAC, shall evaluate whether a continued FHEP is necessary, and, if so, an updated FHEP shall be prepared and adopted to address post-Dam removal conditions in the Watershed. As described in the Adaptive Management section below, the FHEP shall specify how, and, to what extent, the FHEP will be reviewed and updated to incorporate lessons learned, consistent with agreed upon timelines and the Physical Solution.

The Parties recognize that rebuilding a viable, self-sustaining *O. mykiss* population in the Watershed is a long-term process (expected to take decades) that may not be possible without actions that are being performed separate from the Physical Solution, such as removal of Matilija Dam. As discussed more fully below, many factors will influence the recovery and long-term persistence of a viable, self-sustaining *O. mykiss* population in the Watershed. Not all of these factors, such as inter-annual variability in precipitation, survival of *O. mykiss* in the ocean, and natural catastrophic events like wildfires, are controllable by the Parties to the Physical Solution.

A. FISH HABITAT ENHANCEMENT PLAN: PROGRAM OVERVIEW

The **FHEP's Goal** ("**Goal**") is to enhance the quality and increase the quantity and availability of habitat within the Watershed to support the recovery of and contribute to the long-term persistence of a viable, self-sustaining population of *O. mykiss* within the Watershed. The FHEP shall inform and guide the selection and implementation of Management Actions, and required evaluation and monitoring, as part of ongoing adaptive management under the Physical Solution.

To do so, the FHEP shall establish quantitative and qualitative objectives and response metrics, decision thresholds, and implementation requirements sufficient to develop, implement, monitor, and evaluate Management Actions that contribute to the measurable environmental and biological outcomes identified in the FHEP. The FHEP shall identify the expected environmental and biological responses of each recommended Management Action and describe how that response contributes to achieving corresponding environmental and biological objectives. The FHEP shall describe the necessary monitoring to determine whether environmental and biological responses occur as anticipated and, ultimately, whether biological and environmental objectives are achieved. The FHEP shall include an adaptive management program designed to evaluate habitat changes and population-level responses, and to adjust Management Actions as needed.

More specifically, the FHEP shall include the following components:

- Goals and Objectives: The FHEP shall define program goals and "**Specific, Measurable, Achievable, Reasonable, and Timebound**" ("**SMART**") biological and environmental objectives, with specific performance thresholds, timelines, and evaluation criteria that will be used to assess progress towards attainment of the FHEP's goals and objectives.

- Assessment: The FHEP shall identify and assess existing information related to *O. mykiss* in the Watershed, including population dynamics, stressors, and limiting factors. The FHEP shall identify information gaps and uncertainties and describe how such gaps and uncertainties will be addressed through monitoring and other tools. The FHEP shall also describe the science needed to improve understanding of *O. mykiss* ecology and stressors in the Watershed, to provide for evaluation of environmental and biological responses to Management Actions.

- Management Actions: The FHEP shall identify and recommend additional Management Actions beyond the Immediate Management Actions in the Physical Solution for implementation to support the Goal. Each recommended Management Action shall include expected environmental responses and associated biological outcomes, as well as an initial cost estimate for implementation and any additional monitoring/evaluation.

- Monitoring: The FHEP shall identify short- and long-term monitoring needed to enable the Management Entities to evaluate the effectiveness of Management Actions under the Physical Solution, support the information needs identified in the FHEP, and inform adaptive management under the Physical Solution. This includes monitoring to evaluate the effectiveness of Management Actions in achieving the biological and environmental objectives and progress towards attainment of the Goal.

- Adaptive Management: The FHEP shall describe a long-term Adaptive Management Program through which the Parties shall monitor, assess, and if needed, adjust the FHEP based on substantive new scientific information that materially affects the scientific strategy decisions and implementation of the Physical Solution, and after key developments in the Watershed (e.g., after the removal of Matilija Dam, in response to a major wildfire, etc.).

B. BACKGROUND

Across the species' range, *O. mykiss* may express various life histories. Anadromous *O. mykiss* (known as steelhead) migrate to the ocean as smolts, and adults return to freshwater to spawn. Juveniles rear in freshwater for one to three years until they transition to smolts and migrate to the ocean to mature (NMFS 2012). They remain in the ocean for one to four years before returning to freshwater to spawn. *O. mykiss* are iteroparous, meaning they may spawn in multiple years, potentially returning to the same watershed to spawn and then migrating back to the ocean between spawning seasons as kelts (NMFS 2012). Other life histories of *O. mykiss* include resident rainbow trout, which complete their entire life cycle in freshwater, and lagoon-anadromous fish, which complete partial migrations to lagoons or estuaries to grow and mature before returning upstream to spawn. All life histories can and do interbreed, and are recognized as the same species, and offspring can express different life histories than their parents (NMFS 2012). Expression of various life histories in *O. mykiss* is dynamic and complex and is considered plastic because life histories expression is subject to a combination of genetic and environmental factors (Ohms et al. 2014). This complex (plastic) life history provides a wide variety of behavioral and physiological expressions to enhance life history diversity and adapt to highly

variable and uncertain environmental conditions (e.g., extended drought, flooding, etc.) characteristic of Southern California.

The endangered Southern California Steelhead **Distinct Population Segment** ("**DPS**")

[1]inhabits coastal streams from the Santa Maria River south to the United States-Mexico border (NMFS 2023). This makes the Southern California Steelhead DPS the southernmost anadromous *O. mykiss* in the United States (NMFS 2012). The Watershed is one of four major watersheds still supporting populations of the Southern California Steelhead DPS (NMFS 2012, 2023).

Anadromous *O. mykiss* adults are primarily dependent on rains for seasonal passage up estuaries and rivers to spawn. Seasonal timing of adult and juvenile migration and spawning in the Ventura River varies based on the timing of rainfall and runoff. Results of site-specific monitoring within the Ventura River (e.g., adult monitoring within the Robles fish ladder, redd surveys, and juvenile snorkel surveys) can improve the understanding of seasonal migration patterns and response to environmental cues within the Watershed. In the Watershed, anadromous *O. mykiss* exhibit the following general periodicity each year, although the seasonal timing of life history may vary substantially within and among years:

Life History Stage	**General Periodicity**[1]
Adult immigration	December through May
Spawning	December through May
Incubation and emergence	January through June
Juvenile rearing	Year-round where perennial habitats persist
Smolt emigration	December through May

[1] General periodicities of *O. mykiss* life history stages are not meant for compliance under the Physical Solution.

The NMFS Southern California Steelhead Recovery Plan (2012) provides general guidance on habitat needs for *O. mykiss* known as **Primary Constituent Elements** ("**PCEs**"). Generally, NMFS identifies the following PCEs as essential for the conservation of the Southern California Steelhead DPS: sites and habitats that support one or more life stages and contain physical or biological features essential to survival, growth, and reproduction. Although this guidance is not specific to the Ventura River, it and other scientific sources of information on limiting factors and

[1] NMFS originally listed the Southern California Steelhead **Evolutionary Significant Unit** ("**ESU**") (which only includes anadromous *O. mykiss* or steelhead) as endangered under the ESU policy in 1997 (Endangered and Threatened Species: Listing of Several Evolutionary Significant Units (ESUs) of West Coast Steelhead, 62 Fed. Reg. 43937 (Aug. 18, 1997)) and extended the listing to cover the populations southward from the Santa Monica Mountains to the United States-Mexico border in 2002 (Endangered and Threatened Species: Range Extension for Endangered Steelhead in Southern California, 67 Fed. Reg. 21586 (May 1, 2022)). In 2006, NMFS decided to use the joint U.S. Fish and Wildlife Service/NMFS DPS policy (Policy Regarding the Recognition of Distinct Vertebrate Population Segments Under the Endangered Species Act, 61 Fed. Reg. 4722 (Feb. 7, 1996)) to identify DPSs of steelhead rather than the ESU policy and listed the Southern California Steelhead DPS as endangered (Endangered and Threatened Species: Final Listing Determinations for 10 Distinct Population Segments of West Coast Steelhead, 71 Fed. Reg. 834 (Jan. 5, 2006)). NMFS nonetheless "presume[s] that all juvenile *O. mykiss* in streams where listed steelhead occur are listed juvenile steelhead." (71 Fed. Reg. at 841.) In 2022, the California Fish and Game Commission determined that Southern California *O. mykiss* (including both anadromous steelhead and resident rainbow trout) was a candidate for listing as endangered under the **California Endangered Species Act** ("**CESA**") (Fish & G. Code, § 2050 et seq.) and, in 2025, listed *O. mykiss* as endangered, using the same geographic administrative boundary as the federal DPS.

habitat enhancement methods (e.g., Allen 2015, etc.), in addition to best available science shall be considered when developing the FHEP and as part of the adaptive management process. Best available science includes peer-reviewed scientific literature, relevant studies, and monitoring data collected within the Ventura River Watershed.

The FHEP shall also consider the following mutually shared perspectives and recommendations about *O. mykiss* habitat needs of the Southern California Steelhead DPS:

- Anadromous adult *O. mykiss* require sufficient water depth for a sufficient duration of time and frequency to safely migrate from the ocean to spawning habitat.
- Successful spawning, egg incubation, and emergence from eggs requires adequate quantity and quality of water, suitable water temperatures, and spawning substrate.
- Smolts migrating downstream require sufficient water depth and surface flow for a sufficient duration of time to safely migrate to the estuary and eventually the ocean.
- Rearing juvenile *O. mykiss* need access to habitat refugia to survive and grow through the dry season. Habitat refugia consists of adequate quantity (i.e., water depth, water volume) and quality (i.e., water temperature, dissolved oxygen, food sources, instream cover).
- Other environmental factors impact habitat suitability and *O. mykiss* population dynamics such as impediments to access suitable upstream spawning and rearing habitat, predation and competition by other native and non-native species, sediment dynamics within the watershed, smolt-to-adult survival in the ocean, and many others.

C. GOALS AND OBJECTIVES

Goal

The Goal is to enhance the quality and increase the quantity and availability of habitat within the Watershed to support the recovery of and contribute to the long-term persistence of a viable, self-sustaining population of *O. mykiss* in the Watershed.

Biological and Environmental Objectives Framework

The FHEP shall include integrated **Biological Objectives** ("**Biological Objectives**") and **Environmental Objectives** ("**Environmental Objectives**") designed to support the Goal. The Biological and Environmental objectives shall be SMART and grounded in the best available science. The FHEP shall identify and guide implementation of Management Actions designed to produce measurable environmental responses, which in turn create measurable biological responses that should contribute to achieving the Biological Objectives. The FHEP shall use the following Biological and Environmental Objectives framework through an adaptive management process that tests hypotheses through action, evaluates outcomes, and adjusts actions as needed over time. To ensure that the selection and implementation of Management Actions translate into positive biological outcomes, the FHEP shall define quantitative and qualitative measurable objectives, performance measures, and evaluation criteria linking environmental conditions to biological outcomes.

The FHEP shall develop a viable population criterion to guide development and evaluation of Biological Objectives. The viable population criterion shall be based on population dynamic data from the Watershed using **Viable Salmonid Population** ("**VSP**") metrics (abundance, productivity, spatial structure, and diversity; McElhany et al. 2000). Based on a lack of specific data pertaining to the South-Central and Southern California DPSs, NMFS has identified a precautionary mean annual run size viable population criterion for any individual population within the recovery domain (Boughton et al. 2007; NMFS 2023). The FHEP shall develop a viable population criterion for application to the *O. mykiss* population in the Watershed based on

the NMFS methodology (Boughton et al. 2007, *Appendix A: Derivation of the prescriptive size criterion*) or an alternative methodology, considering any new information or methodologies specific to the Watershed (e.g., updated population-specific data sufficient for a watershed-specific performance-based criterion using the methodology in Lindley et al. 2007, etc.). Guidance for monitoring *O. mykiss* using the VSP framework in Southern California watersheds are described in Fish Bulletin 182 (Boughton et al. 2022), and guidance for monitoring in coastal California are described in Fish Bulletin 180 (Adams et al. 2011).

The Biological Objectives in the FHEP shall address the desired condition of the *O. mykiss* population to contribute to population viability in the Watershed. The Biological Objectives shall be linked to spawning and rearing success and survival, spatial distribution, and age-class diversity within the Watershed at levels necessary to achieve sufficient abundance, genetic integrity, and life history diversity.

In developing the FHEP and implementing the Physical Solution, it is important to recognize the uncertainties and many challenges affecting the *O. mykiss* population in the Watershed. Factors beyond the control of the Parties complicate the inherently imprecise nature of biological responses to Management Actions and could even inhibit the desired biological response. Such factors may include ocean conditions and marine survival, variation in precipitation within and among years, anthropogenic influences (e.g., encampments, poaching, stream diversion, and water quality degradation, etc.), habitat destruction or modification (e.g., floods, sedimentation from removal of Matilija Dam, etc.), wildfires, predation, non-native species, pollution, and diseases and parasites.

The Environmental Objectives in the FHEP shall address the physical and chemical habitat conditions, including water quality, necessary to achieve the Biological Objectives in the Watershed, recognizing that not all of those conditions are under the control of the Parties. The Environmental Objectives shall be linked to quantifiable flow, habitat, and water quality metrics that can be evaluated through monitoring. The Environmental Objectives shall address the following:

- Amount, quality, and distribution of suitable *O. mykiss* spawning and rearing habitat, including habitat that is currently accessible or inaccessible due to the presence of fish passage barriers.

- Flow conditions that provide seasonal connectivity and passage (including estuary connection), including flow timing, depth, magnitude, duration, and frequency necessary to support migration.

- Suitable temperature, dissolved oxygen, and water quality conditions to support all *O. mykiss* life stages.

- Habitat diversity, complexity, and availability across the Watershed and its persistence through variable hydrologic and hydraulic conditions.

The future Management Actions recommended in the FHEP shall be designed to support achieving the Environmental Objectives and the Biological Objectives, and shall include both flow and non-flow actions, such as:

- Voluntary flow Management Actions such as flow augmentation, pumping reductions, and instream flow dedications.

- Riparian habitat restoration and enhancement (e.g., repairing degraded riverbanks, planting native vegetation, livestock exclusion, and floodplain reconnection).

- Stream channel enhancement (e.g., gravel augmentation, wood addition, and road crossing improvements).

- Removal or remediation of fish passage barriers and completion of fish passage improvements.

- Non-native species management.

While *O. mykiss* is the focal species, the FHEP shall also consider broader ecological functions and native fish assemblages, including representative native species (e.g., tidewater goby) or simple assemblage-level indicators, to evaluate whether Management Actions support overall Watershed health.

Biological Objectives

The Biological Objectives shall support achieving the FHEP's viable population criterion. This will require increasing the number of returning ocean-run adult fish and the spatial distribution of *O. mykiss* throughout the Watershed. Because recovery may take many years to show progress, and, recognizing the uncertainty of biological responses to restoration or enhancement actions due to uncontrollable factors, Biological Objectives should focus on elements of recovery that can be affected by the Parties through implementation of Management Actions that improve habitat conditions for *O. mykiss* in the Watershed.

The FHEP shall establish SMART Biological Objectives directly related to SMART Environmental Objectives. These SMART Biological Objectives shall increase the likelihood of achieving the Goal while allowing for improvements to be monitored, quantified, and adaptively managed over shorter timeframes. The Biological Objectives shall reflect limiting factors affecting the Ventura River population of *O. mykiss* and the opportunities to address them.

At a minimum, the FHEP shall develop SMART Biological Objectives related to each of the following Biological Objectives:

Biological Objective 1 (BO1): Increase adult *O. mykiss* spawning success.

Biological Objective 2 (BO2): Increase juvenile *O. mykiss* rearing and survival.

Biological Objective 3 (BO3): Increase *O. mykiss* spatial distribution and age-class diversity.

Due to the uncertainties and many challenges affecting the *O. mykiss* population in the Watershed, including factors beyond the control of the Parties that complicate the inherently imprecise nature of biological responses to Management Actions, and that could even inhibit the desired biological responses, the FHEP's Biological Objectives (as well as the Environmental Objectives described below) shall not be used for compliance under the Physical Solution but can inform adaptive management.

Environmental Objectives

Streamflow is necessary to create habitat and provides connectivity between aquatic organisms and their riverine habitats. Streamflow within the Watershed is highly correlated with local natural precipitation and runoff that is not within the control of the Parties. Loss of streamflow and subsequent stream connectivity can affect the flow of nutrients, energy, and materials, as well as the movement and viability of biota in a system. Flow magnitude, duration, and timing influence *O. mykiss* access to spawning grounds, rearing habitats, and lagoon refuge within the

Watershed. Southern California *O. mykiss* require adequate flow to migrate upstream to spawning habitat, avoid redd desiccation or scour, support fry emergence and juvenile rearing, provide over-summer refuge, support smolt emigration, and allow for complete life stage transitions. Therefore, enough habitat must activate at the right time and duration to allow each life stage to successfully transition to the next life stage to support the successful recovery of the *O. mykiss* population.

Passage for adult *O. mykiss* must occur during the period when upstream migration naturally takes place (generally December through May based, in part, on the timing of rainfall and runoff events within the Watershed and reproductive condition of adult *O. mykiss*). When high flows naturally occur, they must occur long enough and at the appropriate frequency for anadromous adult *O. mykiss* to enter the Ventura River estuary and migrate to upstream reaches that contain suitable spawning or holding habitat. Successful passage requires that water quality, depth, velocity, and jump heights remain within the swimming and physiological capabilities of adult *O. mykiss* expected in each reach where there is a potential impediment or barrier to passage. A passage barrier is any artificial or natural structure that hinders, restricts, or prevents fish from migrating upstream or downstream, thereby limiting access to spawning and rearing habitat. These impediments can be complete, partial, and/or temporal, often causing high water velocities, shallow depths, or physical blocks that disrupt the life cycle of aquatic species.

Physical habitat that supports a specific *O. mykiss* life stage provides enough suitable habitat to meet the environmental needs of that life stage. Adult *O. mykiss* require sufficient water depths over suitable spawning substrates to construct and defend redds, as well as adjacent pools deep enough to provide holding cover during the spawning period. Juvenile *O. mykiss* rear year-round in perennial reaches of the Watershed, the extent of which may vary with hydrologic conditions (e.g., precipitation-driven streamflow). Therefore, baseflows must be sufficient to maintain microhabitat diversity, cover (e.g., wood, boulders, and undercut banks), and thermal refugia. During spawning, incubation, and rearing, *O. mykiss* may be limited by resources such as food and cover. Predation and competition by non-native species present additional stressors, potentially affecting individual fish as well as habitat quality. Adequate habitat and resources are necessary to ensure a self-sustaining population can overcome density-dependent stressors, including disease, oxygen depletion, redd superimposition, and predation and competition by non-native species, and to avoid unnecessary aggression.

The FHEP shall establish SMART Environmental Objectives designed to achieve the Biological Objectives. At a minimum, the FHEP shall develop SMART Environmental Objectives related to each of the following Environmental Objectives:

Environmental Objective 1 (EO1): Increase seasonal and interannual habitat connectivity for key life stages (e.g., adult migration, smolt emigration, and inter-habitat movement for rearing juveniles).

Environmental Objective 2 (EO2): Increase spatial distribution of suitable habitat and microhabitat diversity for key life stages (e.g., spawning, rearing, and over-summering).

Environmental Objective 3 (EO3): Increase and maintain suitable habitat amounts and quality to levels that support *O. mykiss* at key life stages.

D. ASSESSMENT

The recovery and persistence of a viable, self-sustaining *O. mykiss* population may be shaped by interacting factors including flow timing and magnitude, water quality parameters (e.g., temperature and dissolved oxygen), sediment supply, channel complexity, migration barriers, passage hydraulics, non-native species stressors, ocean conditions, both flow and non-flow actions, and large-scale disturbances like wildfire. To support the Goal within the Watershed, the FHEP shall focus on life stage-specific habitat requirements (e.g., adult and juvenile migration,

spawning, egg incubation and fry production, and juvenile rearing), evaluate existing habitat conditions, and recommend and evaluate Management Actions designed to achieve the Environmental and Biological Objectives.

To implement a life-cycle approach, the FHEP's assessment of existing conditions in the Watershed shall include, but not be limited to, the following components:

1. Compile basic *O. mykiss* life history information, including observations with identification of life stage and habitat associations (general demographics).

2. Characterize the availability of present and potential suitable habitat within the Watershed for key life stages such as adult spawning and juvenile rearing.

3. Identify and describe immigration and emigration conditions and constraints throughout the Watershed.

4. Identify and describe egg incubation and fry emergence requirements, existing conditions, and constraints within the Watershed.

5. Identify key stressors that limit the distribution, abundance, and reproductive success of *O. mykiss* in the Watershed.

E. MANAGEMENT ACTIONS

As described in the Physical Solution at Section IV, *Immediate Management Actions*, the Parties shall begin implementing the Immediate Management Actions upon entry of the Physical Solution. These Immediate Management Actions are intended to help decrease physical stressors to *O. mykiss* in the Watershed by providing localized habitat benefits (e.g., improved access to spawning and rearing habitats, habitat complexity, and water quality). The FHEP shall consider information gained through implementation and monitoring of the Immediate Management Actions, along with other available information, to identify, evaluate the feasibility of and prioritize, recommend, and guide implementation of future Management Actions designed to achieve the Goal.

Prioritized List of Future Management Actions

The FHEP shall build on the Immediate Management Actions and include a prioritized list of recommended future Management Actions designed to achieve the SMART Environmental and Biological Objectives, along with an implementation schedule, feasibility analysis, and an initial cost estimate for implementation and additional monitoring/evaluations. The Management Entities shall use this prioritized list to select future Management Actions, direct monitoring efforts, and identify response metrics to evaluate contributions toward achieving the Environmental and Biological Objectives.

Response Metrics

The FHEP shall describe the metrics that will be used to evaluate environmental and biological responses for each recommended future Management Action. These environmental and biological response metrics shall be measured to evaluate whether each recommended Management Action ultimately contributes to achieving the Environmental and Biological Objectives. Response metrics shall be identified to allow evaluation of both the Environmental and Biological Objectives identified in the FHEP, with relevant monitoring included in the Monitoring Program.

Examples of environmental response metrics pertinent to the Environmental Objectives EO1, EO2, and EO3 include, but are not limited to:

- The amount (river miles) of and duration (days) that stream channels remained wetted within the Watershed (EO1, EO2, EO3).

- The amounts and types of habitat complexity (e.g., amount of large woody material, instream and overhead cover habitat such as boulders and riparian vegetation, or spawning gravel) in key locations within the Watershed (EO2).

- The duration of habitat persistence (e.g., number of days with available habitat for a given life stage) (EO1, EO2, EO3).

Examples of biological response metrics pertinent to the Biological Objectives BO1, BO2, and BO3 include, but are not limited to:

- The number of redds counted within the Watershed over an identified adaptive-management period considering hydrologic conditions (BO1).

- The number and spatial distribution of juveniles observed to be using rearing habitat within the Watershed over an identified adaptive-management period considering hydrologic conditions (BO2 and BO3).

F. MONITORING

The FHEP shall review, and, if needed, revise the Initial Monitoring Program attached as Exhibit C to the Physical Solution (which includes the Mainstem Monitoring Plan and the San Antonio Creek Monitoring Plan). The FHEP shall ensure that the Monitoring Program identifies short- and long-term monitoring needed to support the information needs identified in the FHEP, and that it informs adaptive management under the Physical Solution. This includes monitoring to evaluate the effectiveness of Management Actions in achieving the Biological and Environmental Objectives and progress towards attainment of the Goal of the FHEP.

Monitoring shall follow standardized operating procedures for the type of monitoring (e.g., hydraulic surveys/2D modeling, riffle transects, redd surveys, snorkel surveys, fixed-point counting stations, and dissolved oxygen/temperature monitoring) with sufficient detection probability targets for key events (e.g., adult passage). The Monitoring Program shall specify data continuity requirements (e.g., sensor uptime and revisit intervals) and quality assurance/quality control (QA/QC) protocols (e.g., calibration, drift checks, and outlier rules).

The monitoring shall be designed to meet the data and information needs described above. Examples of data that shall be collected under the Monitoring Program include, but are not limited to:

- Data necessary to inform and evaluate response metrics, for assessment of Management Actions' contributions toward achieving Environmental and Biological Objectives, as well as the Goal.

- Data necessary to characterize (1) changes in habitat conditions, and (2) changes in the distribution and abundance of *O. mykiss* within the Watershed.

The FHEP shall identify and integrate various modeling and standard data collection methods, including statistically based subsampling, and consider emerging monitoring methods, depending on the specific management objective(s) and data gap(s) to be addressed. The FHEP shall consider these and other data needs and analytical tools during development and implementation.

The Monitoring Program shall describe methods that will be used to collect and report data in a consistent and standardized manner, how such data will be made available to the public, and how such data will support adaptive management.

The information and data that result from the Monitoring Program, along with other available data and information, shall be used to evaluate the effectiveness of Immediate Management Actions and future Management Actions in contributing to achievement of Environmental and Biological Objectives to inform adaptive management. The Monitoring Program shall provide for evaluation of each Management Action's biological and environmental response metrics, as well as the ability of conditions in the Watershed to support the recovery of and contribute to the long-term persistence of a viable, self-sustaining *O. mykiss* population.

The Monitoring Program may be updated as information is gained through modeling, monitoring, or other information sources over time.

G. ADAPTIVE MANAGEMENT

The FHEP shall include an Adaptive Management Program that clearly identifies parties, decision-making processes, and implementation timelines for evaluating whether environmental and biological objectives are being achieved. The Program shall compare observed conditions and outcomes against defined performance metrics, objectives, and scientific hypotheses, and track the effectiveness of Management Actions over time. If any biological or environmental objectives reasonably cannot be achieved, revised objectives shall be developed using the best available science.

The Adaptive Management Program shall incorporate the best available science at the time of implementation and be updated as new scientific information, monitoring data, and technical analyses become available. The Program shall also specify how, and to what extent, the FHEP and all associated plans (including, but not limited to, the Monitoring Program) will be reviewed and updated to incorporate lessons learned, consistent with agreed upon timelines and the Physical Solution.

Purpose and Intent

Adaptive management provides a flexible framework for decision making under uncertainty, which is particularly important in the Watershed where episodic flows, drought, wildfire, sediment pulses, lagoon mouth dynamics, and competing water uses influence habitat availability and *O. mykiss* life history expression. Adaptive management emphasizes learning while doing to refine and improve Management Actions over time. It measures how well Management Actions help meet ecological, social, and operational goals; meet biological and environmental objectives; and increase scientific knowledge.

Adaptive management involves evaluating existing actions, exploring alternative and/or additional actions, predicting outcomes, implementing selected actions, monitoring the results, and adjusting management actions and predictions accordingly over time to achieve the goals and objectives. This cycle continues as new information becomes available.

To be effective for the Watershed, the Adaptive Management Program shall include the following components:

1. **Management Decision Framework**
   The Adaptive Management Program shall identify processes and criteria for recommending and implementing future Management Actions, consistent with processes and criteria in the Physical Solution.

2. **Public and Agency Engagement**
   The Adaptive Management Program shall identify procedures for engagement with interested parties and relevant agencies to support coordination, transparency, and information exchange, consistent with procedures in the Physical Solution.

3. **Adjustable Objectives**
   The Adaptive Management Program shall provide clear Biological and Environmental Objectives, that support achieving the Goal, and which can be refined or adjusted as new information is obtained through monitoring and evaluation.

4. **Resource Relationship Characterization**
   The Adaptive Management Program shall include processes and procedures to refine the descriptions of biological and environmental relationships and potential management effects, as informed by monitoring data, applicable analytical tools, and other available information.

5. **Monitoring Program**
   The Adaptive Management Program shall recommend any necessary changes to the Monitoring Program to generate high quality, reliable data using verified, scientifically sound methods, and provide timely data sharing among parties to support informed adaptive decision making.

6. **Performance Evaluation**
   The Adaptive Management Program shall include quantifiable response metrics for assessing progress toward the Biological and Environmental Objectives and determining whether Management Actions are moving conditions in the desired direction. The Adaptive Management Program shall identify predefined decision triggers tied to expected effects of individual Management Actions to support timely adjustment of those actions (e.g., "if-then" response frameworks). The Adaptive Management Program shall document the basis for any decision to maintain, modify, or defer changes to Management Actions in response to observed outcomes.

7. **Regulatory Consistency**
   The Adaptive Management Program's processes and procedures shall be consistent with, and operate within, existing legal and regulatory frameworks, be compliant with the federal and California Endangered Species Acts, and support recovery planning. Under Code of Civil Procedure section 850(a), the Physical Solution shall be consistent with Section 2 of Article X of the California Constitution and under section 850(b), the Physical Solution shall not substantially impair the ability of a groundwater sustainability agency, the State Board, or DWR to comply with SGMA and to achieve sustainable groundwater management.

The Adaptive Management Program shall be updated after Matilija Dam is removed or within 10 years of entry of the Physical Solution, whichever occurs first, and then thereafter on a seven-year cycle to accommodate two generations of *O. mykiss* (averaging 3 and 4 years per generation). The Program will identify new or adapted Management Actions and, if necessary, adjusted objectives,

to be considered for implementation, consistent with the Physical Solution, that incorporate lessons learned.

Implementation

The Adaptive Management Program shall provide flexibility for the Management Entity to evaluate the effects of each Management Action on environmental and biological responses that contribute toward achieving the Environmental and Biological Objectives.

At a minimum, the Management Entity Technical Advisory Committees shall each convene annually to:

- **Review the Monitoring Program** to confirm that the selected monitoring parameters, indicators, sampling designs, and analytical methods are scientifically appropriate and sufficient to evaluate Management Actions and environmental and biological responses relative to the FHEP's Goal. During the annual meeting, these entities shall identify any revisions to the Monitoring Program needed to improve data quality and monitoring efficiency in the upcoming year and to provide recommendations to the Management Entities. The Management Entities shall consider the recommendations at an open and public meeting in connection with the Annual Report.

- **Review Ongoing Management Actions** to determine and recommend any necessary changes to existing Management Actions based on information gained in the prior year. During their annual meetings, the Technical Advisory Committees shall discuss whether new information supports changes to the implementation of existing Management Actions to improve their effectiveness in the following year. Based on those discussions, these entities shall provide recommendations to the Management Entities. The Management Entities shall consider the recommendations at an open and public meeting in connection with the Annual Report.

- **Evaluate the prior year's monitoring results and all other relevant scientific information** to assess trends, evaluate progress toward the Environmental and Biological Objectives, and determine whether observed conditions support, contradict, or refine existing hypotheses.

- **Review the prioritized list of recommended Future Management Actions** based on emerging data, new scientific findings, completed actions, and observed environmental and biological responses. During their annual meetings, the Technical Advisory Committees shall discuss whether new information supports changes to the priority, timing, or design of future Management Actions to improve the effectiveness of adaptive management in the following year. Based on those discussions, they shall provide recommendations to the Management Entities. The Management Entities shall consider the recommendations at an open and public meeting in connection with the Annual Report.

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