Appendix A

GSP Initial Notification

TENTATIVE FINAL

GSP Initial Notification

4-003.01 VENTURA RIVER VALLEY

Upper Ventura River Groundwater Agency GSA

Date Submitted: ***12/20/2017*** *Last M*

1. How many GSPs are planned for the basin?

   Single GSP for the entire basin

2. Select GSA(s) that will develop the GSP(s)

   Upper Ventura River Groundwater Agency GSA (Exclusive)

   a. (Optional) If one or more GSAs have identified a representative to submit an initial notification on their behalf, the designated representative shou evidence of that identified.

3. Select or add the point of contact for your GSP area or Plan Manager if identified.

   Bruce Kuebler
   (Upper Ventura River Groundwater Agency GSA)
   409 Old Baldwin Rd., Ojai, CA93023
   (805) 649-3050
   pbkuebler@sbcglobal.net

4. Please provide general information about the Agency's process for developing the GSP, including the manner in which interested parties may conta Agency and participate in the development and implementation of the GSP as required by Water Codes §10723.4 and §10727.8
   (Fill in the text box AND/OR attach a file).

   028_UpperVenturaRiverGSA_GSP-IN_2017-12-20.pdf (323.4kB) Uploaded on 01/17/2018 at 09:56AM

5. Please provide link(s) to the Agency's website where relevant information regarding the GSP is posted or will be posted.

   http://www.uvrgroundwater.org/

Upper Ventura River
GROUNDWATER
Sustainability Agency

December 20, 2017

Trevor Joseph, SGM Section Chief
California Department of Water Resources
901 P Street
P. O. Box 942836
Sacramento, CA 94236

Re: Initial Notification of Plan Development

Dear Mr. Joseph,

This is the initial notification that the Upper Ventura River Groundwater Agency is beginning development of a Groundwater Sustainability Plan as required by Section 353.6(a) of the GSP regulations and SGMA Section 10727.8.

The Agency's process for developing the Plan is described in the Grant Proposal for Upper Ventura River Groundwater Sustainability Agency and Plan, submitted for the Proposition 1 Sustainable Groundwater Planning Grant Program. In summary, the Agency will conduct studies to fill gaps in data and analysis during 2018 and 2019. During that period, work will begin on GSP chapter titled, 'Plan Area and Basin Setting'. As analyses are completed, chapters on Sustainable Management Criteria, Projects and Management Actions, and Plan Implementation will be prepared. Approval of chapters is scheduled for 2020 and early 2021 with Plan adoption in late 2021.

Stakeholder engagement is an important part of Plan development. One Director of the seven-member Board represents agricultural interests and one represents environmental interests. Each of those Directors communicates regularly with their interested parties to inform them of activities and receive ideas and comments. People can participate in Plan development by attending monthly afternoon meetings of the Agency's board, by going to occasional community outreach evening meetings, by signing up to be on the Interested Parties list to receive emails on Plan activities and status, by going to the Agency's website to learn about activities, topics, and Plan drafts that may be of interest, and by contacting Board members by phone or email. Board meetings with agenda packets are posted on the Agency's website. Each GSP chapter will be subject of a public meeting to receive comments prior to approval.

The Agency's Stakeholder Outreach Ad Hoc Committee interviewed a variety of people to determine how they would like to participate in GSP development and a Stakeholder Engagement Plan will be prepared. Additional opportunities for interested parties to participate, such as an advisory council, will evolve and be included as Plan development progresses.

Contacting the Agency can occur in several ways. Messages can be left on the Agency's website, uvrgroundwater.org; the Agency's Executive Director, Cece Vandermeer, can be contacted by phone at (805) 640-1247 or email at uvrga1@ gmail.com; Board Chair Bruce Kuebler can be contacted by phone at (805) 649-3050; he and other Board members can be reached using contact information on the Agency's website; or written letters can be sent to UVRGA at P. O. Box 1779, Ojai, CA 93024.

Sincerely,

Bruce Kuebler, Chair
Upper Ventura River Water Agency

Cc: Ventura County Board of Supervisors
City of San Buenaventura City Council
Interested Parties List
Ventura River Watershed Council
City of Ojai City Council

Appendix B

Elements of the Plan Table

TENTATIVE FINAL

APPENDIX B
Elements of the Plan Table

Article 5				Section Number(s)	Or Figure Numbers	Or Table Numbers	Or Appendices
§ 354.			**Introduction to Plan Contents**	1.0			
			This Article describes the required contents of Plans submitted to the Department for evaluation, including administrative information, a description of the basin setting, sustainable management criteria, description of the monitoring network, and projects and management actions.	1.0			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Section 10733.2, Water Code.				
SubArticle 1.			**Administrative Information**	2.0			
§ 354.2.			**Introduction to Administrative Information**	2.0			
			This Subarticle describes information in the Plan relating to administrative and other general information about the Agency that has adopted the Plan and the area covered by the Plan.	2.0			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Section 10733.2, Water Code.				
§ 354.4.			**General Information**				
			Each Plan shall include the following general information:				
(a)			An executive summary written in plain language that provides an overview of the Plan and description of groundwater conditions in the basin.	ES			
(b)			A list of references and technical studies relied upon by the Agency in developing the Plan. Each Agency shall provide to the Department electronic copies of reports and other documents and materials cited as references that are not generally available to the public.	8.0			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10733.2 and 10733.4, Water Code.				
§ 354.6.			**Agency Information**	2.1			
			When submitting an adopted Plan to the Department, the Agency shall include a copy of the information provided pursuant to Water Code Section 10723.8, with any updates, if necessary, along with the following information:	2.1			Appendix B GSA Formation
(a)			The name and mailing address of the Agency.	2.1.1			
(b)			The organization and management structure of the Agency, identifying persons with management authority for implementation of the Plan.	2.1.2			
(c)			The name and contact information, including the phone number, mailing address and electronic mail address, of the plan manager.	2.1.3			
(d)			The legal authority of the Agency, with specific reference to citations setting forth the duties, powers, and responsibilities of the Agency, demonstrating that the Agency has the legal authority to implement the Plan.	2.1.4			
(e)			An estimate of the cost of implementing the Plan and a general description of how the Agency plans to meet those costs.	7.0		7.1-01	
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10723.8, 10727.2, and 10733.2, Water Code.				
§ 354.8.			**Description of Plan Area**	2.2			
			Each Plan shall include a description of the geographic areas covered, including the following information:	2.2			
(a)			One or more maps of the basin that depict the following, as applicable:	2.2.1	2.1-01		
	(1)		The area covered by the Plan, delineating areas managed by the Agency as an exclusive Agency and any areas for which the Agency is not an exclusive Agency, and the name and location of any adjacent basins.	2.2.1	2.1-01		
	(2)		Adjudicated areas, other Agencies within the basin, and areas covered by an Alternative.	N/A			
	(3)		Jurisdictional boundaries of federal or state land (including the identity of the agency with jurisdiction over that land), tribal land, cities, counties, agencies with water management responsibilities, and areas covered by relevant general plans.	2.2.1	2.1-02		
	(4)		Existing land use designations and the identification of water use sector and water source type.	2.2.1	2.2-01		
	(5)		The density of wells per square mile, by dasymetric or similar mapping techniques, showing the general distribution of agricultural, industrial, and domestic water supply wells in the basin, including de minimis extractors, and the location and extent of communities dependent upon groundwater, utilizing data provided by the Department, as specified in Section 353.2, or the best available information.	2.2.1	2.2-02		
(b)			A written description of the Plan area, including a summary of the jurisdictional areas and other features depicted on the map.	2.2.1	2.1-02		
(c)			Identification of existing water resource monitoring and management programs, and description of any such programs the Agency plans to incorporate in its monitoring network or in development of its Plan. The Agency may coordinate with existing water resource monitoring and management programs to incorporate and adopt that program as part of the Plan.	2.2.2, 2.2.2.1, 2.2.2.2		2.2-01 2.2-02	
(d)			A description of how existing water resource monitoring or management programs may limit operational flexibility in the basin, and how the Plan has been developed to adapt to those limits.	2.2.2			
(e)			A description of conjunctive use programs in the basin.	2.2.2.3			
(f)			A plain language description of the land use elements or topic categories of applicable general plans that includes the following:	Various (see below)	2.2-01		
	(1)		A summary of general plans and other land use plans governing the basin.	2.2.3.1	2.2-01		
	(2)		A general description of how implementation of existing land use plans may change water demands within the basin or affect the ability of the Agency to achieve sustainable groundwater management over the planning and implementation horizon, and how the Plan addresses those potential effects	2.2.3.1.1	2.2-01		
	(3)		A general description of how implementation of the Plan may affect the water supply assumptions of relevant land use plans over the planning and implementation horizon.	2.2.3.1.2			

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Article 5				Section Number(s)	Or Figure Numbers	Or Table Numbers	Or Appendices
	(4)		A summary of the process for permitting new or replacement wells in the basin, including adopted standards in local well ordinances, zoning codes, and policies contained in adopted land use plans.	2.2.3.2	2.2-01		
	(5)		To the extent known, the Agency may include information regarding the implementation of land use plans outside the basin that could affect the ability of the Agency to achieve sustainable groundwater management.	2.2.3.1.3	2.2-01		
(g)			A description of any of the additional Plan elements included in Water Code Section 10727.4 that the Agency determines to be appropriate.	2.2.4			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10720.3, 10727.2, 10727.4, 10733, and 10733.2, Water Code.				
§ 354.10.			**Notice and Communication**	2.3			
			Each Plan shall include a summary of information relating to notification and communication by the Agency with other agencies and interested parties including the following:	2.3			Appendix A Initial Notification Appendix E Stakeholder Engagement Plan
(a)			A description of the beneficial uses and users of groundwater in the basin, including the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties.	2.3.1	2.2-01		
(b)			A list of public meetings at which the Plan was discussed or considered by the Agency.	2.3.2			Appendix F List of Public Meetings
(c)			Comments regarding the Plan received by the Agency and a summary of any responses by the Agency.	2.3.3			Appendix G GSP Comments and Responses
(d)			A communication section of the Plan that includes the following:	2.3.4			
	(1)		An explanation of the Agency's decision-making process.	2.3.4.1			
	(2)		Identification of opportunities for public engagement and a discussion of how public input and response will be used.	2.3.4.2			Appendix E Stakeholder Engagement Plan
	(3)		A description of how the Agency encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.	2.3.4.2			Appendix E Stakeholder Engagement Plan
	(4)		The method the Agency shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.	2.3.4.3			Appendix E Stakeholder Engagement Plan
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10723.2, 10727.8, 10728.4, and 10733.2, Water Code				
SubArticle 2.			**Basin Setting**	3.0			
§ 354.12.			**Introduction to Basin Setting**	3.0			
			This Subarticle describes the information about the physical setting and characteristics of the basin and current conditions of the basin that shall be part of each Plan, including the identification of data gaps and levels of uncertainty, which comprise the basin setting that serves as the basis for defining and assessing reasonable sustainable management criteria and projects and management actions. Information provided pursuant to this Subarticle shall be prepared by or under the direction of a professional geologist or professional engineer.	3.0			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Section 10733.2, Water Code.				
§ 354.14.			**Hydrogeologic Conceptual Model**	3.1			
(a)			Each Plan shall include a descriptive hydrogeologic conceptual model of the basin based on technical studies and qualified maps that characterizes the physical components and interaction of the surface water and groundwater systems in the basin.	3.1	Various (see below)		Appendix H Numerical Model
(b)			The hydrogeologic conceptual model shall be summarized in a written description that includes the following:	Various (see below)			
	(1)		The regional geologic and structural setting of the basin including the immediate surrounding area, as necessary for geologic consistency.	3.1.2, 3.1.2.1, 3.1.4	3.1-10a 3.1-10b 3.1-11		
	(2)		Lateral basin boundaries, including major geologic features that significantly affect groundwater flow.	3.1.3.1.1, 3.1.4	3.1-01 3.1-03		
	(3)		The definable bottom of the basin.	3.1.3.1.1, 3.1.4	3.1-15		
	(4)		Principal aquifers and aquitards, including the following information:	Various (see below)			
		(A)	Formation names, if defined.	3.1.3, 3.1.4	3.1-10a 3.1-10b 3.1-11		
		(B)	Physical properties of aquifers and aquitards, including the vertical and lateral extent, hydraulic conductivity, and storativity, which may be based on existing technical studies or other best available information.	3.1.3.1.1, 3.1.3.1.3, 3.1.4	3.1-20 through 3.1-24		Appendix H Numerical Model
		(C)	Structural properties of the basin that restrict groundwater flow within the principal aquifers, including information regarding stratigraphic changes, truncation of units, or other features.	3.1.3.1.2, 3.1.4	3.1-10a 3.1-10b 3.1-11		
		(D)	General water quality of the principal aquifers, which may be based on information derived from existing technical studies or regulatory programs.	3.1.3.3, 3.1.4	3.1-26 through 3.1-41	3.1-02	
		(E)	Identification of the primary use or uses of each aquifer, such as domestic, irrigation, or municipal water supply.	3.1.3.4, 3.1.4	3.1-15 3.1-16 3.1-42		
	(5)		Identification of data gaps and uncertainty within the hydrogeologic conceptual model	3.1.4			
(c)			The hydrogeologic conceptual model shall be represented graphically by at least two scaled cross-sections that display the information required by this section and are sufficient to depict major stratigraphic and structural features in the basin.	3.1.3.1.1, 3.1.3.1.2, 3.1.4	3.1-17 3.1-18 3.1-19		
(d)			Physical characteristics of the basin shall be represented on one or more maps that depict the following:	Various (see below)			
	(1)		Topographic information derived from the U.S. Geological Survey or another reliable source.	3.1.1.1, 3.1.4	3.1-03 3.1-04		

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Article 5				Section Number(s)	Or Figure Numbers	Or Table Numbers	Or Appendices
	(2)		Surficial geology derived from a qualified map including the locations of cross-sections required by this Section.	3.1.2, 3.1.4	3.1-10a 3.1-10b 3.1-11 3.1-17		
	(3)		Soil characteristics as described by the appropriate Natural Resources Conservation Service soil survey or other applicable studies.	3.1.2, 3.1.4	3.1-12		
	(4)		Delineation of existing recharge areas that substantially contribute to the replenishment of the basin, potential recharge areas, and discharge areas, including significant active springs, seeps, and wetlands within or adjacent to the basin.	3.1.3, 3.1.3.2, 3.1.4	3.1-25		Appendix H Numerical Model
	(5)		Surface water bodies that are significant to the management of the basin.	3.1.1.2, 3.1.4	3.1-08	3.1-01	
	(6)		The source and point of delivery for imported water supplies.	3.1.1.3, 3.1.4			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10727.2, 10733, and 10733.2, Water Code.				
§ 354.16.			**Groundwater Conditions**	3.2			
			Each Plan shall provide a description of current and historical groundwater conditions in the basin, including data from January 1, 2015, to current conditions, based on the best available information that includes the following:	Various (see below)			
(a)			Groundwater elevation data demonstrating flow directions, lateral and vertical gradients, and regional pumping patterns, including:	Various (see below)			Appendix H Numerical Model
	(1)		Groundwater elevation contour maps depicting the groundwater table or potentiometric surface associated with the current seasonal high and seasonal low for each principal aquifer within the basin.	3.2.1.1	3.2-01 3.2-02 3.2-03 3.2-04		Appendix H Numerical Model
	(2)		Hydrographs depicting long-term groundwater elevations, historical highs and lows, and hydraulic gradients between principal aquifers.	3.2.1.2	3.2-05 3.2-06 3.2-07		
(b)			A graph depicting estimates of the change in groundwater in storage, based on data, demonstrating the annual and cumulative change in the volume of groundwater in storage between seasonal high groundwater conditions, including the annual groundwater use and water year type.	3.2.2	3.2-08		Appendix H Numerical Model
(c)			Seawater intrusion conditions in the basin, including maps and cross-sections of the seawater intrusion front for each principal aquifer.	3.2.3			
(d)			Groundwater quality issues that may affect the supply and beneficial uses of groundwater, including a description and map of the location of known groundwater contamination sites and plumes.	3.2.4	3.1-26 through 3.1-41 3.2-09	3.1-02	
(e)			The extent, cumulative total, and annual rate of land subsidence, including maps depicting total subsidence, utilizing data available from the Department, as specified in Section 353.2, or the best available information.	3.2.5			
(f)			Identification of interconnected surface water systems within the basin and an estimate of the quantity and timing of depletions of those systems, utilizing data available from the Department, as specified in Section 353.2, or the best available information.	3.2.6	3.2-10 through 3.2-13	3.2-01	Appendix H Numerical Model
(g)			Identification of groundwater dependent ecosystems within the basin, utilizing data available from the Department, as specified in Section 353.2, or the best available information.	3.2.7	3.2-14 3.2-15 3.2-16		
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10723.2, 10727.2, 10727.4, and 10733.2, Water Code.				
§ 354.18.			**Water Budget**	3.3			
(a)			Each Plan shall include a water budget for the basin that provides an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the basin, including historical, current and projected water budget conditions, and the change in the volume of water stored. Water budget information shall be reported in tabular and graphical form.	3.3		3.3-01	Appendix H Numerical Model
(b)			The water budget shall quantify the following, either through direct measurements or estimates based on data:	Various (see below)			
	(1)		Total surface water entering and leaving a basin by water source type.	3.3.1, 3.3.2, 3.3.3	3.1-08 3.3-01 3.3-04	3.3-05 3.3-11	Appendix H Numerical Model
	(2)		Inflow to the groundwater system by water source type, including subsurface groundwater inflow and infiltration of precipitation, applied water, and surface water systems, such as lakes, streams, rivers, canals, springs and conveyance systems.	3.3.1, 3.3.2, 3.3.3	3.1-25 3.3-02 3.3-07	3.3-06 3.3-14	Appendix H Numerical Model
	(3)		Outflows from the groundwater system by water use sector, including evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow.	3.3.1, 3.3.2, 3.3.3	3.3-02 3.3-07	3.3-06 3.3-14	Appendix H Numerical Model
	(4)		The change in the annual volume of groundwater in storage between seasonal high conditions.	3.3.1, 3.3.2, 3.3.3	3.2-08 3.3-03		
	(5)		If overdraft conditions occur, as defined in Bulletin 118, the water budget shall include a quantification of overdraft over a period of years during which water year and water supply conditions approximate average conditions.	3.3.4			
	(6)		The water year type associated with the annual supply, demand, and change in groundwater stored.	3.3.1, 3.3.2, 3.3.3	3.1-07 3.3-03	3.3-02 3.3-03	Appendix H Numerical Model
	(7)		An estimate of sustainable yield for the basin.	3.3.4			
(c)			Each Plan shall quantify the current, historical, and projected water budget for the basin as follows:	Various (see below)			
	(1)		Current water budget information shall quantify current inflows and outflows for the basin using the most recent hydrology, water supply, water demand, and land use information.	3.3.2	3.3-01 3.3-02	3.3-01 3.3-05 3.3-06	Appendix H Numerical Model

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Article 5				Section Number(s)	Or Figure Numbers	Or Table Numbers	Or Appendices
	(2)		Historical water budget information shall be used to evaluate availability or reliability of past surface water supply deliveries and aquifer response to water supply and demand trends relative to water year type. The historical water budget shall include the following:	3.3.1			
		(A)	A quantitative evaluation of the availability or reliability of historical surface water supply deliveries as a function of the historical planned versus actual annual surface water deliveries, by surface water source and water year type, and based on the most recent ten years of surface water supply information.	3.3.1.1		3.3-03 3.3-04	
		(B)	A quantitative assessment of the historical water budget, starting with the most recently available information and extending back a minimum of 10 years, or as is sufficient to calibrate and reduce the uncertainty of the tools and methods used to estimate and project future water budget information and future aquifer response to proposed sustainable groundwater management practices over the planning and implementation horizon.	3.3.1.2, 3.3.1.3	3.3-01 3.3-02 3.3-03	3.3-05 3.3-06	Appendix H Numerical Model
		(C)	A description of how historical conditions concerning hydrology, water demand, and surface water supply availability or reliability have impacted the ability of the Agency to operate the basin within sustainable yield. Basin hydrology may be characterized and evaluated using water year type.	3.3.1.4			
	(3)		Projected water budgets shall be used to estimate future baseline conditions of supply, demand, and aquifer response to Plan implementation, and to identify the uncertainties of these projected water budget components. The projected water budget shall utilize the following methodologies and assumptions to estimate future baseline conditions concerning hydrology, water demand and surface water supply availability or reliability over the planning and implementation horizon:	3.3.3, 3.3.3.3	3.3-04 through 3.3-09		Appendix H Numerical Model
		(A)	Projected hydrology shall utilize 50 years of historical precipitation, evapotranspiration, and streamflow information as the baseline condition for estimating future hydrology. The projected hydrology information shall also be applied as the baseline condition used to evaluate future scenarios of hydrologic uncertainty associated with projections of climate change and sea level rise.	3.3.3.1, 3.3.3.1.1			
		(B)	Projected water demand shall utilize the most recent land use, evapotranspiration, and crop coefficient information as the baseline condition for estimating future water demand. The projected water demand information shall also be applied as the baseline condition used to evaluate future scenarios of water demand uncertainty associated with projected changes in local land use planning, population growth, and climate.	3.3.3.2		3.3-07 3.3-08 3.3-09 3.3-10	
		(C)	Projected surface water supply shall utilize the most recent water supply information as the baseline condition for estimating future surface water supply. The projected surface water supply shall also be applied as the baseline condition used to evaluate future scenarios of surface water supply availability and reliability as a function of the historical surface water supply identified in Section 354.18(c)(2)(A), and the projected changes in local land use planning, population growth, and climate.	3.3.3.2		3.3-08 3.3-09 3.3-10	
(d)			The Agency shall utilize the following information provided, as available, by the Department pursuant to Section 353.2, or other data of comparable quality, to develop the water budget:	3.3.3.1			
	(1)		Historical water budget information for mean annual temperature, mean annual precipitation, water year type, and land use.	3.3.3.1			
	(2)		Current water budget information for temperature, water year type, evapotranspiration, and land use.	3.3.3.1			
	(3)		Projected water budget information for population, population growth, climate change, and sea level rise.	3.3.3.1		3.3-07	
(e)			Each Plan shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow. If a numerical groundwater and surface water model is not used to quantify and evaluate the projected water budget conditions and the potential impacts to beneficial uses and users of groundwater, the Plan shall identify and describe an equally effective method, tool, or analytical model to evaluate projected water budget conditions.	3.3, 3.3.3.1	3.3-01 through 3.3-09	3.3-01 3.3-05 3.3-06 3.3-11 through 3.3-16	Appendix H Numerical Model
(f)			The Department shall provide the California Central Valley Groundwater-Surface Water Simulation Model (C2VSIM) and the Integrated Water Flow Model (IWFM) for use by Agencies in developing the water budget. Each Agency may choose to use a different groundwater and surface water model, pursuant to Section 352.4.	3.3, 3.3.3.1			Appendix H Numerical Model
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10721, 10723.2, 10727.2, 10727.6, 10729, and 10733.2, Water Code.				
§ 354.20.			**Management Areas**	3.4			
(a)			Each Agency may define one or more management areas within a basin if the Agency has determined that creation of management areas will facilitate implementation of the Plan. Management areas may define different minimum thresholds and be operated to different measurable objectives than the basin at large, provided that undesirable results are defined consistently throughout the basin.	3.4			
(b)			A basin that includes one or more management areas shall describe the following in the Plan:	N/A			
	(1)		The reason for the creation of each management area.	N/A			
	(2)		The minimum thresholds and measurable objectives established for each management area, and an explanation of the rationale for selecting those values, if different from the basin at large.	N/A			
	(3)		The level of monitoring and analysis appropriate for each management area.	N/A			

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	(4)		An explanation of how the management area can operate under different minimum thresholds and measurable objectives without causing undesirable results outside the management area, if applicable.	N/A			
(c)			If a Plan includes one or more management areas, the Plan shall include descriptions, maps, and other information required by this Subarticle sufficient to describe conditions in those areas.	N/A			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10733.2 and 10733.4, Water Code.				
SubArticle 3.			**Sustainable Management Criteria**	4			
§ 354.22.			**Introduction to Sustainable Management Criteria**	4.1			
			This Subarticle describes criteria by which an Agency defines conditions in its Plan that constitute sustainable groundwater management for the basin, including the process by which the Agency shall characterize undesirable results, and establish minimum thresholds and measurable objectives for each applicable sustainability indicator.	4.1			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Section 10733.2, Water Code.				
§ 354.24.			**Sustainability Goal**	4.2			
			Each Agency shall establish in its Plan a sustainability goal for the basin that culminates in the absence of undesirable results within 20 years of the applicable statutory deadline. The Plan shall include a description of the sustainability goal, including information from the basin setting used to establish the sustainability goal, a discussion of the measures that will be implemented to ensure that the basin will be operated within its sustainable yield, and an explanation of how the sustainability goal is likely to be achieved within 20 years of Plan implementation and is likely to be maintained through the planning and implementation horizon.	4.2			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10721, 10727, 10727.2, 10733.2, and 10733.8, Water Code.				
§ 354.26.			**Undesirable Results**	Various (see below)			
(a)			Each Agency shall describe in its Plan the processes and criteria relied upon to define undesirable results applicable to the basin. Undesirable results occur when significant and unreasonable effects for any of the sustainability indicators are caused by groundwater conditions occurring throughout the basin.	4.3, 4.4.1, 4.5.1, 4.7.1, 4.9.1	4.4-01		
(b)			The description of undesirable results shall include the following:	Various (see below)			
	(1)		The cause of groundwater conditions occurring throughout the basin that would lead to or has led to undesirable results based on information described in the basin setting, and other data or models as appropriate.	4.4.1, 4.5.1, 4.7.1, 4.9.1			Appendix H Numerical Model Apendix I GW Quality With MTs and MOs Appendix L Pumping Impacts on GW Levels Appendix N Pumping Impacts on Streamflow Appendix O Riparian GDEs Appendix Q GW Levels MTs and MOs
	(2)		The criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.	4.4.1, 4.5.1, 4.7.1, 4.9.1	5.3-01		
	(3)		Potential effects on the beneficial uses and users of groundwater, on land uses and property interests, and other potential effects that may occur or are occurring from undesirable results.	4.4.1, 4.5.1, 4.7.1, 4.9.1			
(c)			The Agency may need to evaluate multiple minimum thresholds to determine whether an undesirable result is occurring in the basin. The determination that undesirable results are occurring may depend upon measurements from multiple monitoring sites, rather than a single monitoring site.	4.4.2.1.1, 4.52.1.1, 4.7.2.1.1, 4.9.2.1.1			
(d)			An Agency that is able to demonstrate that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin shall not be required to establish criteria for undesirable results related to those sustainability indicators.	4.4.1, 4.5.1, 4.7.1, 4.9.1			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10721, 10723.2, 10727.2, 10733.2, and 10733.8, Water Code.				
§ 354.28.			**Minimum Thresholds**	Various (see below)			
(a)			Each Agency in its Plan shall establish minimum thresholds that quantify groundwater conditions for each applicable sustainability indicator at each monitoring site or representative monitoring site established pursuant to Section 354.36. The numeric value used to define minimum thresholds shall represent a point in the basin that, if exceeded, may cause undesirable results as described in Section 354.26.	4.4.2.1, 4.5.2.1, 4.7.2.1, 4.9.2.1	4.9-01 4.9-03 4.9-04	4.4-01 4.7-01 4.9-04 4.9-05	Appendix Q GW Levels MTs and MOs Appendix I GW Quality MTs and MOs
(b)			The description of minimum thresholds shall include the following:	Various (see below)			
	(1)		The information and criteria relied upon to establish and justify the minimum thresholds for each sustainability indicator. The justification for the minimum threshold shall be supported by information provided in the basin setting, and other data or models as appropriate, and qualified by uncertainty in the understanding of the basin setting.	4.4.2.1, 4.5.2.1, 4.7.2.1, 4.9.2.1		4.4-01	Appendix Q GW Levels MTs and MOs

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	(2)		The relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability indicators.	4.4.2.3, 4.5.2.3, 4.7.2.3, 4.9.2.3			Appendix H Numerical Model Appendix L Pumping Impacts on GW Levels Appendix M Groundwater Storage Correlation Appendix N Pumping Impacts on Streamflow
	(3)		How minimum thresholds have been selected to avoid causing undesirable results in adjacent basins or affecting the ability of adjacent basins to achieve sustainability goals.	4.4.2.4, 4.5.2.4, 4.7.2.4, 4.9.2.4			
	(4)		How minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.	4.4.2.5, 4.5.2.5, 4.7.2.5, 4.9.2.5			
	(5)		How state, federal, or local standards relate to the relevant sustainability indicator. If the minimum threshold differs from other regulatory standards, the Agency shall explain the nature of and basis for the difference.	4.4.2.6, 4.5.2.6, 4.7.2.6, 4.9.2.6			
	(6)		How each minimum threshold will be quantitatively measured, consistent with the monitoring network requirements described in Subarticle 4.	4.4.2.7, 4.5.2.7, 4.7.2.7, 4.9.2.7			
(c)			Minimum thresholds for each sustainability indicator shall be defined as follows:	Various (see below)			
	(1)		Chronic Lowering of Groundwater Levels. The minimum threshold for chronic lowering of groundwater levels shall be the groundwater elevation indicating a depletion of supply at a given location that may lead to undesirable results. Minimum thresholds for chronic lowering of groundwater levels shall be supported by the following:	4.4.2.1			
		(A)	The rate of groundwater elevation decline based on historical trends, water year type, and projected water use in the basin.	4.4.2.1			Appendix Q GW Levels MTs and MOs
		(B)	Potential effects on other sustainability indicators.	4.4.2.6			
	(2)		Reduction of Groundwater Storage. The minimum threshold for reduction of groundwater storage shall be a total volume of groundwater that can be withdrawn from the basin without causing conditions that may lead to undesirable results. Minimum thresholds for reduction of groundwater storage shall be supported by the sustainable yield of the basin, calculated based on historical trends, water year type, and projected water use in the basin.	4.5.2.1	4.4-01	4.4-01	Appendix H Numerical Model Appendix Q GW Levels MTs and MOs
	(3)		Seawater Intrusion. The minimum threshold for seawater intrusion shall be defined by a chloride concentration isocontour for each principal aquifer where seawater intrusion may lead to undesirable results. Minimum thresholds for seawater intrusion shall be supported by the following:	N/A			
		(A)	Maps and cross-sections of the chloride concentration isocontour that defines the minimum threshold and measurable objective for each principal aquifer.	N/A			
		(B)	A description of how the seawater intrusion minimum threshold considers the effects of current and projected sea levels.	N/A			
	(4)		Degraded Water Quality. The minimum threshold for degraded water quality shall be the degradation of water quality, including the migration of contaminant plumes that impair water supplies or other indicator of water quality as determined by the Agency that may lead to undesirable results. The minimum threshold shall be based on the number of supply wells, a volume of water, or a location of an isocontour that exceeds concentrations of constituents determined by the Agency to be of concern for the basin. In setting minimum thresholds for degraded water quality, the Agency shall consider local, state, and federal water quality standards applicable to the basin.	4.7.2.1	5.6-01	4.7-01	Apendix I GW Quality With MTs and MOs
	(5)		Land Subsidence. The minimum threshold for land subsidence shall be the rate and extent of subsidence that substantially interferes with surface land uses and may lead to undesirable results. Minimum thresholds for land subsidence shall be supported by the following:	N/A			
		(A)	Identification of land uses and property interests that have been affected or are likely to be affected by land subsidence in the basin, including an explanation of how the Agency has determined and considered those uses and interests, and the Agency's rationale for establishing minimum thresholds in light of those effects.	N/A			
		(B)	Maps and graphs showing the extent and rate of land subsidence in the basin that defines the minimum threshold and measurable objectives.	N/A			
	(6)		Depletions of Interconnected Surface Water. The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results. The minimum threshold established for depletions of interconnected surface water shall be supported by the following:	4.9.2.1	4.9-01 4.9-03 4.9-04	4.9-01 4.9-02 4.9-04 4.9-05	Appendix H Numerical Model Appendix N Pumping Impacts on Streamflow
		(A)	The location, quantity, and timing of depletions of interconnected surface water.	4.9.2.1	4.9-04	4.9-01 4.9-02	
		(B)	A description of the groundwater and surface water model used to quantify surface water depletion. If a numerical groundwater and surface water model is not used to quantify surface water depletion, the Plan shall identify and describe an equally effective method, tool, or analytical model to accomplish the requirements of this Paragraph.	4.9.2.1			Appendix H Numerical Model Appendix N Pumping Impacts on Streamflow
(d)			An Agency may establish a representative minimum threshold for groundwater elevation to serve as the value for multiple sustainability indicators, where the Agency can demonstrate that the representative value is a reasonable proxy for multiple individual minimum thresholds as supported by adequate evidence.	4.4.2.1, 4.4.2.1.2, 4.5.2.1, 4.5.2.1.2, 4.7.2.1.2, 4.9.2.1.2		4.4-01	Appendix H Numerical Model Appendix Q GW Levels MTs and MOs
(e)			An Agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26, shall not be required to establish minimum thresholds related to those sustainability indicators.	4.4.2.1, 4.5.2.1, 4.7.2.2, 4.9.2.1			

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			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10723.2, 10727.2, 10733, 10733.2, and 10733.8, Water Code.				
§ 354.30.			**Measurable Objectives**	Various (see below)			
(a)			Each Agency shall establish measurable objectives, including interim milestones in increments of five years, to achieve the sustainability goal for the basin within 20 years of Plan implementation and to continue to sustainably manage the groundwater basin over the planning and implementation horizon.	4.4.3, 4.5.3, 4.7.3, 4.9.3		4.4-01 4.7-01	Appendix Q GW Levels MTs and MOs
(b)			Measurable objectives shall be established for each sustainability indicator, based on quantitative values using the same metrics and monitoring sites as are used to define the minimum thresholds.	4.4.3, 4.5.3, 4.7.3, 4.9.3	4.4-01	4.4-01 4.7-01 4.9-01 through 4.9-05	Apendix I GW Quality With MTs and MOs Appendix Q GW Levels MTs and MOs
(c)			Measurable objectives shall provide a reasonable margin of operational flexibility under adverse conditions which shall take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty.	4.4.3, 4.5.3, 4.7.3, 4.9.3	4.4-01	4.4-01 4.7-01 4.9-04 4.9-05	Apendix I GW Quality With MTs and MOs Appendix Q GW Levels MTs and MOs
(d)			An Agency may establish a representative measurable objective for groundwater elevation to serve as the value for multiple sustainability indicators where the Agency can demonstrate that the representative value is a reasonable proxy for multiple individual measurable objectives as supported by adequate evidence.	4.4.3, 4.5.3, 4.7.3, 4.9.3		4.4-01 4.7-01	Appendix Q GW Levels MTs and MOs
(e)			Each Plan shall describe a reasonable path to achieve the sustainability goal for the basin within 20 years of Plan implementation, including a description of interim milestones for each relevant sustainability indicator, using the same metric as the measurable objective, in increments of five years. The description shall explain how the Plan is likely to maintain sustainable groundwater management over the planning and implementation horizon.	4.4.3, 4.5.3, 4.7.3, 4.9.3		4.4-01 4.9-04	Appendix Q GW Levels MTs and MOs
(f)			Each Plan may include measurable objectives and interim milestones for additional Plan elements described in Water Code Section 10727.4 where the Agency determines such measures are appropriate for sustainable groundwater management in the basin.	4.10			
(g)			An Agency may establish measurable objectives that exceed the reasonable margin of operational flexibility for the purpose of improving overall conditions in the basin, but failure to achieve those objectives shall not be grounds for a finding of inadequacy of the Plan.	4.4.3, 4.5.3, 4.7.3, 4.9.3		4.7-01 4.9-05	Apendix I GW Quality With MTs and MOs Appendix Q GW Levels MTs and MOs
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10727.2, 10727.4, and 10733.2, Water Code.				
SubArticle 4.			**Monitoring Networks**	5			
§ 354.32.			**Introduction to Monitoring Networks**	5.1			
			This Subarticle describes the monitoring network that shall be developed for each basin, including monitoring objectives, monitoring protocols, and data reporting requirements. The monitoring network shall promote the collection of data of sufficient quality, frequency, and distribution to characterize groundwater and related surface water conditions in the basin and evaluate changing conditions that occur through implementation of the Plan.	5.1			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Section 10733.2, Water Code.				
§ 354.34.			**Monitoring Network**	5.2			
(a)			Each Agency shall develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate Plan implementation.	5.2			
(b)			Each Plan shall include a description of the monitoring network objectives for the basin, including an explanation of how the network will be developed and implemented to monitor groundwater and related surface conditions, and the interconnection of surface water and groundwater, with sufficient temporal frequency and spatial density to evaluate the affects and effectiveness of Plan implementation. The monitoring network objectives shall be implemented to accomplish the following:	5.2.1			
	(1)		Demonstrate progress toward achieving measurable objectives described in the Plan.	5.2.1			
	(2)		Monitor impacts to the beneficial uses or users of groundwater.	5.2.1			
	(3)		Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds.	5.2.1			
	(4)		Quantify annual changes in water budget components.	5.2.1			
(c)			Each monitoring network shall be designed to accomplish the following for each sustainability indicator:	Various (see below)			
	(1)		Chronic Lowering of Groundwater Levels. Demonstrate groundwater occurrence, flow directions, and hydraulic gradients between principal aquifers and surface water features by the following methods:	5.3.1			
		(A)	A sufficient density of monitoring wells to collect representative measurements through depth-discrete perforated intervals to characterize the groundwater table or potentiometric surface for each principal aquifer.	5.3.1	5.3-01	5.3-01	
		(B)	Static groundwater elevation measurements shall be collected at least two times per year, to represent seasonal low and seasonal high groundwater conditions.	5.3.1		5.3-01	
	(2)		Reduction of Groundwater Storage. Provide an estimate of the change in annual groundwater in storage.	5.4.1			Appendix H Numerical Model Appendix M Storage Correlation

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	(3)		Seawater Intrusion. Monitor seawater intrusion using chloride concentrations, or other measurements convertible to chloride concentrations, so that the current and projected rate and extent of seawater intrusion for each applicable principal aquifer may be calculated.	5.5			
	(4)		Degraded Water Quality. Collect sufficient spatial and temporal data from each applicable principal aquifer to determine groundwater quality trends for water quality indicators, as determined by the Agency, to address known water quality issues.	5.6.1	5.6-01	5.6-01	
	(5)		Land Subsidence. Identify the rate and extent of land subsidence, which may be measured by extensometers, surveying, remote sensing technology, or other appropriate method.	5.7			
	(6)		Depletions of Interconnected Surface Water. Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following:	5.8.1			
		(A)	Flow conditions including surface water discharge, surface water head, and baseflow contribution.	5.8.1			
		(B)	Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.	5.8.1			
		(C)	Temporal change in conditions due to variations in stream discharge and regional groundwater extraction.	5.8.1	5.8-01		
		(D)	Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water.	5.8.1			
(d)			The monitoring network shall be designed to ensure adequate coverage of sustainability indicators. If management areas are established, the quantity and density of monitoring sites in those areas shall be sufficient to evaluate conditions of the basin setting and sustainable management criteria specific to that area.	5.2.2			
(e)			A Plan may utilize site information and monitoring data from existing sources as part of the monitoring network.	5.3, 5.4, 5.5, 5.6, 5.7, 5.8			
(f)			The Agency shall determine the density of monitoring sites and frequency of measurements required to demonstrate short-term, seasonal, and long-term trends based upon the following factors:	5.2.3			
	(1)		Amount of current and projected groundwater use.	5.2.3			
	(2)		Aquifer characteristics, including confined or unconfined aquifer conditions, or other physical characteristics that affect groundwater flow.	5.2.3			
	(3)		Impacts to beneficial uses and users of groundwater and land uses and property interests affected by groundwater production, and adjacent basins that could affect the ability of that basin to meet the sustainability goal.	5.2.3			
	(4)		Whether the Agency has adequate long-term existing monitoring results or other technical information to demonstrate an understanding of aquifer response.	5.2.3			
(g)			Each Plan shall describe the following information about the monitoring network:	Various (see below)			
	(1)		Scientific rationale for the monitoring site selection process.	5.3.1, 5.4.1, 5.6.1, 5.8.1			
	(2)		Consistency with data and reporting standards described in Section 352.4. If a site is not consistent with those standards, the Plan shall explain the necessity of the site to the monitoring network, and how any variation from the standards will not affect the usefulness of the results obtained.	5.3.2, 5.4.2, 5.6.2, 5.8.2	5.3-01 5.6-01 5.8-01	5.3-01 5.6-01 5.8-01	
	(3)		For each sustainability indicator, the quantitative values for the minimum threshold, measurable objective, and interim milestones that will be measured at each monitoring site or representative monitoring sites established pursuant to Section 354.36.	4.4.2.1, 4.5.2.1, 5.3, 5.4, 5.6, 5.8		4.4-01 4.7-01 4.9-04 4.9-05	
(h)			The location and type of each monitoring site within the basin displayed on a map, and reported in tabular format, including information regarding the monitoring site type, frequency of measurement, and the purposes for which the monitoring site is being used.	5.3, 5.4, 5.6, 5.8	5.3-01 5.6-01 5.8-01		
(i)			The monitoring protocols developed by each Agency shall include a description of technical standards, data collection methods, and other procedures or protocols pursuant to Water Code Section 10727.2(f) for monitoring sites or other data collection facilities to ensure that the monitoring network utilizes comparable data and methodologies.	5.3.3, 5.4.3, 5.6.3, 5.8.3			Appendix R Data Collection Protocols Appendix S Data Quality Control
(j)			An Agency that has demonstrated that undesirable results related to one or more sustainability indicators are not present and are not likely to occur in a basin, as described in Section 354.26, shall not be required to establish a monitoring network related to those sustainability indicators.	5.3, 5.4, 5.5, 5.6, 5.7, 5.8			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10723.2, 10727.2, 10727.4, 10728, 10733, 10733.2, and 10733.8, Water Code				
§ 354.36.			**Representative Monitoring**	5.9			
			Each Agency may designate a subset of monitoring sites as representative of conditions in the basin or an area of the basin, as follows:	5.9			
(a)			Representative monitoring sites may be designated by the Agency as the point at which sustainability indicators are monitored, and for which quantitative values for minimum thresholds, measurable objectives, and interim milestones are defined.	5.9	5.3-01 5.6-01	5.3-01 5.6-01	
(b)			(b) Groundwater elevations may be used as a proxy for monitoring other sustainability indicators if the Agency demonstrates the following:	5.9			
	(1)		Significant correlation exists between groundwater elevations and the sustainability indicators for which groundwater elevation measurements serve as a proxy.	5.9			

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	(2)		Measurable objectives established for groundwater elevation shall include a reasonable margin of operational flexibility taking into consideration the basin setting to avoid undesirable results for the sustainability indicators for which groundwater elevation measurements serve as a proxy.	5.9			
(c)			The designation of a representative monitoring site shall be supported by adequate evidence demonstrating that the site reflects general conditions in the area.	5.9			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10727.2 and 10733.2, Water Code				
§ 354.38.			**Assessment and Improvement of Monitoring Network**				
(a)			Each Agency shall review the monitoring network and include an evaluation in the Plan and each five-year assessment, including a determination of uncertainty and whether there are data gaps that could affect the ability of the Plan to achieve the sustainability goal for the basin.	5.3.4, 5.4.4, 5.6.4, 5.8.4			
(b)			Each Agency shall identify data gaps wherever the basin does not contain a sufficient number of monitoring sites, does not monitor sites at a sufficient frequency, or utilizes monitoring sites that are unreliable, including those that do not satisfy minimum standards of the monitoring network adopted by the Agency.	5.3.4, 5.4.4, 5.6.4, 5.8.4	5.3-01 5.6-01 5.8-01	5.3-01 5.6-01 5.8-01	
(c)			If the monitoring network contains data gaps, the Plan shall include a description of the following:	5.3.4, 5.4.4, 5.6.4, 5.8.4			
	(1)		The location and reason for data gaps in the monitoring network.	5.3.4, 5.4.4, 5.6.4, 5.8.4	5.3-01 5.6-01 5.8-01	5.3-01 5.6-01 5.8-01	
	(2)		Local issues and circumstances that limit or prevent monitoring.	5.3.4, 5.4.4, 5.6.4, 5.8.4			
(d)			Each Agency shall describe steps that will be taken to fill data gaps before the next five-year assessment, including the location and purpose of newly added or installed monitoring sites.	5.3.4, 5.4.4, 5.6.4, 5.8.4			
(e)			Each Agency shall adjust the monitoring frequency and density of monitoring sites to provide an adequate level of detail about site-specific surface water and groundwater conditions and to assess the effectiveness of management actions under circumstances that include the following:	5.3.4, 5.4.4, 5.6.4, 5.8.4			
	(1)		Minimum threshold exceedances.	5.3.4, 5.4.4, 5.6.4, 5.8.4			
	(2)		Highly variable spatial or temporal conditions.	5.3.4, 5.4.4, 5.6.4, 5.8.4			
	(3)		Adverse impacts to beneficial uses and users of groundwater.	5.3.4, 5.4.4, 5.6.4, 5.8.4			
	(4)		The potential to adversely affect the ability of an adjacent basin to implement its Plan or impede achievement of sustainability goals in an adjacent basin.	5.3.4, 5.4.4, 5.6.4, 5.8.4			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10723.2, 10727.2, 10728.2, 10733, 10733.2, and 10733.8, Water Code				
§ 354.40.			**Reporting Monitoring Data to the Department**	5.10			
			Monitoring data shall be stored in the data management system developed pursuant to Section 352.6. A copy of the monitoring data shall be included in the Annual Report and submitted electronically on forms provided by the Department.	5.10			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10728, 10728.2, 10733.2, and 10733.8, Water Code.				
SubArticle 5.			**Projects and Management Actions**	6			
§ 354.42.			**Introduction to Projects and Management Actions**	6.1			
			This Subarticle describes the criteria for projects and management actions to be included in a Plan to meet the sustainability goal for the basin in a manner that can be maintained over the planning and implementation horizon.	6.1			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Section 10733.2, Water Code.				
§ 354.44.			**Projects and Management Actions**				
(a)			Each Plan shall include a description of the projects and management actions the Agency has determined will achieve the sustainability goal for the basin, including projects and management actions to respond to changing conditions in the basin.	6.1			
(b)			Each Plan shall include a description of the projects and management actions that include the following:	Various (see below)			
	(1)		A list of projects and management actions proposed in the Plan with a description of the measurable objective that is expected to benefit from the project or management action. The list shall include projects and management actions that may be utilized to meet interim milestones, the exceedance of minimum thresholds, or where undesirable results have occurred or are imminent. The Plan shall include the following:	6.2.1, 6.3.1, 6.4.1			
		(A)	A description of the circumstances under which projects or management actions shall be implemented, the criteria that would trigger implementation and termination of projects or management actions, and the process by which the Agency shall determine that conditions requiring the implementation of particular projects or management actions have occurred.	6.2.2, 6.3.2, 6.4.2			
		(B)	The process by which the Agency shall provide notice to the public and other agencies that the implementation of projects or management actions is being considered or has been implemented, including a description of the actions to be taken.	6.2.3, 6.3.3, 6.4.3			
	(2)		If overdraft conditions are identified through the analysis required by Section 354.18, the Plan shall describe projects or management actions, including a quantification of demand reduction or other methods, for the mitigation of overdraft.	6.1			

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	(3)		A summary of the permitting and regulatory process required for each project and management action.	6.2.4, 6.3.4, 6.4.4		6.1-01	
	(4)		The status of each project and management action, including a time-table for expected initiation and completion, and the accrual of expected benefits.	6.2.5, 6.3.5, 6.4.5		6.1-01	
	(5)		An explanation of the benefits that are expected to be realized from the project or management action, and how those benefits will be evaluated.	6.2.6, 6.3.6, 6.4.6			
	(6)		An explanation of how the project or management action will be accomplished. If the projects or management actions rely on water from outside the jurisdiction of the Agency, an explanation of the source and reliability of that water shall be included.	6.2.7, 6.3.7, 6.4.7			
	(7)		A description of the legal authority required for each project and management action, and the basis for that authority within the Agency.	6.2.8, 6.3.8, 6.4.8			
	(8)		A description of the estimated cost for each project and management action and a description of how the Agency plans to meet those costs.	6.2.9, 6.3.9, 6.4.9		6.1-01 7.1-01	
	(9)		A description of the management of groundwater extractions and recharge to ensure that chronic lowering of groundwater levels or depletion of supply during periods of drought is offset by increases in groundwater levels or storage during other periods.	6.1			
(c)			Projects and management actions shall be supported by best available information and best available science.	6.1			
(d)			An Agency shall take into account the level of uncertainty associated with the basin setting when developing projects or management actions.	6.1, 6.2, 6.3, 6.4			
			Note: Authority cited: Section 10733.2, Water Code.				
			Reference: Sections 10727.2, 10727.4, and 10733.2, Water Code.				

Appendix C

GSA Formation Pursuant to Water Code Section 10723.8

TENTATIVE FINAL

Upper Ventura River Groundwater Sustainability Agency Boundary

Upper Ventura River GROUNDWATER Sustainability Agency

OJAI VALLEY
4-02
4-002

VENTURA RIVER VALLEY
UPPER VENTURA RIVER
4-3.01
4-003.01

VENTURA RIVER VALLEY
LOWER VENTURA RIVER
4-3.02
4-003.02

Legend

- UVRGSA Boundary
- DWR Bulletin No. 118 Groundwater Basins
- cities

N W E S

0 0.5 1 2 Miles

BOARD OF DIRECTORS

UPPER VENTURA RIVER GROUNDWATER AGENCY

RESOLUTION NO. 2017-2

A RESOLUTION OF THE UPPER VENTURA RIVER GROUNDWATER AGENCY TO ELECT TO BECOME THE GROUNDWATER SUSTAINABILITY AGENCY FOR THE UPPER VENTURA RIVER BASIN PURSUANT TO THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT

WHEREAS, the California Legislature has adopted, and the Governor has signed into law, the Sustainable Groundwater Management Act of 2014 ("Act"), which authorizes local agencies to manage groundwater in a sustainable fashion; and

WHEREAS, the legislative intent of the Act is to provide for sustainable management of groundwater basins, to enhance local management of groundwater, to establish minimum standards for sustainable groundwater management, and to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater; and

WHEREAS, in order to exercise the authority granted in the Act, a local agency or combination of local agencies must elect to become a groundwater sustainability agency ("GSA"); and

WHEREAS, the Upper Ventura River Groundwater Agency ("Agency") is a local agency, as the Act defines that term; and

WHEREAS, the Agency exercises jurisdiction upon land overlying the entire Upper Ventura River Groundwater Basin (designated basin number 4-003.01 in the Department of Water Resources' ("DWR") most recent changes to Bulletin No. 118) ("Basin"); and

WHEREAS, the Agency is committed to sustainable management of the Basin's groundwater resources; and

WHEREAS, the Act requires that a GSA be formed for all basins designated by DWR as a medium- or high-priority basins by June 30, 2017; and

WHEREAS, the Basin is designated as a medium-priority basin pursuant to the DWR's initial prioritization; and

WHEREAS, it is the intent of the Agency to work cooperatively with other local GSAs and stakeholders, as may be appropriate, to sustainably manage to Basin and ensure that the Act's goals are satisfied; and

WHEREAS, notice of a hearing on the Agency's election to become a GSA for the ("Notice") has been published in the Ventura County Star and the Ojai Valley News as provided by law; and

WHEREAS, on this day, the Agency held a public hearing to consider whether it should elect to become a GSA for the Basin; and

WHEREAS, it would be in the best interest of the Basin for the Agency to become a GSA for the Basin, and to begin the process of preparing a groundwater sustainability plan ("Sustainability Plan"); and

WHEREAS, the Agency's process to develop of the Sustainability Plan for the Basin will include stakeholder outreach and will provide multiple opportunities for public involvement; and

WHEREAS, adoption of this resolution does not constitute a "project" under California Environmental Quality Act Guidelines Section 15378(b)(5), including organization and administrative activities of government, because there would be no direct or indirect physical change in the environment.

THEREFORE, BE IT RESOLVED by the Board of Directors of the Upper Ventura River Groundwater Agency, as follows:

1. All the recitals in this resolution are true and correct and the Agency so finds, determines and represents.

2. The Agency hereby elects to become the GSA for the Basin.

3. Within thirty days of the date of this resolution, the Agency's interim Executive Director is directed to provide notice to DWR of the Agency's election to be the GSA for the Basin ("Notice of GSA Election") in the manner required by law.

4. One of the elements of the Notice of GSA Election is the boundary the Agency intends to manage as the GSA for the Basin. Until further action of the Agency, the boundaries of the GSA shall be the external boundary of the Basin, the entirety of which currently falls within the Agency's jurisdiction.

5. Upon submission of the Notice of GSA Election, the Agency's Board of Director's shall begin discussions with interested stakeholders and beneficial users within the Basin in order to begin the process of developing a Sustainability Plan for the Basin.

6. The Agency's acting Executive Director is designated as the point-of-contact and is directed to report back to the Agency's Board of Directors at least quarterly on the progress toward developing the Sustainability Plan.

7. This resolution shall take effect immediately upon passage and adoption.

WE, THE UNDERSIGNED, do hereby certify that the above and foregoing Resolution No. 2017-2 was duly adopted and passed by the Board of Directors of the Upper Ventura River Groundwater Agency at a meeting held on the 9th day of March, 2017, by the following vote:

AYES:
NOES:
ABSENT:

Bruce Kuebler, Board Chair
Upper Ventura River Groundwater Agency

ATTEST:

Jennifer Tribo, Interim Executive Director

Certificate of Publication

Ad #1494343

In Matter of Publication of:

Public Notice

State of California)
))§
County of Ventura)

I, **Maria Rodriguez**, hereby certify that the **Ventura County Star Newspaper** has been adjudged a newspaper of general circulation by the Superior Court of California, County of Ventura within the provisions of the Government Code of the State of California, printed in the City of Camarillo, for circulation in the County of Ventura, State of California; that I am a clerk of the printer of said paper; that the annexed clipping is a true printed copy and publishing in said newspaper on the following dates to wit:

Feb. 22, March 01, 2017

I, Maria Rodriguez certify under penalty of perjury, that the foregoing is true and correct.

Dated this March 01, 2017; in Camarillo, California, County of Ventura.

Maria Rodriguez
(Signature)

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that a Public Hearing of the Upper Ventura River Groundwater Agency Board of Directors will be held:

--Thursday, March 9, 2017 at 6:30pm--
UPPER VENTURA RIVER GROUNDWATER AGENCY
Oak View Community Center
18 Valley Road, Oak View, California 93022

The purpose of this Public Hearing is to accept public comment regarding the Upper Ventura River Groundwater Agency's ("Agency") election to become the designated Groundwater Sustainability Agency ("GSA") pursuant to the Sustainable Groundwater Management Act ("SGMA") for the Upper Ventura River Groundwater Basin ("Basin"). Under SGMA, a local agency is required to elect to become a GSA for the Basin by June 30, 2017. Failure to comply with this deadline subjects the Basin to state intervention under SGMA. Once a GSA is formed for the Basin, the GSA will begin holding public meetings to discuss development of a Groundwater Sustainability Plan. Additional information can be found at: http://www.uvrgroundwater.org/ and by contacting pbkuebler@sbcglobal.net or 805-649-3050.

Bruce Kuebler
Chair, Upper Ventura River Groundwater Agency

UPPER VENTURA RIVER GROUNDWATER AGENCY BOARD OF DIRECTORS

Publish: February 22, 2017 and March 1, 2017 Ad No. 1494343

PROOF OF PUBLICATION
(SECTION 2015.5 CCP)

STATE OF CALIFORNIA
COUNTY OF VENTURA
I am a citizen of the United States and a resident of the aforesaid County; I am over the age of eighteen, and not interested in the above entitled matter. I am now, and at all times embraced in the publication herein mentioned, was a principal clerk of the printers and publishers of THE OJAI VALLEY NEWS, a newspaper of general circulation, printed and published every Friday at Ojai in the above-named County and State; that the Legal Advertisement

Public Hearing

of which the annexed clipping is a true printed copy, was published in the above-named newspaper, and not in any supplement thereof, on the following dates, to-wit:

Feb. 24 & March 3

that said newspaper was duly and regularly ascertained and established newspaper of general circulation by Decree entered in the Superior Court of the County of Ventura, State of California, on February 14, 1958, under the provision of Chapter 1, Division 7, Title 1 of the California Code of the State of California. I certify (or declare) under penalty of perjury that the foregoing is true and correct.

Linda Griffin
Ojai Valley News

Linda Griffin

Dated this 3rd Day of March
2017 at Ojai Valley News, Ventura County, California

OVN02-19-2017
Published Ojai Valley News
February 24 & March 3, 2017
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Bruce Kuebler
Chair, Upper Ventura River Groundwater Agency
UPPER VENTURA RIVER GROUNDWATER AGENCY
BOARD OF DIRECTORS

JOINT EXERCISE OF POWERS AGREEMENT

by and among

THE CASITAS MUNICIPAL WATER DISTRICT

THE CITY OF SAN BUENAVENTURA

THE COUNTY OF VENTURA

THE MEINERS OAKS WATER DISTRICT

and

THE VENTURA RIVER WATER DISTRICT

creating

THE UPPER VENTURA RIVER GROUNDWATER AGENCY

DECEMBER 2016

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JOINT EXERCISE OF POWERS AGREEMENT
THE UPPER VENTURA RIVER GROUNDWATER AGENCY

This **Joint Exercise of Powers Agreement ("Agreement")** is made and effective on the last date executed ("**Effective Date**"), by and among the Casitas Municipal Water District, the City of San Buenaventura, the County of Ventura, the Meiners Oaks Water District, and the Ventura River Water District, sometimes referred to herein individually as a "**Member**" and collectively as the "**Members,**" for purposes of forming the Upper Ventura River Groundwater Agency ("**Agency**") and setting forth the terms pursuant to which the Agency shall operate. Capitalized defined terms used herein shall have the meanings given to them in Article 1 of this Agreement.

RECITALS

A. Each of the Members is a local agency, as defined by the Sustainable Groundwater Management Act of 2014 ("**SGMA**"), duly organized and existing under and by virtue of the laws of the State of California, and each Member can exercise powers related to groundwater management.

B. For groundwater basins designated by the Department of Water Resources ("**DWR**") as medium- and high-priority but that have not been designated by DWR as subject to critical conditions of overdraft, SGMA requires establishment of a groundwater sustainability agency ("**GSA**") by June 30, 2017, and adoption of a groundwater sustainability plan ("**GSP**") by January 31, 2022.

C. The Upper Ventura River Basin (designated basin number 4-3.01 in the DWR's Bulletin No. 118) ("**Basin**") is designated as a medium-priority sub-basin.

D. Under SGMA, a combination of local agencies may form a GSA through a joint exercise of powers agreement.

E. The Members have determined that the sustainable management of the Basin pursuant to SGMA may best be achieved through the cooperation of the Members operating through a joint powers authority.

F. The Joint Exercise of Powers Act of 2000 ("**Act**") authorizes the Members to create a joint powers authority, and to jointly exercise any power common to the Members and to exercise additional powers granted under the Act.

G. The Act, including the Marks-Roos Local Bond Pooling Act of 1985 (Government Code sections 6584, *et seq.*), authorizes an entity created pursuant to the Act to issue bonds, and under certain circumstances, to purchase bonds issued by, or to make loans to, the Members for financing public capital improvements, working capital, liability and other insurance needs or projects whenever doing so would result in significant public benefits, as determined by the Members. The Act further authorizes and empowers a joint powers authority to sell bonds so issued or purchased to public or private purchasers at public or negotiated sales.

H. Based on the foregoing legal authority, the Members desire to create a joint powers authority for the purpose of taking all actions deemed necessary by the joint powers authority to ensure sustainable management of the Basin as required by SGMA.

I. The governing board of each Member has determined it to be in the Member's best interest and in the public interest that this Agreement be executed.

TERMS OF AGREEMENT

In consideration of the mutual promises and covenants herein contained, the Members agree as follows:

ARTICLE 1
DEFINITIONS

The following terms have the following meanings for purposes of this Agreement:

1.1 "Act" means the Joint Exercise of Powers Act, set forth in Chapter 5 of Division 7 of Title 1 of the Government Code, sections 6500, *et seq.*, including all laws supplemental thereto.

1.2 "Agreement" has the meaning assigned thereto in the Preamble.

1.3 "Auditor" means the auditor of the financial affairs of the Agency appointed by the Board of Directors pursuant to Section 13.3 of this Agreement.

1.4 "Agency" has the meaning assigned thereto in the Preamble.

1.5 "Basin" has the meaning assigned thereto in Recital C.

1.6 "Board of Directors" or "Board" means the governing body of the Agency as established by Article 6 of this Agreement.

1.7 "Bylaws" means the bylaws adopted by the Board of Directors pursuant to Article 11 of this Agreement to govern the day-to-day operations of the Agency.

1.8 "Director" and "Alternate Director" shall mean a director or alternate director appointed by a Member pursuant to Article 6 of this Agreement.

1.9 "DWR" has the meaning assigned thereto in Recital B.

1.10 "Effective Date" has the meaning assigned thereto in the Preamble.

1.11 "Executive Director" means the chief administrative officer of the Agency to be appointed by the Board of Directors pursuant to Article 10 of this Agreement.

1.12 "Farm Bureau" means the Farm Bureau of Ventura County.

1.13 "GSA" has the meaning assigned thereto in Recital B.

1.14 "GSP" has the meaning assigned thereto in Recital B.

1.15 "Member" has the meaning assigned thereto in the Preamble and further means each party to this Agreement that satisfies the requirements of Section 5.1 of this Agreement, including any new members as may be authorized by the Board, pursuant to Section 5.2 of this Agreement.

1.16 "Member Director" means a Director appointed pursuant to Article 6 of this Agreement that represents a Member.

1.17 "Officer(s)" means the chair, vice chair, secretary, or treasurer of the Agency to be appointed by the Board of Directors pursuant to Section 7.1 of this Agreement.

1.18 "Quorum" shall have the meaning assigned to it in Section 9.1.

1.19 "SGMA" has the meaning assigned thereto in Recital A.

1.20 "Special Projects" shall mean a project undertaken pursuant to Article 17.

1.21 "Stakeholder Director" means a Director appointed pursuant to Article 6 that represents stakeholder interests.

1.22 "State" means the State of California.

1.23 "Supermajority" shall mean the following:

1.23.1 If either six (6) or seven (7) Directors are in attendance and eligible to vote, a supermajority shall mean six (6) affirmative votes.

1.23.2 If only six (6) Directors are in attendance and one (1) of those six (6) Directors is prevented from voting due to a conflict of interest, a supermajority vote shall mean five (5) affirmative votes.

1.23.3 If only six (6) Directors are in attendance and two (2) of those six (6) Directors are prevented from voting due to a conflict of interest, a supermajority shall mean four (4) affirmative votes, provided that all four (4) affirmative votes are by Member Directors.

1.23.4 If fewer than six (6) Directors are in attendance at the meeting, a matter subject to a supermajority vote pursuant to Section 9.3 shall not be called for a vote.

ARTICLE 2
CREATION OF THE AGENCY

2.1 Creation of the Agency. There is hereby created pursuant to the Act a joint

powers authority, which will be a public entity separate from the Members to this Agreement and shall be known as the Upper Ventura River Groundwater Agency ("**Agency**"). Within thirty (30) days after the Effective Date of this Agreement and after any amendment to this Agreement, the Agency shall cause a notice of this Agreement or amendment to be prepared and filed with the office of the California Secretary of State containing the information required by Government Code section 6503.5. Within seventy (70) days after the Effective Date of this Agreement, the Agency shall cause a statement of the information concerning the Agency, required by Government Code section 53051, to be filed with the office of the California Secretary of State and with the Clerk for the County of Ventura, setting forth the facts required to be stated pursuant to Government Code section 53051(a).

2.2 Purpose of the Agency. Each Member to this Agreement has in common the power to study, plan, develop, finance, acquire, construct, maintain, repair, manage, operate, control, and govern water supply projects and exercise groundwater management authority within the Basin either alone or in cooperation with other public or private non-member entities, and each is a local agency eligible to serve as the GSA in the Basin, either alone or jointly through a joint powers agreement as provided for by SGMA. This Agreement is being entered into in order to jointly exercise some or all of the foregoing common powers, as appropriate, and for the exercise of such additional powers as may be authorized by law in the manner herein set forth, in order to effectuate the purposes of this Agreement. The purpose of the Agency is to serve as the GSA for the Basin and to develop, adopt, and implement the GSP for the Basin pursuant to SGMA and other applicable provisions of law.

ARTICLE 3
TERM

This Agreement shall become effective upon its execution by each of the Members and shall remain in effect until terminated pursuant to the provisions of Article 16 of this Agreement.

ARTICLE 4
POWERS

The Agency shall possess the power in its own name to exercise any and all common powers of its Members reasonably related to the purposes of the Agency, including but not limited to the powers set forth below. For purposes of Government Code section 6509, and unless the Agency has adopted applicable rules, regulations, policies, bylaws and procedures, the powers of the Agency shall be exercised subject to the restrictions upon the manner of exercising such powers as are imposed on the County of Ventura, and in the event of the withdrawal of the County of Ventura as a Member under this Agreement, then the powers of the Agency shall be exercised subject to the restrictions upon the manner of exercising such powers as are imposed on the City of San Buenaventura.

4.1. To exercise all powers afforded to the Agency under SGMA, including without limitation:

4.1.1 To adopt rules, regulations, policies, bylaws and procedures governing the operation of the Agency.

4.1.2 To develop, adopt and implement a GSP for the Basin, and to exercise jointly the common powers of the Members in doing so.

4.1.3 To obtain rights, permits and other authorizations for, or pertaining to, implementation of a GSP for the Basin.

4.1.4 To collect and monitor data on the extraction of groundwater from, and the quality of groundwater in, the Basin.

4.1.5 To acquire property and other assets by grant, lease, purchase, bequest, devise, gift, or eminent domain, and to hold, enjoy, lease or sell, or otherwise dispose of, property, including real property, water rights, and personal property, necessary for the full exercise of the Agency's powers.

4.1.6 To establish and administer a conjunctive use program for the purposes of maintaining sustainable yields in the Basin consistent with the requirements of SGMA.

4.1.7 To exchange and distribute water.

4.1.8 To regulate groundwater extractions as permitted by SGMA.

4.1.9 To spread, sink and inject water into the Basin.

4.1.10 To store, transport, recapture, recycle, purify, treat or otherwise manage and control water for beneficial use.

4.1.11 To develop and facilitate market-based solutions for the use and management of water rights.

4.1.12 To impose assessments, groundwater extraction fees or other charges, and to undertake other means of financing the Agency as authorized by Chapter 8 of SGMA, commencing at section 10730 of the Water Code.

4.1.13 To perform other ancillary tasks relating to the operation of the Agency pursuant to SGMA, including without limitation, environmental review, engineering, and design.

4.2 To apply for, accept and receive licenses, permits, water rights, approvals, agreements, grants, loans, contributions, donations or other aid from any agency of the United States, the State of California or other public agencies or private persons or entities necessary for the Agency's purposes.

4.3 To develop, collect, provide, and disseminate information that furthers the purposes of the Agency.

4.4 To make and enter contracts necessary to the full exercise of the Agency's power.

4.5 To employ, designate, or otherwise contract for the services of, agents, officers, employees, attorneys, engineers, planners, financial consultants, technical specialists, advisors, and independent contractors.

4.6 To incur debts, liabilities or obligations, to issue bonds, notes, certificates of participation, guarantees, equipment leases, reimbursement obligations and other indebtedness, as authorized by the Act.

4.7 To cooperate, act in conjunction and contract with the United States, the State of California, or any agency thereof, counties, municipalities, public and private corporations of any kind (including without limitation, investor-owned utilities), and individuals, or any of them, for any and all purposes necessary or convenient for the full exercise of the powers of the Agency.

4.8 To sue and be sued in the Agency's own name.

4.9. To provide for the prosecution of, defense of, or other participation in, actions or proceedings at law or in public hearings in which the Members, pursuant to this Agreement, have an interest and employ counsel and other expert assistance for these purposes.

4.10. To accumulate operating and reserve funds for the purposes herein stated.

4.11. To invest money that is not required for the immediate necessities of the Agency, as the Agency determines is advisable, in the same manner and upon the same conditions as Members, pursuant to Government Code section 53601, as that section now exists or may hereafter be amended.

4.12. To undertake any investigations, studies, and matters of general administration.

4.13. To undertake Special Projects, as set forth in Article 17.

4.14. To perform all other acts necessary or proper to carry out fully the purposes of this Agreement.

ARTICLE 5
MEMBERSHIP

5.1 Members. The Members of the Agency shall be the Casitas Municipal Water District, the City of San Buenaventura, the County of Ventura, the Meiners Oaks Water District, and the Ventura River Water District, as long as they have not, pursuant to the provisions hereof, withdrawn from this Agreement.

5.2 New Members. It is recognized that a public agency that is not a Member on the Effective Date of this Agreement may wish to participate in the Agency. Additional public agencies or mutual water companies may become members of the Agency upon such terms and conditions as established by the Board of Directors and upon the unanimous consent of the existing Members, evidenced by the execution of a written amendment to this Agreement signed by all of the Members, including the additional public agency or mutual water company. The addition of new Members shall not affect any rights of existing Members without the consent of all affected Members.

ARTICLE 6
BOARD OF DIRECTORS AND OFFICERS

6.1 Formation of the Board of Directors. The Agency shall be governed by a Board of Directors ("**Board of Directors**" or "**Board**"). The Board shall be composed of seven (7) Directors consisting of the following representatives, who shall be appointed in the manner set forth in Section 6.3:

6.1.1 Five (5) Member Directors, with one (1) Member Director appointed by the governing board of each Member.

6.1.2 Two (2) Stakeholder Directors, one of which shall be representative of agricultural stakeholders and interests within the Basin and one of which shall be representative of environmental stakeholders and interests within the Basin. The two (2) Stakeholder Directors shall meet the following qualifications:

(a) Agricultural Stakeholder Director. The Agricultural Stakeholder Director shall meet one or more of the following three criteria, determined at the sole discretion of the Member Directors: (i) own and operate an agricultural business with its principal operations on land overlying the Basin; (ii) own or lease property overlying the Basin and extract groundwater from the Basin for the irrigation of at least two (2) acres of crops in commercial operation; or (iii) be a representative of an agricultural organization currently active within the Members' service area boundaries.

(b) Environmental Stakeholder Director. The Environmental Stakeholder Director shall be an active member of a nonprofit, 501(c)(3) organization which, at the sole discretion of the Member Directors, meets the following requirements: (i) is currently active within Ventura County; (ii) has an adopted budget; and (iii) has a mission that advances, or is furthered by, groundwater sustainability.

6.2 Duties of the Board of Directors. The business and affairs of the Agency, and all of the powers of the Agency, including without limitation all powers set forth in Article 4, are reserved to and shall be exercised by and through the Board of Directors, except as may be expressly delegated to the Executive Director or others pursuant to this Agreement, Bylaws, or by specific action of the Board of Directors.

6.3 Appointment of Directors. The Directors shall be appointed as follows:

6.3.1 One (1) Member Director from the Casitas Municipal Water District shall be appointed by resolution of the Casitas Municipal Water District Board of Directors.

6.3.2 One (1) Member Director from the City of San Buenaventura shall be appointed by resolution of the City of San Buenaventura City Council.

6.3.3 One (1) Member Director from the County of Ventura shall be appointed by resolution of the County of Ventura Board of Supervisors.

6.3.4 One (1) Member Director from the Meiners Oaks Water District shall be appointed by resolution of the Meiners Oaks Water District Board of Directors.

6.3.5 One (1) Member Director from the Ventura River Water District shall be appointed by resolution of the Ventura River Water District Board of Directors.

6.3.6 The two (2) Stakeholder Directors shall be appointed as follows:

(a) Agricultural Stakeholder Director: The Member Directors shall select the Agricultural Stakeholder Director from a list of three (3) qualified nominees submitted by the Farm Bureau of Ventura County ("**Farm Bureau**"). The Farm Bureau shall submit its nominees to the Member Directors pursuant to a process determined by the Member Directors. The Member Directors shall consider the nominees at a regular meeting and at that meeting shall appoint the Agricultural Stakeholder Director upon a vote of all Member Directors.

(b) Environmental Stakeholder Director. The Member Directors shall select the Environmental Stakeholder Director from qualified nominees submitted by environmental nonprofit, 501(c)(3) organizations meeting the criteria specified in Section 6.1.2(b). The nominations shall be submitted to the Member Directors pursuant to a process determined by the Member Directors. The Member Directors shall consider the nominees at a regular meeting and shall appoint the Environmental Stakeholder Director upon a vote of all Member Directors.

6.4 Alternate Directors. Each Member may also appoint one Alternate Director to the Board of Directors. A Stakeholder Director shall not have an Alternate Director. All Alternate Directors shall be appointed in the same manner as set forth in Section 6.3. Unless appearing as a substitute for a Member Director due to absence or conflict of interest, Alternate Directors shall have no vote, and shall not participate in any discussions or deliberations of the Board. If the Director is not present, or if the Director has a conflict of interest which precludes participation by the Director in any decision-making process of the Board, the Alternate Director appointed to act in his/her place shall assume all rights of the Director, and shall have the authority to act in his/her absence, including casting votes on matters before the Board. Each Alternate Director shall be appointed prior to the third meeting of the Board. Alternate Directors are encouraged to attend all Board meetings and stay informed on current issues before the Board.

6.5 Term, Reappointment, and Removal. Directors and Alternate Directors shall serve for terms of two (2) years, provided that for the purpose of establishing staggered terms among the Directors and Alternate Directors, three (3) of the Member Directors and their respective Alternate Directors shall serve an initial term of three (3) years. The Member Directors and Alternative Directors that will serve an initial term of three (3) years shall be determined by resolution of the Board of Directors at its first meeting. A Member Director or Alternate Director may be removed during his or her term or reappointed for multiple terms at the pleasure of the Member that appointed him or her. A Member Director or Alternate Director shall be either a member of the appointing agency's staff or governing board and shall cease to be a Member Director or Alternate Director when no longer a member of the appointing agency's staff or governing board. A Stakeholder Director may be removed or reappointed by a vote of all Member Directors.

6.6 Vacancies. A vacancy on the Board of Directors shall occur when a Director resigns or reaches the end of that Director's term, as set forth in Section 6.5. For Member Directors, a vacancy shall also occur when he or she is removed by his or her appointing Member. For Stakeholder Directors, a vacancy shall also occur when the Stakeholder Director is removed, as set forth in Section 6.5. Upon the vacancy of a Member Director, the Alternate Director shall serve as Director until a new Director is appointed as set forth in Section 6.3 unless the Alternate Director is already serving as an Alternate Director in the event of a prior vacancy, in which case, the seat shall remain vacant until a replacement Director is appointed as set forth in Section 6.3. Members shall submit any changes in Director or Alternate Director positions to the Executive Director by written notice signed by an authorized representative of the Member. The written notice shall include a resolution of the governing board of the Member directing such change in the Director or Alternative Director position.

6.7 Conflicts of Interest. No Director shall be allowed to participate in any matter before the Board in which he or she has a conflict of interest. A Member Director is deemed to have a conflict of interest and disqualified from participating in related matters before the Board if that Member Director (i) is personally, or (ii) was appointed by a Member that is named as an adverse party in any litigation in which the Agency is a party. A Stakeholder Director is deemed to have a conflict of interest and disqualified from participating in related matters before the Board if that Stakeholder Director (i) is personally, (ii) was nominated by, (iii) is employed by, or (iv) acts as a manager or executive director to, or sits on the board of, an entity that is named as an adverse party in litigation in which the Agency is a party. In such an event, the Director shall be deemed disqualified in all matters related to the issue being litigated, shall not be eligible to receive confidential information relating to the litigation from the Agency or its legal counsel, and shall not be eligible to attend any closed session where the litigation is discussed. In the event a Director deemed to have conflict of interest refuses to withdraw from matters related to the conflict, the other Directors shall jointly seek a court order preventing the conflicted Director from participating in those related matters.

ARTICLE 7
OFFICERS

7.1 Officers. The officers of the Agency shall be a chair, vice chair, secretary selected from among the Member Directors. The Agency shall also appoint a treasurer consistent with the provisions of Section 13.3. The vice chair, or in the vice chair's absence, the secretary, shall exercise all powers of the chair in the chair's absence or inability to act.

7.2 Appointment of Officers. Officers shall be elected by, and serve at the pleasure of, the Board of Directors, in accordance with the Bylaws.

7.3 Principal Office. The principal office of the Agency shall be established by the Board of Directors, and may thereafter be changed by a vote of the Board.

ARTICLE 8
DIRECTOR MEETINGS

8.1 Initial Meeting. The initial meeting of the Board of Directors shall be held in the County of Ventura, California, within thirty (30) days of the Effective Date of this Agreement.

8.2 Time and Place. The Board of Directors shall meet at least quarterly, at a date, time and place set by the Board, within the jurisdictional boundaries of one or more of the Members, and at such times as may be determined by the Board.

8.3 Special Meetings. Special meetings of the Board of Directors may be called by the Chair or by a vote of the Directors in accordance with the provisions of Government Code section 54956.

8.4 Conduct. All meetings of the Board of Directors, including special meetings, shall be noticed, held, and conducted in accordance with the Ralph M. Brown Act (Government Code sections 54950, *et seq*.). The Board may use teleconferencing in connection with any meeting in conformance with and to the extent authorized by applicable law.

8.5 Local Conflict of Interest Code. The Board of Directors shall adopt a local conflict of interest code pursuant to the provisions of the Political Reform Act of 1974 (Government Code sections 81000, *et seq*.) within six (6) months following the appointment of both Stakeholder Directors.

ARTICLE 9
MEMBER VOTING

9.1 Quorum. A quorum of any meeting of the Board of Directors shall consist of a majority of the total number of Directors plus one Director ("**Quorum**"). In the absence of a quorum, any meeting of the Directors may be adjourned by a vote of the Directors present, but no other business may be transacted at the meeting. For purposes of this Article, a Director shall be deemed present if the Director appears at the meeting in person or participates telephonically, provided the telephone appearance is consistent with the requirements of the Ralph M. Brown Act.

9.2 Director Votes. Voting by the Board of Directors shall be made on the basis of one vote for each Director. A Director, or an Alternate Director when acting in the absence of his or her Director, may vote on all matters of Agency business unless disqualified because of a conflict of interest pursuant to California law or the local conflict of interest code adopted by the Board of Directors.

9.3 Affirmative Decisions of the Board of Directors. The structure of voting and the determination of affirmative decisions of the Board of Directors, as set forth herein, are designed to encourage and facilitate consensus, pursuant to the following procedure:

9.3.1 First Reading. A matter may be approved on the first reading of the matter pursuant to a unanimous vote of all Directors.

9.3.2 Second Reading. If unanimity is not obtained on the first reading of a matter, the Board shall continue a final vote on the matter for a second reading. The second reading shall occur at the next regular meeting of the Board, unless the Board votes to continue the second reading of the matter to another regular or special meeting of the Board.

(a) Matters Requiring Supermajority Vote on Second Reading. Decisions concerning the following matters shall require a supermajority vote in order to pass on the second reading: (i) any capital expenditure of $50,000 or more; (ii) the Agency's annual budget and amendments thereto; (iii) the GSP for the Basin or any amendments thereto; (iv) the Agency's adoption of groundwater extraction fees; (v) the Agency's adoption of any taxes, fees, or assessments subject to Proposition 218; (vi) the issuance of assessments for contributions by Members pursuant to Section 14.2; or (vii) any stipulation to resolve litigation concerning groundwater rights within, or groundwater management for, the Basin. A supermajority vote shall be calculated pursuant to Section 1.23.

(b) Simple Majority Vote for All Other Matters on Second Reading. Unless otherwise specified in this Agreement, for all matters not specified in Section 9.3.2(a), an affirmative decision of the Board on the second reading shall require a simple majority of all Directors present at the meeting and eligible to vote on the matter.

ARTICLE 10
EXECUTIVE DIRECTOR AND STAFF

10.1 Appointment. The Board of Directors shall appoint an Executive Director, who may be, though need not be, an officer, employee, or representative of one of the Members. The Executive Director's compensation, if any, shall be determined by the Board of Directors.

10.2 Duties. If appointed, the Executive Director shall be the chief administrative officer of the Agency, shall serve at the pleasure of the Board of Directors, and shall be responsible to the Board for the proper and efficient administration of the Agency. The Executive Director shall have the powers designated by the Board, or otherwise as set forth in the Bylaws.

10.3 Term and Termination. The Executive Director shall serve until he/she resigns or the Board of Directors terminates his/her appointment.

10.4 Staff and Services. The Executive Director may employ such additional full-time and/or part-time employees, assistants and independent contractors who may be necessary from time to time to accomplish the purposes of the Agency, subject to the approval of the Board of Directors. The Agency may contract with a Member or other public agency or private entity for various services, including without limitation, those related to the Agency's finances, purchasing, risk management, information technology and human resources. A written agreement shall be entered between the Agency and the Member or other public agency or private entity contracting to provide such service, and that agreement shall specify the terms on which such services shall be provided, including without limitation, the compensation, if any, that shall be made for the provision of such services.

ARTICLE 11
BYLAWS

The Board of Directors shall cause to be drafted, approve, and amend Bylaws of the Agency to govern the day-to-day operations of the Agency. The Bylaws shall be adopted at or before the first anniversary of the Board's first meeting.

ARTICLE 12
ADVISORY COMMITTEES

The Board of Directors may from time to time appoint one or more advisory committees or establish standing or ad hoc committees to assist in carrying out the purposes and objectives of the Agency. The Board shall determine the purpose and need for such committees and the necessary qualifications for individuals appointed to them. Each committee shall include a Director as the chair thereof. Other members of each committee may be composed of those individuals approved by the Board of Directors for participation on the committee. However, no committee or participant on such committee shall have any authority to act on behalf of the Agency.

ARTICLE 13
ACCOUNTING PRACTICES

13.1 General. The Board of Directors shall establish and maintain such funds and accounts as may be required by generally accepted public agency accounting practices. The Agency shall maintain strict accountability of all funds and report all receipts and disbursements of the Agency.

13.2 Fiscal Year. Unless the Board of Directors decides otherwise, the fiscal year for the Agency shall run from July 1 to June 30.

13.3 Appointment of Treasurer and Auditor; Duties. The treasurer and Auditor shall be appointed and/or retained in the manner, and shall perform such duties and responsibilities, specified in sections 6505, 6505.5 and 6505.6 of the Act. The treasurer shall be bonded in accordance with the provisions of Government Code section 6505.1.

ARTICLE 14
BUDGET AND EXPENSES

14.1 Budget. Within one hundred and twenty (120) days after the first meeting of the Board of Directors, and thereafter prior to the commencement of each fiscal year, the Board shall adopt a budget for the Agency for the ensuing fiscal year. In the event that a budget is not so approved, the prior year's budget shall be deemed approved for the ensuing fiscal year, and any groundwater extraction fee or assessment(s) of contributions by Members, or both, approved by the Board during the prior fiscal year shall again be assessed in the same amount and terms for the ensuing fiscal year.

14.2 Agency Funding and Contributions. For the purpose of funding the expenses and ongoing operations of the Agency, the Board of Directors shall maintain a funding account in connection with the annual budget process. The Board of Directors may fund the Agency and the GSP for the Basin as provided in Chapter 8 of SGMA (commencing with section 10730 of the Water Code), through voluntary contributions from Members, and through the assessment of Member contributions, with the intent that the Agency will reimburse each Member at a later date. Such assessment of Member contributions shall be in the amount and frequency determined necessary by a supermajority vote of the Board (as set forth is Section 9.3) and shall be paid by each Member to the Agency within one hundred and twenty (120) days of assessment by the Board, unless otherwise directed by the Board.

14.3 Return of Contributions. The Agency may reimburse Members for all or any part of any contributions made by Members, and any revenues by the Agency may be distributed by the Board of Directors at such time and upon such terms as the Board of Directors may decide; provided that (i) any distributions shall be made in proportion to the contributions paid by each Member to the Agency, and (ii) any capital contribution paid by a Member voluntarily, and without obligation to make such capital contribution pursuant to Section 14.2, shall be returned to the contributing Member, together with accrued interest at the annual rate published as the yield of the Local Agency Investment Fund administered by the California State Treasurer, before any other return of contributions to the Members is made. The Agency shall hold title to all funds and property acquired by the Agency during the term of this Agreement.

14.4 Issuance of Indebtedness. The Agency may issue bonds, notes or other forms of indebtedness, as permitted under Section 4.6, provided such issuance is approved by a unanimous vote of the Member Directors.

ARTICLE 15
LIABILITIES

15.1 Liability. In accordance with Government Code section 6507, the debt, liabilities and obligations of the Agency shall be the debts, liabilities and obligations of the Agency alone, and not the individual Members.

15.2 Indemnity. Funds of the Agency may be used to defend, indemnify, and hold harmless the Agency, each Member, each Director, and any officers, agents and employees of the Agency for their actions taken within the course and scope of their duties while acting on behalf of the Agency. To the fullest extent permitted by law, the Agency agrees to save, indemnify, defend and hold harmless each Member from any liability, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, losses, expenses or costs of any kind, whether actual, alleged or threatened, including attorney's fees and costs, court costs, interest, defense costs, and expert witness fees, where the same arise out of, or are in any way attributable in whole or in part to, acts or omissions of the Agency or its employees, officers or agents or negligent acts or omissions (not including gross negligence or wrongful conduct) of the employees, officers or agents of any Member, while acting within the course and scope of a Member relationship with the Agency.

15.3 Hazardous Materials. The Agency shall not handle, receive, use, or dispose of hazardous materials unless first amending this Agreement to provide indemnification by the Agency of all of Members in relation to the Agency's handling, receipt, use or disposal of hazardous materials.

15.4 Liability Insurance. The Board of Directors shall obtain, and maintain in effect, appropriate liability insurance to cover the activities of the Agency's Directors and staff in the ordinary course of their duties.

15.5 Privileges and Immunities. All of the privileges and immunities from liability, exemption from laws, ordinances and rules, all pension, relief, disability, workers compensation, and other benefits which apply to the activity of officers, agents, or employees of any of the Members when performing their respective functions shall apply to them to the same degree and extent while engaged in the performance of any of the functions and other duties under this Agreement. None of the officers, agents, or employees appointed by the Board of Directors shall be deemed, by reason of their employment by the Board of Directors, to be employed by any of the Members or, by reason of their employment by the Board of Directors to be subject to any of the requirements of such Members.

ARTICLE 16
WITHDRAWAL OF MEMBERS

16.1 Unilateral Withdrawal. Subject to the Dispute Resolution provisions set forth in Section 18.9, a Member may unilaterally withdraw from this Agreement without causing or requiring termination of this Agreement, effective upon sixty (60) days written notice to the Executive Director.

16.2 Rescission or Termination of Agency. This Agreement may be rescinded and the Agency terminated by unanimous written consent of all Members, except during the outstanding term of any Agency indebtedness.

16.3 Effect of Withdrawal or Termination. Upon termination of this Agreement or unilateral withdrawal, a Member shall remain obligated to pay its share of all debts, liabilities and obligations of the Agency required of the Member pursuant to the terms of this Agreement

which were incurred or accrued prior to the date of such termination or withdrawal, including, without limitation, those debts, liabilities and obligations pursuant to Sections 4.6 and 14.4. Any Member that withdraws from the Agency shall have no right to participate in the business and affairs of the Agency or to exercise any rights of a Member under this Agreement or the Act, but shall continue to share in distributions from the Agency on the same basis as if such Member had not withdrawn, provided that a Member that has withdrawn from the Agency shall not receive distributions in excess of the contributions made to the Agency while a Member. The right to share in distributions granted under this Section shall be in lieu of any right the withdrawn Member may have to receive a distribution or payment of the fair value of the Member's interest in the Agency.

16.4 Return of Contribution. Upon termination of this Agreement, any surplus money on-hand shall be returned to the Members in proportion to their contributions made. The Board of Directors shall first offer any property, works, rights and interests of the Agency for sale to the Members on terms and conditions determined by the Board of Directors. If no such sale to Members is consummated, the Board of Directors shall offer the property, works, rights, and interest of the Agency for sale to any non-member for good and adequate consideration. The net proceeds from any sale shall be distributed among the Members in proportion to their contributions made.

ARTICLE 17
SPECIAL PROJECTS

17.1 Special Projects. In addition to the general activities undertaken by all Members of the Agency, the Agency may initiate Special Projects that involve fewer than all Members. No Member shall be required to be involved in a Special Project that involves fewer than all Members.

17.2 Special Project Agreement. With the unanimous approval of Member Directors, Members may undertake Special Projects in the name of the Agency. Prior to undertaking a Special Project, the Members electing to participate in the Special Project shall enter into an activity agreement. Such activity agreement shall provide that (i) no Special Project undertaken pursuant to such agreement shall conflict with the terms of this Agreement; and (ii) the Members to the activity agreement shall indemnify, defend and hold the Agency, and the Agency's other Members, harmless from and against any liabilities, costs or expenses of any kind resulting from the Special Project described in the activity agreement. All assets, rights, benefits, debts, liabilities and obligations attributable to a Special Project shall be assets, rights, benefits, debts, liabilities and obligations solely of the Members that have entered into the activity agreement for that Special Project, in accordance with the terms of the activity agreement, and shall not be the assets, rights, benefits, debts, liabilities and obligations of those Members that have not executed the activity agreement. Members not electing to participate in the Special Project shall have no rights, benefits, debts, liabilities or obligations attributable to such Special Project.

ARTICLE 18
MISCELLANEOUS PROVISIONS

18.1 No Predetermination or Irretrievable Commitment of Resources. Nothing in this Agreement shall constitute a determination by the Agency or any of its Members that any action shall be undertaken or that any unconditional or irretrievable commitment of resources shall be made, until such time as the required compliance with all local, state, or federal laws, including without limitation the California Environmental Quality Act, National Environmental Policy Act, or permit requirements, as applicable, has been completed.

18.2 Notices. Notices to a Director or Member hereunder shall be sufficient if delivered to the City Clerk, Board Clerk, or Board Secretary of the respective Director or Member and addressed to the Director or Member. Delivery may be accomplished by U.S. Postal Service, private mail service or electronic mail.

18.3 Amendments to Agreement. This Agreement may be amended or modified at any time only by subsequent written agreement approved and executed by all of the Members.

18.4 Agreement Complete. This Agreement constitutes the full and complete agreement of the Members. This Agreement supersedes all prior agreements and understandings, whether in writing or oral, related to the subject matter of this Agreement that are not set forth in writing herein.

18.5 Severability. Should any part, term or provision of this Agreement be decided by a court of competent jurisdiction to be illegal or in conflict with any applicable federal law or any law of the State of California, or otherwise be rendered unenforceable or ineffectual, the validity of the remaining parts, terms, or provisions of this Agreement shall not be affected thereby, provided however, that if the remaining parts, terms, or provisions do not comply with the Act, this Agreement shall terminate.

18.6 Withdrawal by Operation of Law. Should the participation of any Member to this Agreement be decided by the courts to be illegal or in excess of that Member's authority or in conflict with any law, the validity of this Agreement as to the remaining Members shall not be affected thereby.

18.7 Assignment. The rights and duties of the Members may not be assigned or delegated without the written consent of all other Members. Any attempt to assign or delegate such rights or duties in contravention of this Agreement shall be null and void.

18.8 Binding on Successors. This Agreement shall inure to the benefit of, and be binding upon, the successors or assigns of the Members.

18.9 Dispute Resolution. In the event that any dispute arises among the Members relating to (i) this Agreement, (ii) the rights and obligations arising from this Agreement, (iii) a Member proposing to withdraw from membership in the Agency, or (iv) a Member proposing to initiate litigation in relation to legal rights to groundwater within the Basin or the management of the Basin, the aggrieved Member or Members proposing to withdraw from membership shall provide written notice to the other Members of the controversy or proposal to withdraw from

membership. Within forty-five (45) days after such written notice, the Members shall attempt in good faith to resolve the controversy through informal means. If the Members cannot agree upon a resolution of the controversy within forty-five (45) days from the providing of written notice specified above, the dispute shall be submitted to mediation prior to commencement of any legal action or prior to withdrawal of a Member proposing to withdraw from membership. The mediation shall be no less than a full day (unless agreed otherwise among the Members) and the cost of mediation shall be paid in equal proportion among the Members. The mediator shall be either voluntarily agreed to or appointed by the Superior Court upon a suit and motion for appointment of a neutral mediator. Upon completion of mediation, if the controversy has not been resolved, any Member may exercise all rights to bring a legal action relating to the controversy or withdraw from membership as otherwise authorized pursuant to this Agreement. The Agency may, at its discretion, participate in mediation upon request by a Stakeholder Director concerning a dispute alleged by the Stakeholder Director concerning the management of the Basin or rights to extract groundwater from the Basin, with the terms of such mediation to be determined in the sole discretion of the Member Directors.

18.10 Counterparts. This Agreement may be executed in counterparts, each of which shall be deemed an original.

18.11 Singular Includes Plural. Whenever used in this Agreement, the singular form of any term includes the plural form and the plural form includes the singular form.

18.12 No Third-Party Rights. Nothing in this Agreement, whether express or implied, is intended to confer any rights or remedies under, or by reason of, this Agreement on any person other than the Members and their respective successors and assigns, nor is anything in this Agreement intended to relieve or discharge the obligations or liability of any third person to any Member, nor shall any provision give any third person any right of subrogation or action over or against any Member.

18.13 Member Authorization. The legislative bodies of the Members have each authorized execution of this Agreement, as evidenced by the signatures below.

IN WITNESS WHEREOF, the Members hereto have executed this Agreement by authorized officials thereof on the dates indicated below, which Agreement may be executed in counterparts.

CASITAS MUNICIPAL WATER DISTRICT DATED: 11/23/16

APPROVED AS TO FORM:

By: _____
Title: President

By: _____
Title: Secretary

[Signatures continue on the following page.]

CITY OF SAN BUENAVENTURA DATED: _____

APPROVED AS TO FORM:

By: _____
Title: _____

By: _____
Title: _____

COUNTY OF VENTURA DATED: _____

APPROVED AS TO FORM:

By: _____
Title: _____

By: _____
Title: _____

MEINERS OAKS WATER DISTRICT DATED: _____

APPROVED AS TO FORM:

By: _____
Title: _____

By: _____
Title: _____

CASITAS MUNICIPAL WATER DISTRICT

By: _____
Title: _____

DATED: _____

APPROVED AS TO FORM:

By: _____
Title: _____

[Signatures continue on the following page.]

CITY OF SAN BUENAVENTURA

By: E.J. as member
Title: Mayor

DATED: 12-12-16

APPROVED AS TO FORM:

By: _____
Title: _____

COUNTY OF VENTURA

By: _____
Title: _____

DATED: _____

APPROVED AS TO FORM:

By: _____
Title: _____

MEINERS OAKS WATER DISTRICT

By: _____
Title: _____

DATED: _____

APPROVED AS TO FORM:

By: _____
Title: _____

CASITAS MUNICIPAL WATER DISTRICT DATED: _____

APPROVED AS TO FORM:

By: _____ By: _____
Title: _____ Title: _____

[Signatures continue on the following page.]

CITY OF SAN BUENAVENTURA DATED: _____

APPROVED AS TO FORM:

By: _____ By: _____
Title: _____ Title: _____

COUNTY OF VENTURA DATED: 12/6/16

APPROVED AS TO FORM:

By: Linda Parks
Title: Chair, Board of Supervisors
County of Ventura

By: _____
Title: _____

MEINERS OAKS WATER DISTRICT DATED: _____

APPROVED AS TO FORM:

By: _____ By: _____
Title: _____ Title: _____

CASITAS MUNICIPAL WATER DISTRICT DATED:________________

APPROVED AS TO FORM:

By: ________________ By: ________________
Title: ________________ Title: ________________

[Signatures continue on the following page.]

CITY OF SAN BUENAVENTURA DATED:________________

APPROVED AS TO FORM:

By: ________________ By: ________________
Title: ________________ Title: ________________

COUNTY OF VENTURA DATED:________________

APPROVED AS TO FORM:

By: [signature] By: [signature]
Title: Board President Title: General Manger

MEINERS OAKS WATER DISTRICT DATED: November 15, 2016

APPROVED AS TO FORM:

By: ________________ By: [signature]
Title: ________________ Title: District Counsel

VENTURA RIVER WATER DISTRICT

DATED: NOVEMBER 9, 2016

APPROVED AS TO FORM:

By: _____
Title: _____

Ed Lee, President

By: _____
Title: DISTRICT COUNSEL

Lindsay Nielson,
District Counsel

BYLAWS

of the

UPPER VENTURA RIVER GROUNDWATER AGENCY

Adopted on
December 14, 2017

PREAMBLE

These Bylaws are adopted pursuant to Section 4.1.1 and Article 11 of the Joint Exercise of Powers Agreement (Agreement) creating the Upper Ventura River Groundwater Agency.

ARTICLE 1

DEFINITIONS AND CONSTRUCTION

1.1 Definitions and Construction. Unless specifically defined in these Bylaws, all defined terms shall have the same meaning ascribed to them in the Agreement. If any term of these Bylaws conflicts with any term of the Agreement, the Agreement's terms shall prevail, and these Bylaws shall be amended to eliminate such conflict of terms. Unless the context or reference to the Agreement requires otherwise, the general provisions, rules of construction, and definitions in the California Civil Code will govern the interpretation of these Bylaws.

DEFINITIONS

The following terms have the following meanings for purposes of the Bylaws.

1.2 "Agreement" has the meaning The Joint Exercise of Powers Agreement by and among the Casitas Municipal Water District, the City of San Buenaventura, the County of Ventura, the Meiners Oaks Water District, and the Ventura River Water District for purposes of forming the Upper Ventura River Groundwater Agency and setting forth the terms pursuant to which the Agency shall operate.

1.3 "Auditor" means the auditor of the financial affairs of the Agency appointed by the Board of Directors pursuant to Section 13.3 of the Agreement.

1.4 "Agency" means the Upper Ventura River Groundwater Agency

1.5 "Board of Directors" or "Board" means the governing body of the Agency as established by Article 6 of the Agreement.

1.6 "Bylaws" means these Bylaws adopted by the Board of Directors pursuant to Section 4.1.1 and Article 11 of the Agreement to govern the day-to-day operations of the Agency.

1.7 "Director" and "Alternate Director" shall mean a director or alternate director appointed by a Member or by the Board pursuant to Article 6 of the Agreement.

1.8 "Executive Director" means the chief administrative officer of the Agency to be appointed by the Board of Directors pursuant to Article 10 of the Agreement.

1.9 "Farm Bureau" means the Farm Bureau of Ventura County.

1.10 "GSP" means a Groundwater Sustainability Plan for the Basin.

1.11 "Member" means any Agency Member, as determined pursuant to Article 5 of the Agreement. "Members" shall refer collectively to all Members of the Agency.

1.12 "Member Director" means a Director appointed pursuant to Article 6 of the Agreement that represents a Member.

1.13 "Officer(s)" means the chair, vice chair, secretary, or treasurer of the Agency to be appointed by the Board of Directors pursuant to Article 7 of the Agreement.

1.14 "Quorum" shall have the meaning assigned to it in Section 9.1 of the Agreement.

1.15 "Special Projects" means a project undertaken pursuant to Article 17 of the Agreement.

1.16 "Stakeholder Director" means a Director appointed pursuant to Article 6 of the Agreement that represents stakeholder interests.

ARTICLE 2

THE AGENCY

2.1 Name of the Agency. The name of the Agency created by the Agreement is the Upper Ventora River Groundwater Agency.

2.2 Principal Office of the Agency. The principal office of the Agency is the shared office of the Ojai Groundwater Basin Management Agency and the Upper Ventura River Groundwater Agency, located at 428 Bryant Circle, Ojai, CA 93023.

2.3 Agency Powers. The powers of the Agency are established in Article 4 of the Agreement and vested in the Board. The Board reserves the right to delegate such powers as are appropriate and permissible by law.

ARTICLE 3

MEETINGS

3.1 Time and Place. The Board of Directors shall meet at least quarterly, at a date, time, and place set by the Board, within the jurisdictional boundaries of one or more of the Members, and at such times as may be determined by the Board.

3.2 Special Meetings. Special meetings of the Board of Directors may be called by the Chair or by a vote of the Directors in accordance with the requirements of the Ralph M. Brown Act, Government Code Section 54950, *et seq.* ("Brown Act").

3.3 Conduct. All meetings of the Board of Directors, including special meetings, shall be noticed, held, and conducted in accordance with the Brown Act. The Board may use teleconferencing in connection with any meeting in conformance with and to the extent authorized by the Brown Act.

3.4 Local Conflict of Interest Code. The Board of Directors has adopted a local conflict of interest code pursuant to the provisions of the Political Reform Act of 1974, Government Code Section 81000, *et seq.* The Board shall take all actions necessary to ensure the code remains in compliance with applicable laws, including updating the code as required.

3.5 Agenda. The Executive Director, in consultation with Board Chair, shall prepare the draft agenda. The Board Chair shall approve the draft agenda before its finalization and posting. The agenda shall in all respects comply with the Brown Act.

3.6 Quorum. Quorum will be determined as provided in Section 9.1 of the Agreement.

3.7 Official Act. The Agency shall take action by motion, resolution, or ordinance. Every action shall be by a vote of the Board in accordance with the applicable provisions of the Agreement, the Bylaws, and State laws.

3.8 Director Voting. All votes of the Board of Directors shall be in accord with the procedures set forth in Article 9 of the Agreement, supplemented by the Collaborative Decision-Making Approach set forth in Section 3.9 of these Bylaws.

3.9 Collaborative Decision-Making Approach. The Board shall seek to achieve unanimous consensus among its members by following these procedures for collaborative decision-making. All actions taken pursuant to this Section 3.9 shall be conducted in accordance with the requirements of the Brown Act and provisions of the Agreement. If any conflict arises between the procedures required by this Section 3.9 and the requirements of the Brown Act or the provisions of the Agreement, the Brown Act and/or Agreement shall control.

3.9.1 Guiding Principles for Collaborative Decision-Making Approach.

3.9.1.1 Consensus. The Directors shall seek to reach consensus on all decisions. Consensus means that each Member of the GSA Board does not reject a proposal. In reaching consensus, some Directors may "support" a particular decision while others may only be able to "live with it." Still others may choose to "stand aside" by verbally noting disagreement, yet allowing the Board to reach consensus without them. Any of these actions constitutes consensus. A lack of consensus is when one or more Members cannot support, live with, or stand aside on a topic.

3.9.1.2 Consensus with Accountability. The Board will seek mutually acceptable and beneficial decisions whenever possible. In an attempt to achieve consensus, any Director that disagrees with a decision must provide an alternative that attempts to meet his/her agency's/constituency's interests while also meeting the interests of other Directors. The consensus decision method is based on principles of "consensus with accountability."

3.9.1.3 Consensus Seeking. As stated above, the Board will seek to achieve consensus. This reflects an aspiration, however. The work of the Board must be timely and efficient and attempts to reach consensus cannot continue indefinitely. Therefore, "consensus seeking" represents an approach through which the Board will make a robust, reasonable attempt to reach consensus, the duration of which must be decided by the Board. After such attempts are made, if the Board cannot reach consensus, the approach and outcomes are memorialized, and the Board may proceed to a vote.

3.9.1.4 Agreements in Principle/Agreements in Detail. In a collaborative decision-making process, it is beneficial for Directors to have the space and time to propose initial ideas to be discussed amongst, and potentially modified by, their Board colleagues, rather than to move straight to a binding vote. This can be achieved using "straw polls" or similar methods whereby a Director proposes an idea in principle, the Board discusses and modifies it, the Board seeks to reach an informal "agreement in principle," and then votes on the item. This method allows Members time to informally discuss ideas, test feasibility with other colleagues/leadership or their Member organizations, and eventually reach consensus.

3.9.2 Consensus Seeking Decision Approach

3.9.2.1 Preliminary Discussions. The Board shall employ a consensus seeking decision approach whereby Directors and Members become informed on the item under consideration by the Board, Directors deliberate over the issues, and Directors then create proposals to test the feasibility of a decision to achieve consensus. In this step the Directors shall employ straw polls, agreements in principle, and consensus with accountability.

3.9.2.2 First Vote. At a point where the Board feels that a matter has been sufficiently discussed, a Director should make a motion for a formal vote. The result of the first vote is either a consensus decision or failure to reach consensus. If the Board achieves consensus on a first vote, then the decision is final. If the Board does not achieve consensus, the matter will be continued to a future Board meeting where final action may be taken upon a second vote.

3.9.2.3 Consensus Review. In the time period between a first and a second vote, the Directors will review the discussion and outcome regarding the first vote and should prepare alternatives to the item under consideration that will meet the interests of all Members. Communications between Directors shall be conducted in strict compliance with the requirements of the Brown Act. The Board may hold noticed public workshops or meetings between the first and second vote as necessary to foster further consensus-based discussion of the matter. Consideration of viewpoints and alternatives will be particularly important for any Directors that could not support the topic at the first vote. The duration of this consensus review period is at the discretion of the Board.

3.9.2.4 Second Vote. After the prescribed period of time has passed, the Board will place the item on the agenda for a second vote. At that time, Directors will discuss the item under consideration with a particular emphasis placed on proposed alternatives that ideally achieve the interests of all Members. After a sufficient discussion period, the Board will conduct the second vote, which shall be final.

3.9.2.5 Dispute Resolution. In the event that an outcome of the second vote is considered untenable by one or more Members, the Member(s) may initiate the dispute resolution process provided by Section 18.9 of the Agreement.

3.10 Actions Not Subject to Consensus Voting Procedure. The Board may approve the regular monthly receivables by a simple majority vote, rather than the procedures required by Article 9 of the Agreement and Section 3.9 of these Bylaws, so long as the routine costs and bills making up the regular monthly receivables have not been objected to by any Director. A Director may

voice an oral objection at the meeting or file an objection in writing prior to the meeting. Likewise, any meeting of the Board may be adjourned by a simple majority vote.

3.11 Roll Call Vote. The vote on resolutions, ordinances, and on such other matters as may be requested by majority of the Board or required by law, shall be accomplished by roll call vote and the vote of each Director shall be entered upon the minutes of such meeting.

3.12 Supermajority Voting. When a supermajority vote is required by Section 9.3 of the Agreement, it shall be determined as follows:

3.12.1 If either six (6) or seven (7) Directors are in attendance and eligible to vote, a supermajority shall mean six (6) affirmative votes.

3.12.2 If only six (6) Directors are in attendance and one (1) of those six (6) Directors is prevented from voting due to a conflict of interest, a supermajority vote shall mean five (5) affirmative votes.

3.12.3 If only six (6) Directors are in attendance and two (2) of those six (6) Directors are prevented from voting due to a conflict of interest, a supermajority shall mean four (4) affirmative votes, provided that all four (4) affirmative votes are by Member Directors.

3.12.4 If fewer than six (6) Directors are in attendance at the meeting, a matter subject to a supermajority vote pursuant to Section 9.3 shall not be called for a vote.

3.13 Unanimous Vote. Provisions the Agreement requiring a unanimous vote of the Board shall mean a unanimous vote of the Directors present at the meeting.

3.14 Rules of Order. All rules of order not otherwise provided for in these Bylaws shall be determined, to the extent practicable, in accordance with "Robert's Rules of Order"; provided, however, that no action shall be invalidated or its legality otherwise affected by the failure or omission to observe or follow "Robert's Rules of Order."

3.15 Minutes. The Executive Director shall prepare written minutes of the Board meetings, which shall be available for public inspection when approved by the Board. The record shall contain the votes and abstentions on each matter for which a vote is taken.

ARTICLE 4

BOARD OFFICERS, EXECUTIVE DIRECTOR AND STAFF

4.1 Officers. Officers of the Agency shall be as set forth in Section 7.2 of the Agreement and elected as set forth in Section 7.2.

4.2 Term of Board Officers. The term of office for officers shall be one year and elections shall be held at first meeting at the start of the fiscal year. Officers may serve consecutive terms with no limit.

4.3 Board Secretary. The Secretary may, with oversight, assign designated day-to-day responsibilities to be carried out by the Executive Director. The Executive Director shall keep the administrative records of the Agency, act as secretary at meetings of the Agency, record all votes and keep a record of the proceedings of the Agency to be kept for such purpose, and perform all duties incident to the Secretary's office. The Executive Director shall maintain a record of all official proceedings of the Board. The Executive Director shall also establish and maintain a list of persons interested in receiving notices regarding plan preparation, meeting announcements, and availability of draft plans, maps, and other relevant documents pursuant to Water Code Section 10723.4.

4.4 Executive Director. The Executive Director shall be appointed by, and serve at the pleasure of, the Board. The Executive Director shall have general supervision over the administration of Agency business and affairs, subject to the direction of the Board. Compensation shall be set by contract with the Executive Director. The Executive Director may execute contracts, deeds, and other documents and instruments as authorized by the Board. The Board shall maintain a job description of the duties and requirements of the Executive Director.

4.5 General Counsel. The Agency's General Counsel shall serve at the pleasure of the Board of Directors. General Counsel shall be appointed by the Board, and shall be directly responsible to the Board. The General Counsel shall give advice or written opinions as needed and/or directed by the Board, and shall prepare proposed resolutions, laws, rules, contracts, and other legal documents for the Agency as directed by the Board Chair, Executive Committee, or Board of Directors. The General Counsel shall attend to all lawsuits and other matters to which the Agency is a party or in which the Agency may be legally interested and do such other things pertaining to the General Counsel's office as may be requested. Additionally, the General Counsel shall, when deemed appropriate or called upon, seek the advice and consultation of the legal counsels, and possibly staff, from Agency Members on legal issues facing the Agency. Agency General Counsel will recommend appointment of Special Counsel for matters involving more specialized legal service as required. Compensation for General Counsel shall be set by agreement between the Agency and General Counsel approved by the Board.

4.6 Principal Office. The principal office of the Agency is 428 Bryant Circle, Ojai, CA 93023. It may be changed at any time by a vote of the Board.

4.7 Staff Compensation. Staff of the Agency shall receive compensation as set by written contract approved by the Board. When, and only if, specifically authorized by the Board in advance, staff may receive reimbursement of their actual and necessary expenses incurred in carrying out Agency business at the then current IRS reimbursement rate.

4.8 Fiscal Agent and Treasurer. The Treasurer and Auditor for the Agency shall be appointed as set forth in Section 13.3 of the Agreement. The Treasurer shall be depository for and shall have the responsibility for all money of the Agency from whatever source. All funds of the Agency shall be strictly and separately accounted for and regular reports shall be rendered of all receipts and disbursements during the fiscal year, as designated by the Board. The books and records of the Agency shall be open to inspection by the Member and Stakeholder Directors, and the Treasurer shall provide strict accountability of said funds in accordance with Government

Code sections 6505 and 6505.5 and all other applicable provisions of law, including any amendments thereto.

4.9 Consultants. The Agency may, by vote of the Board, hire and engage consultants to assist the Agency in carrying out its functions and duties. Consultants shall possess the technical background, expertise, and experience necessary to perform the work directed by the Board.

4.10 GSP Project Manager. The Agency may, by vote of the Board, hire and engage a consultant to assist in preparation and implementation of a Groundwater Sustainability Plan ("GSP"). This position shall be named the GSP Project Manager and shall be responsible for preparing and implementing the GSP, as directed by the Board. An engineering or other technical firm may perform these duties; but, if performed by a firm, an individual shall be appointed to serve as the primary project manager. In preparing the GSP, the Agency's GSP Project Manager may consult with any committee established by the Board, as directed by the Board. The Agency's GSP Project Manager shall also provide technical information and reports to the Board as needed and/or directed by the Board. Following the adoption of the GSP, the Agency's GSP Project Manager shall be responsible for all work needed to implement the terms of the GSP as directed by the Board, including, if so directed, the preparation of an annual report.

ARTICLE 5

DIRECTOR COMPENSATION AND EXPENSES

5.1 Compensation. Directors are not compensated by the Agency for their service.

5.2 Expenses. If previously approved by the Board, a Director shall receive actual, reasonable, and necessary reimbursement for travel, meals, lodging, registration, and similar expenses incurred in performing Agency business. The reimbursement rates for lodging shall not exceed the posted rates for a trade conference. If lodging at the posted rates is not available, the reimbursement rate shall be comparable to the posted rates. For travel of 250 miles or less, directors shall be reimbursed at the IRS mileage rate. For travel over 250 miles, directors shall be reimbursed at a rate determined by the Board. As used herein, "transportation" includes travel to and from terminals. Automobile rental expenses shall be approved in advance. Reimbursement for meals shall be at the rate established by the IRS or actual reasonable cost not to exceed $90 per day. Reimbursement will not be provided for alcoholic beverages. Directors may declare the amount of the meal under penalty of perjury in lieu of receipts if the amount is less than the IRS rate. Claims for expense reimbursement shall be submitted to the Board on forms provided by the Agency within 30 days after the expense has been incurred. The Executive Director shall determine whether the claim satisfies the requirements of this section, and if the claim is denied, the claimant may appeal to the Board. In accordance with Government Code Section 53065.5, the Agency shall, at least annually, disclose any reimbursement paid within the immediately preceding fiscal year of at least one hundred dollars ($100) for each individual charge. The disclosure requirement shall be fulfilled by including the reimbursement information in a document published or printed at least annually by a date determined by that Board and shall be made available for public inspection.

ARTICLE 6

COMMITTEES

6.1 Establishment of Advisory Committees. In accordance with Article 12 of the Agreement, the Board may from time to time establish advisory committees for the purpose of making recommendations to the Board on the various activities of the Agency. The establishment of any advisory committee and its duties shall require a vote of the Board. Advisory committees may be established as standing or ad hoc committees.

6.2 Establishment of Standing Committees. The Board may from time to time establish standing committees for the purpose of making recommendations to the Board on the various activities of the Agency. The establishment of any standing committee and its duties shall require a vote of the Board. The Board may by vote dissolve a standing committee at any time.

6.3 Conduct of Standing Committees. All standing committee meetings shall be noticed, held, and conducted in accordance with the provisions of the Brown Act. The Board may further establish rules of conduct for said standing committees. Each standing committee shall establish a time and place for regular meetings and may call special meetings in the same manner as the Board. Standing committee meetings shall be recorded and minutes prepared, which, upon approval, shall be distributed to the Board.

6.4 Standing Committee Membership. Standing committee membership and appointments shall be at the Board's sole discretion. Likewise, the Board shall have the sole discretion to remove or admonish any member, or members, of any standing committee at any time. The Board may, at its sole discretion, appoint an alternate to any standing committee.

6.5 Standing Committee Direction. In establishing a standing committee, the Board shall provide specific direction to the standing committee as to its tasks, expected duration for completion of its tasks, and a summary of the resources, including staff or consultant support available to the standing committee in performing its tasks.

6.6 Executive Committee. The Board may establish a standing committee named the Executive Committee. The Executive Committee, when specifically designated and assigned by the Board, may advise the Board on the development and implementation of the GSP and work with the Executive Director as needed. The Board shall establish the time and place for Executive Committee meetings in consultation with the members of the Committee.

6.7 Ad Hoc Committees. The Board may from time to time establish ad hoc committees for the purpose of making recommendations to the Board on the various activities of the Agency. The establishment of any ad hoc committee and its duties shall require a vote of the Board. Ad hoc committees shall exist for the term specified in the action creating the committee and the Board may dissolve an ad hoc committee at any time through a vote of the Board. Ad hoc committees made of less than a quorum of the Board shall not be required to comply with the provisions of the Brown Act.

ARTICLE 7

BUDGET AND FINANCES

7.1 Budget. The Agency shall operate pursuant to an operating budget adopted in accordance with Section 14.1 of the Agreement. The Agency shall endeavor to operate each year pursuant to an annually balanced budget so that projected annual expenses do not exceed projected annual revenues. If the Executive Director or Chair determines the approved budget is inadequate, he or she shall submit recommended modifications to the Board for consideration and action. The Executive Director shall implement the approved or revised budget; provided, however, that all expenditures for capital improvements shall be approved by the Board before they are undertaken.

7.2 Approval of Warrants and Signature of Checks. The Board shall approve all warrants and authorize issuance of checks in payment thereof. A check register showing the check number, payee, amount, and the purpose of each check, as prepared by the Treasurer, will be sent to the Board as required by law. Checks in payment of utility bills, postage, payroll, payroll taxes, credit union collections, petty cash, emergency repairs, invoices subject to discount and interfund transfers, and similar payments may be disbursed prior to Board approval. Such items shall be set forth on the next regular check register and presented to the Board.

7.3 General and Special Books of Account. The Executive Director, in concordance with the Treasurer, shall maintain books of account in accordance with accepted accounting principles showing the status of all monies received and disbursed. Such general and special fund accounts shall be maintained as are necessary to accomplish the purpose of the Agency.

7.4 Fund Depositories. All funds of the Agency shall be deposited into the Agency's bank account. If the Board desires to designate a new depository for Agency funds, the Board shall do so through formal action and amendment of these Bylaws.

ARTICLE 8

DEBTS AND LIABILITIES

8.1 Debts and Liabilities. Except as may be specifically provided for in the Agreement and/or California Government Code Section 895.2, as amended or supplemented, the debts, liabilities and obligations of the Agency are not and will not be the debts, liabilities, or obligations of any or all of the Members. The Members may amend the Agreement to be jointly and/or severally liable, in whole or in part, for any debt, obligation or liability of the Agency, including but not limited to, any bond or other debt instrument issued by the Agency.

ARTICLE 9

RECORDS RETENTION

9.1 Records Retention Policy. The Agency shall adopt a records retention policy. This policy will provide criteria and procedures for the retention or destruction of Agency records.

9.2 Maintenance and Inspection of Agreement and Bylaws. The Agency will keep at its principal executive office the original or copy of the Agreement and these Bylaws, as amended to date, which will be open to inspection by any Director, Member, and all members of the public at all reasonable times during office hours.

9.3 Inspection Rights of Members. Provided that upon the advice of General Counsel no legal conflict exists, any Member may inspect any record of the Agency, including, but not limited to, the accounting books and records and minutes of the proceedings of the Board and committees of the Board, at any reasonable time. A designated representative of the entity may make any inspection and copying under this section, and the right of inspection includes the right to copy.

9.4 Inspection by Directors. Provided that upon the advice of General Counsel no legal conflict exists, any Director may inspect any record of the Agency, including, but not limited to, the accounting books and records and minutes of the proceedings of the Board and committees of the Board, at any reasonable time. A designated representative of the Director may make any inspection and copying under this section, and the right of inspection includes the right to copy.

9.5 Inspection by the Public. As directed and permitted by law, Agency records are open to inspection by the public.

ARTICLE 10

EMAIL POLICY

10.1 Purpose and Scope. The purpose of this Article is to establish rules for appropriate use of Agency email accounts. This policy is intended to ensure compliance with applicable policies and laws and advise officials and employees of their responsibilities in using Agency email accounts. This policy applies to all email accounts assigned to officials and employees by the Agency.

10.2 Assignment of Email Account. Each member of the Board, including alternate directors, and each employee shall be assigned an Agency email account by the Agency ("Agency Email Accounts").

10.3 Use of Email Accounts. Agency Email Accounts shall be used only to transact Agency business. Agency Email Accounts shall not be used for: (1) personal purposes unrelated to Agency business; (2) discriminatory, unethical, or unprofessional activities; (3) personal gain; (4) any purposes that would jeopardize the legitimate interests of the Agency; or (5) any purposes that would violate any law. Agency Directors, officers, and employees shall not use personal email accounts to transact Agency business.

10.4 Privacy and Disclosure. There is no expectation of privacy in the use of Agency Email Accounts. All communications sent or received on Agency Email Accounts may be subject to disclosure under the California Public Records Act or other disclosure laws, unless an exception provided in law applies.

10.5 Security. Agency Directors, officers, and employees shall take reasonable precautions to prevent the use of Agency Email Accounts by any person other than the account holder.

ARTICLE 11

CODE OF ETHICS

11.1 Declaration of Policy. The proper operation of democratic government requires that public officials and employees be independent, impartial and responsible to the people; that government decisions and policy he made in the proper channels of the governmental structure; that public office not be used for personal gain; and that the public have confidence in the integrity of its government. In recognition of these goals, there is hereby established a code of ethics for all Directors, officers, and employees, whether elected or appointed, paid or unpaid. This article establishes ethical standards of conduct for Agency Directors, officers, and employees by setting forth those acts or actions that are incompatible with the best interests of the Agency and by directing the disclosure of private financial or other interests in matters affecting the Agency. Agency Directors, officers, and employees shall comply with this Article, in addition to all applicable State and Federal ethics laws and regulations.

11.2 Responsibilities of Public Office. Public officials and employees are agents of public purpose and hold office for the benefit of the public. They are bound to uphold the United States and State Constitutions and to carry out impartially the laws of the nation, State, and the Agency, and to foster respect for all governments. They are bound to observe, in their official acts, the highest standards of performance and to discharge faithfully the duties of their office, regardless of personal considerations. Recognizing that the public interests must be their primary concern, their conduct in both their official and private affairs should be above reproach.

11.3 Dedicated Service. Directors, officers, and employees owe a duty of loyalty to the political objectives expressed by the electorate and the programs developed by the Board to attain those objectives. Directors, officers, and employees should adhere to the rules of work and performance established as the standards for their positions. Directors, officers, and employees should not exceed their Agency authority or breach the law, or ask others to do so, and owe a duty to cooperate fully with other public officials and employees unless prohibited from so doing by law or by the officially recognized confidentiality of their work.

11.4 Fair and Equal Treatment. The canvassing of members of the Board, directly or indirectly, to obtain preferential consideration in connection with any appointment to the municipal service, shall disqualify the candidate for appointment, except with reference to positions filled by appointment by the Board. Directors, officers, and employees shall not request or permit the use of Agency-owned vehicles, equipment, materials, or property for personal convenience or profit. Services may be available to Directors, officers, and employees when such services are made available to the public generally or when provided for the use of such a Director, officer, or employee in the conduct of official business. Directors, officers, and employees shall not grant special consideration, treatment, or advantage to a member of the public beyond what is available to every other member of the public.

11.5 Political Activities. Directors, officers, and employees shall not solicit or participate in soliciting a contribution to a political party during working hours on property owned by the Agency and shall conform to the provisions of Government Code Sections 3201, *et seq.* Directors, officers, and employees shall not promise appointment to a position with the Agency.

11.6 Ex Parte Communications. A written communication received by a Director, officer, or employee relevant to an item under consideration by the Board shall be made part of the record

of decision on that item. A communication concerning only the status of a pending matter shall not be regarded as an ex parte communication.

11.7 Avoidance of Impressions of Corruptibility. Directors, officers, and employees shall conduct their official and private affairs so as not to give a reasonable basis for the impression that they can be improperly influenced in the performance of public duties. Directors, officers, and employees shall endeavor to maintain public confidence in their performance of the public trust in the Agency. They should not be a source of embarrassment to the Agency and shall avoid even the appearance of conflict between their public duties and private interests.

11.8 No Discrimination in Appointments. No person shall be appointed to, removed from, or in any way favored or discriminated against with respect to any appointive administrative office because of such person's race, color, age, religion, gender identification, national origin, political opinions, affiliations, or functional limitation, as defined by applicable State or Federal laws, if otherwise qualified for the position or office. This provision shall not be construed to impair administrative discretion in determining the requirements of a position or in a job assignment of a person holding such a position, subject to review by the Board.

11.9 Agency Allegiance and Proper Conduct. Directors, officers, and employees shall not engage in or accept any private employment, or render services for private interest, when such employment or service is incompatible with proper discharge of official duties or would tend to impair independence of judgment or action in the performance of those duties. Directors, officers, and employees shall not disclose confidential information concerning the property, government, or affairs of the Agency, and shall not use confidential information for personal financial gain. Directors, officers, and employees shall not accept a gift in excess of limits established by State law. Directors, officers, and employees shall not accept any gift contingent upon a specific action by the Board. Directors, officers, and employees shall not appear on behalf of business or private interests of another before the Board where such appearance would create a potential of having to abstain from participating on that matter or would be incompatible with official duties. Directors, officers, and employees shall not represent a private interest of another person or entity in any action or proceeding against the interest of the Agency in any litigation to which the Agency is a party. A Director may appear before the Agency on behalf of constituents in the course of duties as a representative of the electorate or in the performance of public or civic obligations.

11.10 Penalties. In addition to any other penalties or remedies provided by law, violation of this Article shall constitute a cause for suspension, removal from office or employment, or other disciplinary action. In the case of misconduct by a Stakeholder Director or Agency employee, no disciplinary action shall be taken except upon notice and a hearing. In the case of misconduct by a Member Director, the matter shall be referred to the appointing Member for appropriate action as determined by the Member. If other Members are not satisfied by the action taken by the appointing Member, the Members may resort to the dispute resolution procedures set forth in Section 18.9 of the Agreement.

11.11 Ethics Training. All Directors shall be required to comply with Assembly Bill 1234. Directors that have complied with AB 1234 through service for a separate public agency are deemed to have satisfied this Section 10.11.

ARTICLE 12

CLAIMS AGAINST THE AGENCY

12.1 [RESERVED]

ARTICLE 13

PURCHASING POLICY

13.1 [RESERVED]

ARTICLE 14

INVESTMENT POLICY

14.1 [RESERVED]

ARTICLE 15

CONFLICT OF INTEREST CODE

15.1 [RESERVED]

ARTICLE 16

AMENDMENT

16.1 Amendment. These Bylaws may be amended from time to time by resolution of the Board. Any amendments must be in accordance with the terms of the Agreement.

ARTICLE 17

SPECIAL PROJECTS

17.1 Special Projects. The Agency may undertake Special Projects as permitted by Article 17 of the Agreement.

ARTICLE 18

MISCELLANEOUS PROVISIONS

18.1 No Predetermination or Irretrievable Commitment of Resources. Nothing in the Bylaws shall constitute a determination by the Agency or any of its Members that any action shall be undertaken or that any unconditional or irretrievable commitment of resources shall be made, until such time as the required compliance with all local, State, or federal laws, including, without limitation, the California Environmental Quality Act, National Environmental Policy Act, or permit requirements, as applicable, have been achieved.

18.2 Notices. Notices to a Director or Member hereunder shall be sufficient if delivered to the City Clerk, Board Clerk, or Board Secretary of the respective Director or Member and addressed to the Director or Member. Delivery may be accomplished by U.S. Postal Service, private mail service, or electronic mail.

18.3 Severability. Should any part, term or Article of the Bylaws be decided by a court of competent jurisdiction to be illegal or in conflict with any applicable federal law or any law of the State, or otherwise be rendered unenforceable or ineffectual, the validity of the remainder of the Bylaws shall not be affected thereby; provided, however, that if the remaining parts, terms, or Articles do not comply with the Joint Exercise of Powers Act, Government Code Sections 6500, *et seq.*, including all laws supplemental thereto, the Board shall amend the Bylaws to comply with law or rescind them in their entirety.

18.4 Singular Includes Plural. Whenever used in these Bylaws, the singular form of any term includes the plural form and the plural form includes the singular form.

LIST OF ALL BENEFICIAL USES AND USERS OF GROUNDWATER

Pursuant to Water Code Sections 10723.8(a)(4) and 10723.2, the Agency will consider the interests of all beneficial uses and users of groundwater, as well as those responsible for implementing a Groundwater Sustainability Plan ("Plan").

The Upper Ventura River Groundwater Agency ("Agency") has engaged stakeholders in the development of the Agency to serve as the groundwater sustainability agency ("GSA"). For example, during development of the joint powers authority agreement ("JPA Agreement") forming the Agency, the signatory members held numerous public meetings to discuss important terms to be included in the JPA Agreement. The signatory members also held multiple stakeholder outreach meetings to engage and educate stakeholders within the Upper Ventura Basin ("Basin") about the requirements of the Sustainable Groundwater Management Act ("SGMA"), the JPA Agreement, and the Agency's intention to form a GSA for the Basin. In addition to the Agency's public outreach efforts, it also designated two seats on its seven-seat Board of Directors for Stakeholder Directors: one seat is reserved for an Agricultural Stakeholder Director and one seat is reserved for an Environmental Stakeholder Director.

The Agency plans to continue its practice of seeking broad stakeholder engagement in management of the Basin's groundwater resources as it undertakes the process to develop and implement the Plan for the Basin over the next several years. The Agency will solicit and welcome participation from the following stakeholder groups:

Holders of Overlying Groundwater Rights, including:

- **Agricultural Users.** There are agricultural users of groundwater operating on land overlying the Basin. To account for these users' interests, the Agency designated a seat on its seven-member governing board to be filled by an Agricultural Stakeholder Director. The Agricultural Stakeholder Director is appointed from nominations received by the Ventura County Farm Bureau. The Agricultural Stakeholder Director is responsible for engaging the Basin's agricultural users of groundwater and representing their interests before the Agency.
- **Domestic Well Owners.** There are many domestic wells overlying the Basin. It is believed that the majority—if not all—of these domestic well owners are de minimus users, as defined by SGMA. The Agency anticipates that the Plan will address the collective interests of domestic users of groundwater wells and plans to engage in outreach to domestic well owners throughout the development of the Plan through inviting their participation in the Agency's public meetings and reserving a seat for domestic well owners on a to-be-established advisory committee.

Municipal Well Operators. The Agency is a joint powers authority created by five local public agencies. Two of the Agency's signatory members—the City of San Buenaventura and Casitas

Municipal Water District—operate municipal wells within the Basin and are represented on the Agency's Board of Directors.

Public Water Systems. The following public water systems are located within the Agency's boundaries:

- Casitas Municipal Water District
- Casitas Mutual Water Company
- Del Vasco Mutual Water Company
- Krotona Institute of Theosophy
- Meiners Oaks Water District
- Ojala Mutual Water Company
- Rancho Del Cielo Mutual Water Company
- Sheriff's Honor Farm
- Tico Mutual Water Company
- Ventura River Water District
- Ventura Water (City of San Buenaventura)
- Villanova Road Water Well Associates

Signatory members to the JPA Agreement forming the Agency, as well as the Agency itself, have communicated with these entities throughout development of the JPA Agreement and the Agency's decision to form a GSA for the Basin. The Agency will continue to communicate with these entities concerning Plan development and implementation and opportunities to participate in the process, including through the advisory committee to be established. In addition to holding multiple public meetings, the Agency also plans to retain a seat on an advisory committee for a representative chosen from among the public water companies overlying the basin.

Local Land Use Planning Agencies. Both the County of Ventura ("County") and the City of Ojai have land use planning authority on land overlying the Basin. The County is a signatory member to the JPA Agreement forming the Agency and represented on the Agency's Board of Directors. As noted above, although the City of Ojai declined to patriciate in the JPA, the Agency intends to coordinate with the City of Ojai and keep them informed about Plan development activities through public meetings and other outreach.

Environmental Users of Groundwater. There are numerous environmental organizations dedicated to preserving and maintaining environmental values operating within the boundaries of the Basin. To account for these users' interests, the Agency designated a seat on its seven-member governing board to be filled by an Environmental Stakeholder Director. The Environmental Stakeholder Director is appointed from nominations received from local environmental nonprofit organizations supportive of the Basin's groundwater sustainability. The Environmental Stakeholder Director is responsible for engaging stakeholders within the Basin representing environmental users of surface and groundwater and representing their interests before the Agency.

Surface Water Users, if there is a hydrologic connection between surface and groundwater bodies. Based on past studies performed in the Basin, there is a hydrologic connection between surface and groundwater in certain areas of the Ventura River. The State Water Resources Control Board ("SWRCB") identifies five entities and/or individuals that have claimed either riparian or appropriative surface water rights to the Ventura River. Three of these five rights holders are signatory members to the JPA Agreement forming the Agency and represented on the Agency's Board of Directors. The Agency plans to engage with the other two water rights holders throughout development of the Plan to better understand and take into account their interests.

Federal Government, including, but not limited to, the military and managers of federal lands. N/A. No land overlying the Basin is managed by the Federal Government.

California Native American Tribes. A representative of overlying California Native American tribes is on the Agency's interested parties list, as a result of which this individual receives notices of all Agency meetings and other stakeholder involvement opportunities.

Disadvantaged Communities, including, but not limited to those served by private domestic wells or small community water systems. The community of Casitas Springs is recognized as a disadvantaged community. The community is served by Casitas Mutual Water Company, Ventura River Water District, and Casitas Municipal Water District, the latter two being signatory members to the JPA Agreement forming the Agency. Thus the community is represented on the Agency's Board of Directors. The Agency also plans to form an advisory committee and reserve a seat for domestic well owners.

Entities Listed in Section 10927 that are Monitoring and Reporting Groundwater Elevations in all or a part of the Groundwater Basin Managed by the GSA. The County is the designated California Statewide Groundwater Elevation Monitoring ("CASGEM") entity for the Basin. The County is a signatory member to the JPA Agreement forming the Agency and represented on the Agency's Board of Directors.

The Agency's and other stakeholders' roles and responsibilities will be further developed and defined in the Sustainability Plan. The Agency's staff welcomes feedback during this process from the State, any of the agencies or organizations listed herein, and any other interested stakeholders.

If the Department of Water Resources ("DWR") requires anything further prior to the acceptance of this notification of the Agency's election to serve as the GSA for the Basin, please address your inquiry to:

Bruce Kuebler
Ventura River Water District
409 Old Baldwin Rd.
Ojai, California 93023

Appendix D

Santa Barbara Channelkeeper v. State Water Resources Control Board and the City of San Buenaventura (Los Angeles County Superior Court, Case No. 19STCP01176) Settlement Agreement and Amendments

TENTATIVE FINAL

Chanelkeeper**'s First Amended Complaint**

Daniel Cooper (Bar No. 153576)
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Attorneys for Petitioner
SANTA BARBARA CHANNELKEEPER

SUPERIOR COURT OF THE STATE OF CALIFORNIA

IN AND FOR THE COUNTY OF SAN FRANCISCO

SAN FRANCISCO DIVISION

SANTA BARBARA CHANNELKEEPER, a California non-profit corporation, Petitioner, v. STATE WATER RESOURCES CONTROL BOARD, a California State Agency; CITY OF BUENAVENTURA, a California municipal corporation, Respondents.	Case No. CPF-14-513875 **FIRST AMENDED COMPLAINT FOR DECLARATORY RELIEF AND VERIFIED PETITION FOR WRIT OF MANDATE** Code of Civil Procedure §§ 1060, 1085, 1086; California Constitution, Article X, § 2; Water Code § 275

I. **Introduction**

1. Santa Barbara Channelkeeper (Channelkeeper, SBCK, or Petitioner) hereby seeks from this Court a Declaratory Judgment pursuant to California Code of Civil Procedure section 1060 declaring that the City of Buenaventura's (Ventura or City) use of Reach 4 of the Ventura River (River) from April through October is unreasonable in violation of Article X, section 2 of the California Constitution.

2. Channelkeeper also petitions this Court for a Writ of Mandate pursuant to California Code of Civil Procedure section 1085:

a. Compelling the State Water Resources Control State Board (State Board or SWRCB) to perform its mandatory duties to prevent unreasonable use of the State's waters by conducting an analysis of Ventura's pumping and diversion of water from Reach 4 of the River based on existing conditions in the River, which have changed since Ventura began its use of the River, and to consider impacts to public trust resources resulting from Ventura's use of Reach 4, as required by Article X, section 2 of the California Constitution and section 275 of the Water Code,

b. Compelling the State Board to perform its mandatory duties to consider impacts to public trust resources by conducting an analysis of Ventura's pumping and diversion of water from Reach 4 of the River based on existing conditions in the River, which have changed since Ventura began its use of the River, as required by the Public Trust Doctrine; and/or

c. Enjoining the State Board from further abuse of discretion in failing to conduct an analysis of the reasonableness of Ventura's use of the River and in failing to conduct an analysis of the impacts to public trust resources resulting from Ventura's use of the River, as required by Article X, section 2 of the California Constitution, section 275 of the Water Code, and the Public Trust Doctrine.

II. **The Parties**

A. **Santa Barbara Channelkeeper**

3. Channelkeeper is a non-profit public benefit corporation organized under the laws of the State of California and headquartered in Santa Barbara, California.

4. Channelkeeper's office is located at 714 Bond Avenue, Santa Barbara, California 93103.

5. Channelkeeper's mission is to protect and restore the Santa Barbara Channel and its

tributaries for the benefit of its ecosystems and the surrounding human communities. Channelkeeper accomplishes its mission through science-based advocacy, education, field work, and enforcement of environmental laws. Because the Ventura River is one of the largest rivers that empties into the Santa Barbara Channel, it is a major focus of SBCK's work.

6. SBCK has served as a lead advocate, community organizer, educator, scientist, and monitor in the Ventura River watershed for 18 years. Via the "Ventura River Stream Team" citizen water quality monitoring program, Channelkeeper has trained and engaged 650 volunteers and collected 17 years of scientifically sound data characterizing water quality in the Ventura River and its tributaries. This data has been used extensively by various agencies to guide their pollution prevention and clean-up programs. In addition to this monitoring effort, SBCK has also served as the lead environmental advocate on a variety of priority issues throughout the watershed for many years. Channelkeeper and its members have surveyed nearly every mile of the Ventura River and its major tributaries, identifying and mapping water quality and habitat impairments. Channelkeeper served as the primary (and in many cases sole) stakeholder representing environmental interests in critical and technically complex environmental regulatory processes such as the Total Maximum Daily Loads (TMDL) for the Ventura River's impairments.

7. Thus, the interests of SBCK and its members have been, are being, and will continue to be adversely affected by the ongoing controversy between SBCK and Ventura and the State Board's failure to comply with the requirements of Constitution, the Water Code, and the Public Trust Doctrine described herein. The relief sought herein will redress the harms to SBCK caused by SBCK's controversy with Ventura and the State Board's failures to act. Continuing commission of the omissions alleged herein will irreparably harm SBCK's members, for which harm they have no plain, speedy or adequate remedy at law.

B. **The State Board**

8. The State Board is now, and at all times mentioned in this complaint and petition has been, a state agency under the laws of the State of California. *See* Water Code § 174 *et seq.*

9. The State Board is directly responsible for carrying out the Constitutional and statutory mandates to prevent the unreasonable use of California's waters. *See* Water Code §§ 174, 179, 275, and

1050.

10. The State Board is directly responsible for administering public trust resources on behalf of the people of the State. *See* Water Code § 1120.

C. **The City of Ventura**

11. Ventura is now, and at all times mentioned in this complaint and petition has been, a municipal corporation situated in the County of Ventura of the State of California. *See* Ventura Mun. Code § 100.

12. In 2011, Ventura formed a new city department, Ventura Water, which is responsible for managing Ventura's water supply, stormwater, and wastewater.

13. Ventura is obligated to make only reasonable and beneficial use of the waters of the State. *See* Cal. Const., art. X, § 2.

III. **Authenticity of Exhibits Attached**

14. The documents accompanying this first amended complaint and petition are true and correct copies of the original documents, and were obtained in the manner described in the Supplemental Declaration of Daniel Cooper in support of Channelkeeper's First Amended Complaint for Declaratory Relief and Verified Petition for Writ of Mandate (Supp. Cooper Dec.), which is filed concurrently herewith. Channelkeeper has consecutively numbered accompanying documents, and the exhibit citations herein refer to those consecutive page numbers.

15. The documents attached to the Supplemental Cooper Declaration are incorporated herein by reference as though fully set forth in this first amended complaint and petition.

IV. **Jurisdiction and Venue**

16. This Court has jurisdiction over this action pursuant to Code of Civil Procedure section 1060.

17. This Court has jurisdiction over this action pursuant to Code of Civil Procedure section 1085. *Elmore v. Imperial Irrigation Dist.* (1984) 159 Cal.App.3d 185, 192-93 ("The doctrine of exhaustion of administrative remedies is inapplicable in water cases. … The exhaustion of administrative remedies is not a prerequisite to the filing of a mandamus petition in water cases, nor does failure to exhaust preclude the court from exercising its concurrent original jurisdiction.") (citing

National Audubon Society v. Superior Court (1983) 33 Cal.3d 419, 449); *see also* Supp. Cooper Dec., Ex. A (State Board's Scott River Brief) at 6:19-20 ("The State [] Board and the courts have concurrent jurisdiction to apply the public trust doctrine.") (citing *National Audubon Society*, 33 Cal.3d at 449-451).

18. Venue is proper in this Court pursuant Code of Civil Procedure sections 395 and 401, as defendant State Board is a resident of Sacramento County and the Attorney General maintains an office in San Francisco County.

19. In 1998, the United States Environmental Protection Agency (EPA) approved California's list of impaired water bodies identified pursuant to section 303(d) (303(d) List) of the Federal Water Pollution Control Act (Clean Water Act), 33 U.S.C. § 1313(d), which first listed Reaches 3 and 4 of the Ventura River as impaired for pumping and diversion. On October 11, 2011, the EPA approved the State Board's triennial review and update to the 303(d) List, which maintained the pumping and diversion impairments for Reaches 3 and 4 of the Ventura River. On June 28, 2013, EPA approved the TMDL for algae, nutrients, and eutrophic conditions in the Ventura River (Ventura River TMDL). Under Code of Civil Procedure section 338(a), this action is properly before this Court, as it is filed not later than three years from the date EPA approved the State Board's updated 303(d) List and/or from the date EPA approved the Ventura River TMDL, or from the State Board's ongoing, indivisible course of conduct occurring since Reaches 3 and 4 of the Ventura River were first included on California's 303(d) List as impaired for pumping and diversion in 1998.

V. Regulatory Background

A. Water Rights in California

20. All water within the State of California is the property of the people of the State, but the right to the use of water may be acquired by appropriation in the manner provided by law. Water Code §§ 102, 1201.

21. California operates under a dual system of surface water rights that recognizes both riparian rights and appropriation rights. *Joslin v. Marin Mun. Water Dist.* (1967) 67 Cal.2d 132, 136-37 (providing review of development of California water law); *see also United States v. State Water Res. Control Bd.* (1986) 182 Cal.App.3d 82, 101.

22. Riparian rights confer upon a landowner the right to divert the water flowing by the land

for use on the land, without regard to the priority in time. *U.S. v. SWRCB*, 182 Cal.App.3d at 101.

23. In times of water shortage, riparian rights are paramount to appropriation rights. *U.S. v. SWRCB*, 182 Cal.App.3d at 104-105.

24. Appropriation rights confer upon the user who actually diverts and uses water the right to do so. *U.S. v. SWRCB*, 182 Cal.App.3d at 101-102. Appropriators are not required to own land contiguous to the watercourse or make use of the diverted water on the adjacent land, but appropriation rights are subordinate to riparian rights and as between appropriators, the rule of priority is "first in time, first in right." *Id.* at 102.

25. The Water Commission Act of 1913 at Water Code, Division 2, section 1000 *et seq.* establishes the regulatory framework governing appropriation rights, including permitting and licensing requirements. Appropriation rights acquired prior to enactment of the Water Commission Act (pre-1914 appropriation rights) are not subject to the Act's permit and licensing requirements. Water Code §§ 1006, 1202(b); *see also Cal. Farm Bureau Fed'n v. State Water Res. Control Bd.* (2011) 51 Cal.4th 421, 428-29; *State Water Res. Control Bd. Cases* (2006) 136 Cal.App.4th 674, 741-42.

26. California law also recognizes the right to the use of groundwater either as an overlying user or an appropriator. *City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224, 1240-41. Overlying groundwater users are analogous to riparian users, i.e., overlying groundwater users have the right to use the water beneath their land by virtue of their ownership of the land and must use the water on the overlying property. *City of Barstow*, 23 Cal.4th at 1240. Groundwater appropriators are subject to the "first in time, first in right" rule of priority and their use of the appropriated groundwater is not restricted to the overlying land. *City of Barstow*, 23 Cal.4th at 1241.

27. In times of water shortage, overlying groundwater rights are paramount to appropriation rights, either surface water appropriations or ground water appropriations. *City of Pasadena v. City of Alhambra* (1949) 33 Cal.2d 908, 926.

28. The Water Commission Act's permit and licensing requirements do not regulate the use of groundwater whether overlying or appropriative. *City of Pasadena*, 33 Cal.2d at 933-34.

29. Groundwater users in Ventura County are, however, required to report the volume of water used pursuant to an overlying or appropriation right to the State Board. Water Code §§ 4999, *et*

seq.

B. **Beneficial Uses of State Waters**

30. All waters of the State must be put to beneficial use. *See* Cal. Const., art. X, § 2; *see also* Water Code §§ 1201, 1240.

31. Several provisions of California law define beneficial uses and beneficial use categories to be applied to the State's waters. Pursuant to these provisions categories of beneficial uses include: (1) Aquaculture, raising fish or other aquatic organisms not for release to other waters; (2) Domestic, water used by homes, resorts, or campgrounds, including water for household animals, lawns, and shrubs; (3) Fire Protection, water to extinguish fires; (4) Fish and Wildlife, enhancement of fish and wildlife resources, including raising fish or other organisms for scientific study or release to other waters of the state; (5) Frost Protection, sprinkling to protect crops from frost damage; (6) Heat Control, sprinkling to protect crops from heat; (7) Industrial Use, water needs of commerce, trade, or industry; (8) Irrigation, agricultural water needs; (9) Mining, Hydraulicking, drilling and concentrator table use; (10) Municipal, city and town water supplies; (11) Power, generating hydroelectric and hydromechanical power; (12) Recreation, boating, swimming, and fishing; (13) Stock watering, Commercial livestock water needs; and (14) Water Quality Control, protecting and improving waters that are put to beneficial use. *See* Water Code §§ 100, 106, 1004, 1005.1, 1005.2, 1005.4, 1010, 1011, 1011.5, 1012, 1017, 1242, 1242.5, 1243, 1243.5, and 13050(f).

32. Under California law, each regional board is required to formulate and adopt "water quality control plans," commonly known as "Basin Plans," for all hydrologic areas within their region. Water Code § 13240. A Basin Plan "consists of a designation or establishment for the waters within a specified area" of all of the following: "(1) Beneficial uses to be protected; (2) Water quality objectives; [and] (3) A program of implementation needed for achieving water quality objectives." Water Code § 13050(j).

33. Water quality objectives are numeric or narrative water quality standards that must be attained or maintained in order to protect the designated beneficial uses of a water body. *See* 33 U.S.C. §§ 1312, 1313(a).

34. Under the Clean Water Act, when effluent limitations are insufficient to ensure

compliance with water quality objectives and a water body can no longer be put to its designated beneficial uses, that water body's beneficial uses are impaired and the State must place that water body on the list of impaired waters. 33 U.S.C. § 1313(d)(1). The State must also develop a TMDL for the pollutant(s) impairing the water body. 33 U.S.C. § 1313(d)(1). The State must submit its list of impaired water bodies, pollutants causing impairments, and a priority ranking including water bodies targeted for TMDL development to the EPA for review and approval every two years. 40 C.F.R. § 130.7(d).

35. TMDLs can be developed by the EPA or the state. 33 U.S.C. 1313(d); 40 C.F.R. § 130.7. Each TMDL must be "established at a level necessary to implement the applicable water quality standards." 33 U.S.C. § 1313(d)(1)(C); 40 C.F.R. § 130.2(i). Each TMDL must include the individual waste load allocations (WLAs) for point sources discharging into the water body, as well as load allocations for non-point sources and natural background sources. 33 U.S.C. § 1313(d)(1)(C); 40 C.F.R. § 130.2(i). WLAs are "[t]he portion of a receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation." 40 C.F.R. § 130.2(h).

C. **The Reasonable Use Doctrine**

36. In addition to the requirement that all water be put to beneficial use, all water rights in California are constrained by the "rule of reasonableness," which has been preserved in the state Constitution since 1928. *See, e.g., Light v. State Water Res. Control Bd.* (2014) 2014 Cal.App.LEXIS 523, at *17 (citing Cal. Const., art. X, § 2). This constitutional requirement is "generally construed as applying a rule of reasonable use 'to all water rights enjoyed or asserted in this state, whether the same be grounded on the riparian right or the right, analogous to the riparian right, of the overlying land owner, or the percolating water right, or the appropriative right.'" *Joslin*, 67 Cal.2d at 138 (quoting *Peabody v. City of Vallejo* (1935) 2 Cal.2d 351, 383).

37. Specifically, article X, section 2 of the California Constitution states:

> It is hereby declared that because of the conditions prevailing in this State the general welfare requires that the water resources of the State be put to beneficial use to the fullest extent of which they are capable, and that **the waste or unreasonable use or unreasonable method of use of water be prevented**, and that the conservation of such waters is to be exercised with a view to the reasonable and beneficial use thereof in the interest of the people and for the public welfare. **The right to water or to the use or**

> **flow of water in or from any natural stream or water course in this State is and shall be limited to such water as shall be reasonably required for the beneficial use to be served, and such right does not and shall not extend to the waste or unreasonable use or unreasonable method of use or unreasonable method of diversion of water.** Riparian rights in a stream or water course attach to, but to no more than so much of the flow thereof as may be required or used consistently with this section, for the purposes for which such lands are, or may be made adaptable, in view of such reasonable and beneficial uses; provided, however, that nothing herein contained shall be construed as depriving any riparian owner of the reasonable use of water of the stream to which the owner's land is riparian under reasonable methods of diversion and use, or as depriving any appropriator of water to which the appropriator is lawfully entitled. **This section shall be self-executing**, and the Legislature may also enact laws in the furtherance of the policy in this section contained.

(emphasis added). The rule of reasonableness, i.e., the reasonable use doctrine, is the overriding principle governing the use of water in California. *See Peabody*, 2 Cal.2d at 367-68.

38. The constitutional mandate that unreasonable use and waste of the State's waters be prevented is also codified at sections 100, 101, and 106.5 of the Water Code.

39. What constitutes an unreasonable use of water is determined on a case-by-case basis depending on the totality of circumstances. *See Peabody*, 2 Cal.2d at 368; *see also Joslin*, 67 Cal.2d at 139; *Imperial Irrigation Dist. v. State Water Res. Control Bd.* (1986) 186 Cal.App.3d 1160, 1165. "What may be a reasonable beneficial use, where water is present in excess of all needs, would not be a reasonable beneficial use in an area of great scarcity and great need." *Tulare Irrigation Dist. v. Lindsay-Strathmore Dist.* (1935) 3 Cal.2d 489, 567.

40. Conformity of a use, method of use, or method of diversion of water with local custom shall not be determinative of its reasonableness, but is considered as one factor to be weighed in determining the reasonableness of the use, method of use, or method of diversion within the meaning of Article X of the California Constitution. Water Code § 100.5.

41. "Impacts on public trust uses are a relevant consideration in determining whether a diversion is unreasonable." Supp. Cooper Dec., Ex. A (State Board's Scott River Brief) at 15:8-12.

42. In issuing regulations to prevent unreasonable use of a water body segment, the State Board stated: "The premise underlying the proposed Regulation is that a diversion of water that is harmful to salmonids is an unreasonable use of water if the diversion can be managed to avoid the harm." Supp. Cooper Dec., Ex. B (State Board's Notice of Preparation and Public Scoping Meeting on

Russian River Frost Regulation) at 26.

43. The reasonableness of a use of water changes over time. "What is a beneficial use at one time may, because of changed conditions, become a waste of water at a later time." *Tulare Irrigation Dist.*, 3 Cal.2d at 576. Further, the reasonableness of a use of water "cannot be resolved *in vacuo* isolated from statewide considerations of transcendent importance. Paramount among these [is] the ever increasing need for the conservation of water in this state, an inescapable reality of life quite apart from its express recognition in the 1928 amendment." *Joslin*, 67 Cal.2d at 140.

44. The California Supreme Court has found the unreasonableness of a specific use of water to be self-evident as a matter of law. *Light*, 2014 Cal.App.LEXIS at *19-20 (citing *Tulare Irrigation Dist.*, 3 Cal.2d at 568; *Joslin*, 67 Cal.2d at 141 (holding that the use of waters to expose and carry and deposit sand, gravel, and rock was "as a matter of law unreasonable within the meaning of the constitutional amendment")).

45. A water user cannot acquire a vested right to the unreasonable use of water. *See, e.g.*, *Joslin*, 67 Cal.2d at 145.

46. A water right holder's water use is properly involuntarily curtailed based on the unreasonableness of the use. *See, e.g., Joslin*, 67 Cal.2d at 140-41; *see also* Gray, *The Modern Era in California Water Law* (1994) 45 Hastings L.J. 249, 253-72.

47. "When the supply of water in a particular stream system is insufficient to satisfy all beneficial uses, water rights users must curtail their use." *Light*, 2014 Cal.App.LEXIS at *39. While "it is ordinarily the function of the rule of priority to determine the degree to which any particular use must be curtailed, the [State] Board has the ultimate authority to allocate water in a manner inconsistent with the rule of priority, when doing so is necessary to prevent the unreasonable use of water." *Id*. at 39-40 (citing *El Dorado Irrigation Dist. v. St. Water Res. Control Board* (2006) 142 Cal.App.4th 937, 966).

48. A dispute as to the reasonableness of a use of water concerning competing beneficial uses does not implicate the rule of priority. *See Light*, 2014 Cal.App.LEXIS at 40-41.

D. **The Public Trust Doctrine**

49. The public trust doctrine provides that "the sovereign owns 'all of its navigable waterways and the lands lying beneath them as trustee of a public trust for the benefit of the people.'"

National Audubon Society, 33 Cal.3d at 434 (internal citations omitted).

50. It is well settled in the United States generally and in California that the public trust is not limited by the reach of the tides, but encompasses all navigable lakes and streams. *National Audubon Society*, 33 Cal.3d at 435.

51. Public trust resources traditionally included navigation, commerce and fishing. *National Audubon Society*, 33 Cal.3d at 434. The public trust doctrine now also encompasses the preservation of lands adjacent to navigable waters in their natural state "so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area." *National Audubon Society*, 33 Cal.3d at 434-35. Such preservation is recognized as "one of the most important public uses of the tidelands." *National Audubon Society*, 33 Cal.3d at 434.

52. "The public trust doctrine also applies to activities that harm fish in all waters within the state." Supp. Cooper Dec., Ex. A (State Board's Scott River Brief) at 6:13-19 (citing cases).

53. "The public trust doctrine, as recognized and developed in California decisions, protects navigable waters from harm caused by diversion of nonnavigable tributaries." *National Audubon Society*, 33 Cal.3d at 437 (footnotes omitted). This includes groundwater hydrologically connected to navigable surface waters. *National Audubon Society*, 33 Cal.3d at 436-37.

54. "In administering the trust the state is not burdened with an outmoded classification favoring one mode of utilization over another." *National Audubon Society*, 33 Cal.3d at 436. "The state as sovereign retains continuing supervisory control over its navigable waters and the lands beneath those waters. This principle, fundamental to the concept of the public trust, applies to rights in flowing waters as well as to the rights in tidelands and lakeshores; it prevents any party from acquiring a vested right to appropriate water in a manner harmful to the interests protected by the public trust." *Id.* at 445.

55. "To further the protection of public trust uses, the public trust doctrine limits conduct affecting those uses," including groundwater extraction impacting public trust uses. Supp. Cooper Dec., Ex. A (State Board's Scott River Brief) at 6:20-25.

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E. The State Board Has Mandatory Duties to Prevent Unreasonable Use and to Consider Public Trust Resources in Regulating the Use of the State's Waters

56. Article X, section 2 of the California Constitution is self-executing and imposes a mandatory duty on the State Board to prevent unreasonable use, among other obligations. *See Envt'l Defense Fund v. East Bay Mun. Utility Dist.* (1980) 26 Cal.3d 183, 195 ("the [State Board's] duties and responsibilities over appropriative rights include insuring that they meet the mandate of article X, section 2"); *see also City of* Barstow, 23 Cal.4th at 1236; *Elmore*, 159 Cal.App.3d at 193-97; *see also* Supp. Cooper Dec., Ex. A (State Board's Scott River Brief) at 14:15-15:4.

57. The mandatory duty imposed by Article X, section 2 is ongoing. *City of Barstow*, 23 Cal.4th at 1243.

58. Provisions of the Water Code also impose upon the State Board a mandatory, affirmative duty to prevent unreasonable use of the State's waters, such as uses resulting in harm to trust resources. Specifically, section 275 of the Water Code states: "The department and board shall take all appropriate proceedings or actions before executive, legislative, or judicial agencies to prevent waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion of water in this state."

59. Consistent with the duty under section 275, section 104 of the Water Code states: "The people of the State of California have a paramount interest in the use of all the water of the State and the State determines what water of the State, surface or groundwater, can be converted to public use or controlled for public protection."

60. The State Board has interpreted section 275 as imposing a mandatory duty: "Water Code section 275 directs the State Water Board to 'take all appropriate proceedings or actions before executive, legislative, or judicial agencies . . .' to enforce the constitutional and statutory prohibition against waste, unreasonable use, unreasonable method of use, or unreasonable method of diversion, commonly referred to as the reasonable use doctrine." Supp. Cooper Dec., Ex. B (State Board's Notice of Preparation and Public Scoping Meeting on Russian River Frost Regulation) at 26; *see also* Supp. Cooper Dec., Ex. A (State Board's Scott River Brief) at 14:3-8.

61. Part of the State Board's mandatory duty to prevent unreasonable use includes considering impacts to public trust resources caused by water use. *National Audubon Society*, 33 Cal.3d

at 446; *see also* Supp. Cooper Dec., Ex. A (State Board's Scott River Brief) at 14:3-15:16 (explaining that to carry out its duty under Water Code section 275, the State Board applies the public trust doctrine, among other considerations).

62. The State Board's mandatory duties prescribed by article X, section 2 and section 275, which include carrying out its obligations under the Public Trust Doctrine, apply to all types of water rights, including riparian, pre-1914, and groundwater appropriation rights. *Envt'l Defense Fund*, 26 Cal.3d at 194-95, 198; *see also* Supp. Cooper Dec., Ex. B (State Board's Notice of Preparation and Public Scoping Meeting on Russian River Frost Regulation) at 26-27; Supp. Cooper Dec., Ex. C at 48-50 (explaining that the State Board's regulation applies to interconnected groundwater).

63. The State has a duty to exercise continued supervision over trust resources. *National Audubon Society*, 33 Cal.3d at 437-440. As applied to a water user's right to use water of the State, the State Board "has an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible." *National Audubon Society*, 33 Cal.3d at 446.

64. The continuing, affirmative duty to take impacts on public trust resources from use of the State's waters into account applies to all types of water rights. *National Audubon Society*, 33 Cal.3d at 445. This is especially true when an appropriation of water has never been reviewed for its impact on public trust resources. *Id*. at 446.

65. The State may not abdicate its public trust duties. *National Audubon Society*, 33 Cal.3d at 437-38.

VI. Facts and Procedural Background

A. The Ventura River Watershed

66. As described in the Ventura River TMDL, the Ventura River Watershed is located in the northwestern portion of Ventura County with a small portion in the southeastern portion of Santa Barbara County. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 94. The watershed drains a fan-shaped area of about 220 square miles with an elevation from 6,000 feet to sea level. *Id*.

67. The River has several major tributaries, including Matilija Creek, North Fork Matilija Creek, San Antonio Creek, Coyote Creek, and Cañada Larga. Supp. Cooper Dec., Ex. D (EPA Draft

TMDL) at 94.

68. The cities of Ojai and Ventura are the largest urban areas in the watershed and the communities of Casitas Springs, Foster Park, Oak View, Valley Vista, Mira Monte, Meiners Oaks, Upper Ojai, and Live Oak Acres are within the unincorporated Ventura County. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 98.

69. The Ventura River consists of five reaches, which, upstream from the Pacific Ocean, are: Reach 1 (Ventura River Estuary to Main Street), Reach 2 (Main Street to Weldon Canyon), Reach 3 (Weldon Canyon to Casitas Vista Road), Reach 4 (Casitas Vista Road to Camino Cielo Road), and Reach 5 (above Camino Cielo Road). Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 101-102; Supp. Cooper Dec., Ex. E (Basin Plan) at 195.

70. The Upper Ventura River Basin underlies Reach 4, stretching from Camino Cielo Road to Foster Park at Casitas Vista Road.

71. The Upper Ventura River Basin's maximum capacity is 35,118 acre-feet of water per year. Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

72. There are two major dams, Matilija and Casitas; a river diversion, Robles Diversion Facility; and a subsurface diversion, Foster Park Subsurface Diversion, on the River. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 101.

73. Flow in the Ventura River varies seasonally due to a Mediterranean climate pattern of wet cool winters from November through March and dry warm summers from April through October. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 98. High flows predominate during the rainy season, starting in winter through early spring. *Id*.

74. As shown in the Ventura River TMDL, between October 2000 and October 2008 peak flows in the Foster Park vicinity, i.e., Reaches 3 and 4, occurred after winter storm events and the flows declined to very low levels, less than 1 cubic foot per second (cfs), during the summer dry season. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 99. This dry pattern was mitigated in the lower Ventura River, Reaches 1 and 2, by effluent from the Ojai Valley Waste Water Treatment Plant, which constitutes a majority or, at times, all of the flow in this section of the river during summer and fall of

dry years. *Id*.

75. In addition to natural variations in flow, based on annual rainfall, flow regimes in the Ventura River have been altered to support water supply and allow for municipal development, including by the City. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 99; Supp. Cooper Dec., Ex. F (Historical Ecology of the Ventura River) at 204, 274-75, 280.

76. Flow in any particular reach of the River is additionally affected by the status of the underlying groundwater basin (whether full, filling, or emptying), the occurrence of natural recharge areas where surface flows will disappear at times, flow between groundwater basins, and the amount of surface or groundwater withdrawals for municipal, domestic, or agricultural uses. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 100.

77. According to the National Marine Fisheries Service (NMFS), flows in the Ventura River are naturally perennial, due to the geology of the bedrock formation beneath the river facilitating groundwater from the aquifer to rise, and partially because of the Foster Park subsurface dam. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 355.

78. The flow in the river is disrupted at Foster Park (which overlies the Upper Ventura River Groundwater Basin) due to subsurface diversions and groundwater extraction. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 100.

79. The City of Ventura's water production facilities are located at Foster Park, the southern and down-gradient terminus of the Upper Ventura River Basin. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 100, 102; see also Supp. Cooper Dec., Ex. W (Ventura River Watershed Plan) at 1076-1078.

80. There is a high degree of hydraulic connectivity between the groundwater and surface hydrology in the Foster Park area. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 356. Due to this connectivity a 1-to-1 relationship between groundwater withdrawals in Foster Park and River surface flows in Reaches 3 and 4 has been assumed. *Id.* at 356, 363.

B. Southern California Steelhead Trout and Other Endangered Species in the Ventura River Watershed

81. The Ventura River watershed is home to at least 11 endangered or threatened species, including southern California steelhead trout, arroyo toad, California least tern, California red-legged

frog, Foothill yellow-legged frog, Least Bell's vireo, southwestern willow flycatcher, and western snowy plover. *See* U.S. Fish & Wildlife Service, Listing and Occurrence for California available at: http://ecos.fws.gov/tess_public/pub/stateListingAndOccurrenceIndividual.jsp?state=CA&s8fid=112761032792&s8fid=112762573902, last visited August 18, 2014; *see also* Cal. Dept. of Fish and Wildlife, Endangered and Threatened Species List available at: http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/TEAnimals.pdf, last visited August 18, 2014.

82. Before dams were constructed in the Ventura River Watershed, during normal to wet years the steelhead run was estimated at 4,000-5,000 individuals. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 100.

83. Following the construction of Matilija Dam (located upstream of Reach 3), which cut off access to about half of the prime spawning habitat, and coincident with a drought in the late 1940s, steelhead runs dropped to about 2,000-2,500 individuals. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 101.

84. By the 1990s there had been a 96% decline in the steelhead population in the Ventura River, prompting its listing as an endangered species in 1997. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 352; *see also* Supp. Cooper Dec., Ex. H (Southern California Steelhead Recovery Plan) at 437 (describing declines in steelhead run sizes of 90% or more).

85. During dry years, juvenile fish unable to transit back downstream to the ocean due to low flows must survive in pools in the mainstem, i.e., Reaches 3 and 4. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 101.

86. The fish are subjected to elevated temperatures, endure competition with other fish for a decreasing food supply, and are exposed to predators. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 101.

87. The Ventura River (including Reaches 3 and 4), Ventura River Estuary, San Antonio Creek, Cañada Larga, Matilija Creek and North Fork Matilija Creek, among other tributaries, have been designated as critical habitat for the remaining population of the southern California Steelhead, which is estimated at less than 500 spawning adults. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 104; Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 354.

88. Reaches 3 and 4 of the Ventura River are occupied by steelhead and are rated as having high conservation value. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 355-56. These reaches of the River provide spawning and rearing habitat and serve as a migratory corridor for steelhead to upstream reaches. *Id*. at 356-57.

89. In 2012, NMFS developed the Southern California Steelhead Recovery Plan, a guidance document the goals of which are to prevent the extinction of southern California steelhead in the wild, to ensure the long-term persistence of viable, self-sustaining populations of steelhead distributed across the Southern California Distinct Population Segment, including the Ventura River, and to re-establish a sustainable southern California steelhead sportfishery. Supp. Cooper Dec., Ex. H (Southern California Steelhead Recovery Plan) at 417.

90. Since southern California steelhead were listed as endangered in 1997, the impacts leading to the listing remain prevalent and widespread. Supp. Cooper Dec., Ex. H (Southern California Steelhead Recovery Plan) at 447. These impacts include present or threatened destruction, modification or curtailment of habitat or range, over-utilization of the steelhead population for commercial, recreational, scientific, or educational purposes, disease and predation, inadequacy of existing regulatory mechanisms, and other natural or human-made factors affecting continued existence. *Id.* at 448-453.

91. As to the steelhead population in the Ventura River, NMFS found the critical recovery actions to include providing fish passage around dams and diversions, including Foster Park, and developing and implementing water management plans for diversion operations such as Foster Park. Supp. Cooper Dec., Ex. H (Southern California Steelhead Recovery Plan) at 462, 514.

92. NMFS also found that diversions from the Ventura River at Foster Park contribute to the present or threatened destruction, modification or curtailment of steelhead habitat or range and disease and predation of steelhead. Supp. Cooper Dec., Ex. H (Southern California Steelhead Recovery Plan) at 514.

93. The inadequacy of existing regulatory mechanisms for diversions at Foster Park contributed to the listing and continuing impacts to endangered steelhead. Supp. Cooper Dec., Ex. H (Southern California Steelhead Recovery Plan) at 514.

94. Reaches 3 and 4 of the River are part of the lower basin. Supp. Cooper Dec., Ex. I

(Steelhead Population Assessment) at 576 (map).

95. The fish abundance surveys conducted in the Ventura/Matilija basin over an eight-week period between June 21 and August 11, 2011 counted or captured a total of 1,241 steelhead in the Ventura River. Supp. Cooper Dec., Ex. I (Steelhead Population Assessment) at 581.

96. In most previous years, and in 2011, overall steelhead abundance was highest in the upper basin segment above Matilija Dam, intermediate in the middle basin segment between Robles Diversion Dam and Matilija Dam, and lowest in the lower basin segment. Supp. Cooper Dec., Ex. I (Steelhead Population Assessment) at 604.

97. The upper basin was estimated to contain 77% of steelhead fry, with only 1% in the lower basin. Supp. Cooper Dec., Ex. I (Steelhead Population Assessment) at 604.

98. Relative abundance of juvenile steelhead was more evenly distributed among basin segments in 2011, with 45% in the upper basin, 25% in the middle basin, and 29% in the lower basin. Supp. Cooper Dec., Ex. I (Steelhead Population Assessment) at 604.

C. The Ventura River Is Impaired for Pumping and Diversion and Cannot Support its Beneficial Uses

99. The designated potential and existing beneficial uses of Reach 1 are municipal and domestic supply, industrial service supply, agricultural supply, ground water recharge, freshwater replenishment, warm freshwater habitat, cold freshwater habitat, wildlife habitat, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, wetland habitat, and recreation. Supp. Cooper Dec., Ex. E (Basin Plan) at 195; Supp. Cooper Dec., Ex. X (Basin Plan) at 1145.

100. The designated potential and existing beneficial uses of Reach 2 are municipal and domestic supply, industrial service supply, agricultural supply, ground water recharge, freshwater replenishment, warm freshwater habitat, cold freshwater habitat, wildlife habitat, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, wetland habitat, and recreation. Supp. Cooper Dec., Ex. E (Basin Plan) at 195; Supp. Cooper Dec., Ex. X (Basin Plan) at 1145.

101. The designated potential and existing beneficial uses of Reach 3 are municipal and

domestic supply, industrial service supply, agricultural supply, ground water recharge, freshwater replenishment, warm freshwater habitat, cold freshwater habitat, wildlife habitat, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, wetland habitat, and recreation. Supp. Cooper Dec., Ex. E (Basin Plan) at 195; Supp. Cooper Dec., Ex. X (Basin Plan) at 1145.

102. The designated potential and existing beneficial uses of Reach 4 are municipal and domestic supply, industrial service supply, agricultural supply, ground water recharge, freshwater replenishment, warm freshwater habitat, cold freshwater habitat, wildlife habitat, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, wetland habitat, and recreation. Supp. Cooper Dec., Ex. E (Basin Plan) at 195; Supp. Cooper Dec., Ex. X (Basin Plan) at 1145.

103. The designated existing beneficial uses of Reach 5 are municipal and domestic supply, industrial service supply, industrial process supply, agricultural supply, ground water recharge, freshwater replenishment, warm freshwater habitat, cold freshwater habitat, wildlife habitat, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, wetland habitat, and recreation. Supp. Cooper Dec., Ex. E (Basin Plan) at 195; Supp. Cooper Dec., Ex. X (Basin Plan) at 1145.

104. In 1998, the State Board approved and issued California's 303(d) List which first listed water pumping and diversions as impairing the designated beneficial uses of Reaches 3 and 4 of the Ventura River. Ex. D (EPA Draft TMDL) at 92; *see also* 33 U.S.C. § 13370 (explaining that the State Board is responsible for implementing Clean Water Act requirements, which include approval and issuance of California's 303(d) List).

105. Reaches 3 and 4 of the Ventura River were listed on California's 303(d) List as impaired for pumping and diversion in 1998. Supp. Cooper Dec., Ex. J (Reach 3 Impairment Listing) at 613-15; Supp. Cooper Dec., Ex. K (Reach 4 Impairment Listing) at 619-21.

106. In 2017, the State Board removed Reaches 3 and 4 of the Ventura River from California's 303(d) List, but none of the factors that led to the original impairment listing have been addressed and the impairment due to pumping and diversion is ongoing and continuous. Supp. Cooper Dec. Ex. AA

(2014/2016 Integrated Report Ventura River Excerpt) at 1199, 1209-1216.

107. "[T]he River is considered an impacted habitat that is impaired by dams and diversion structures that impede the seasonal migration of fish, and by groundwater extractions in the upper Ventura Groundwater Basin and Ojai Groundwater Basin (which drains to San Antonio Creek) that reduce river flows." Supp. Cooper Dec., Ex. O (Ventura Flows Study) at 662.

108. Although low and intermittent flows may be natural in the Ventura River system, low flows due to pumping and diversion activities likely exacerbate the flow and water quality conditions in Reaches 3 and 4. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 102.

109. The low flows in conjunction with other existing degraded water quality conditions affect beneficial uses. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 102.

110. Beneficial uses impaired by pumping and diversions in Reaches 3 and 4 of the Ventura River include cold freshwater habitat, wildlife habitat, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, and wetland habitat. *See* Ex. D (EPA Draft TMDL) at 104.

D. **Ventura's Water Rights, and Pumping and Diversions from the Ventura River**

111. Ventura has filed groundwater recordations for three diversions from wells in the vicinity of Foster Park and a Statement of Water Diversion and Use under a pre-1914 claim to water from the Ventura River. Supp. Cooper Dec., Ex. N (PRA Response) at 654; Supp. Cooper Dec., Ex. Q (Ventura Water Rights) at 1017-1027. These rights are identified by the following identification numbers: G561269, G561270, G561025, and S010335. Supp. Cooper Dec., Ex. N (PRA Response) at 654.

112. Based on the nature of its water rights, Ventura is not required to apply for or have permit or license to appropriate water from the Ventura River. And Ventura, in fact, has no permit or license to appropriate water from the River.

113. Ventura's water right pursuant to S010335 was first put to use in 1870. Supp. Cooper Dec., Ex. Q (Ventura Water Rights) at 1023.

114. The Foster Park diversion/subsurface dam was constructed in 1906. Supp. Cooper Dec., Ex. D (EPA Draft TMDL) at 102.

115. Ventura's water rights are appropriative.

116. Ventura's appropriative water rights are subordinate to upstream riparian and overlying groundwater rights in the Ventura River watershed.

117. There are riparian water rights upstream of the Foster Park Diversion.

118. There are overlying groundwater rights upstream of the Foster Park Diversion.

119. Ventura's appropriative water rights are subordinate to appropriative water rights first put to use before 1870.

120. The Foster Park subsurface dam is downstream of San Antonio Creek near the point at which Reach 4 ends and Reach 3 begins; it also overlies the downstream end of the Upper Ventura River Groundwater Basin (Foster Park Diversion). *Id*. "The submerged dam is approximately 975 feet long and extends from the confluence of Coyote Creek almost completely across the river channel," the purpose of which is to bring subsurface water flow to the surface in the Foster Park area for agricultural and domestic use. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 355.

121. In the winter of 2005, Ventura's facilities at Foster Park were damaged when large storms caused the River to flood. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 346. Ventura applied for a permit from the Army Corps of Engineers (Corps) to repair its well facilities in the Ventura River pursuant to section 404 of the Clean Water Act, and the Corps requested concurrence from NMFS that Ventura's proposed repairs were not likely to adversely affect endangered steelhead in the River. *Id*.

122. In response to the Corps request, and after additional information was provided, NMFS issued a Draft Biological Opinion finding that Ventura's resumed pumping and diversion in the Foster Park vicinity would likely jeopardize the continued existence of steelhead and would likely destroy or adversely modify critical steelhead habitat. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 346-47, 379.

123. After NMFS issued its Draft Biological Opinion, Ventura did not pursue its permit application submitted to the Corps, and did not complete the proposed repairs subject to Corps jurisdiction.

124. However, pursuant to its water rights (G561269, G561270, G561025, and S010335), Ventura currently operates 5 water production facilities at the Foster Park Diversion for municipal supply: Nye Well No. 2, Nye Well No. 7, Nye Well No. 8, Nye Well No. 11, and Subsurface Collector.

Supp. Cooper Dec., Ex. O (Ventura Flows Study) at 669, 692 (map), 694 (map).

125. Ventura has acknowledged that the appropriation rights Ventura obtained via deed from Southern California Edison in 1923 for appropriation of 58,035 acre-feet per year allows appropriation of more water than the Ventura River normally yields. Supp. Cooper Dec., Ex. P (Summary of Biological Opinion Timeline) at 1002.

126. In 2011, Ventura asserted a right to appropriate 72,397 acre-feet per year from the Ventura River. Supp. Cooper Dec., Ex. Q (Ventura Water Rights) at 1007; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

127. Ventura's asserted right to appropriate 72,397 acre-feet allows appropriation of more water than the Ventura River normally yields.

128. Between 1980 and 2000, Ventura extracted an average of approximately 6,350 acre-feet of surface flow and groundwater annually. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 361.

129. Between 2008 and 2013, Ventura extracted an average of approximately 2,970 acre-feet of surface flow and groundwater annually. Supp. Cooper Dec., Ex. R (Production and Flows Summary Table) at 1028-1029.

130. From January through July 2014, Ventura extracted approximately 1,955 acre-feet of surface flow and groundwater from the Ventura River, which reflects an increase in the average monthly extractions compared to the monthly averages for 2008 through 2013. Supp. Cooper Dec., Ex. R (Production and Flows Summary Table) at 1028-1029.

131. Ventura's extractions from January through July 2014 occurred during California's current drought with 2014 expected to be the driest year on record. Supp. Cooper Dec., Ex. U (Drought Declaration) at 1053-59.

132. Between 2014 and 2017, Ventura extracted an average of approximately 2,030 acre-feet of surface flow and groundwater annually. Supp. Cooper Dec., Ex. Y (Updated Production and Flows Summary Table) at 1164-1167.

E. **Ventura's Pumping and Diversion from Reach 4 of the Ventura River**

133. From 2014-2016, the Ventura River went dry at the Foster Park Diversion. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec., Ex. LL

(Updated Source Report and Flow Summary) at 2037-2042.

134. When Ventura pumps and diverts at the Foster Park Diversion flows in Reach 4 of the Ventura River are reduced. Supp. Cooper Dec. Ex. BB (Foster Park Production vs. River Flow) at 1217.

135. When Ventura ceases its pumping and diversion at the Foster Park Diversion, flows in Reach 4 of the Ventura River increase. Supp. Cooper Dec. Ex. BB (Foster Park Production vs. River Flow) at 1217.

136. The Foster Park Diversion can impact critical habitat and steelhead at any time of year because Ventura withdraws water at all times of the year. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 361; Supp. Cooper Dec. Ex. BB (Foster Park Production vs. River Flow) at 1217.

137. However, negative impacts to steelhead and critical habitat from the Foster Park Diversion are most likely to occur in the summer and fall when the river flows are low, i.e., April through October. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 361; Supp. Cooper Dec. Ex. BB (Foster Park Production vs. River Flow) at 1217.

138. Summer and fall withdrawals from the Foster Park Diversion decrease the functional value of the downstream reaches as an oversummering area for juvenile steelhead. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 361. NMFS considers the reduction in quantity and quality of oversummering rearing sites from water diversion unfavorable for steelhead conservation. *Id.*

139. To avoid jeopardizing steelhead existence and destruction or adverse modification of critical steelhead habitat, NMFS found that flows in the Ventura River at the Foster Park USGS gauge no. 111185000 should not fall below 11 to 12 cfs. Supp. Cooper Dec., Ex. G (Draft Biological Opinion) at 378-79.

140. In June 2013, Ventura conducted a preliminary hydrogeological study and surface water/groundwater interaction study for the City's diversions at Foster Park. Supp. Cooper Dec., Ex. O (Ventura Flows Study) at 658. "The findings of this study indicate a flow threshold exists whereby when flows decrease below the threshold, the steelhead habitat suitability declines significantly." *Id*. The threshold set by the Ventura study is 2 cfs. Supp. Cooper Dec., Ex. O (Ventura Flows Study) at 659.

141. Ventura continues to pump and divert water from the Foster Park Diversion after water levels in the River fall below 11 to 12 cfs. Supp. Cooper Dec., Ex. R (Production and Flows Summary

Table) at 1028-29, Ex. S (Ventura Source Report), Ex. T (Foster Park Flow Data); Supp. Cooper Dec. Ex. BB (Foster Park Production vs. River Flow) at 1217; Supp. Cooper Dec., Ex. Y (Updated Production and Flows Summary Table) at 1164-1167.

142. Ventura continues to pump and divert water from the Foster Park Diversion in a manner that contributes to water levels in the River falling below 11 to 12 cfs. Supp. Cooper Dec., Ex. R (Production and Flows Summary Table) at 1028-29, Ex. G (Draft Biological Opinion) at 378; Supp. Cooper Dec. Ex. BB (Foster Park Production vs. River Flow) at 1217; Supp. Cooper Dec., Ex. Y (Updated Production and Flows Summary Table) at 1164-1167.

143. Ventura continues to pump and divert water from the Foster Park Diversion after water levels in Ventura River fall below the 2 cfs threshold. Supp. Cooper Dec., Ex. R (Production and Flows Summary Table) at 1028-29, Ex. S (Ventura Source Report), Ex. T (Foster Park Flow Data); Supp. Cooper Dec. Ex. BB (Foster Park Production vs. River Flow); Supp. Cooper Dec., Ex. Y (Updated Production and Flows Summary Table) at 1164-1167.

144. Ventura continues to pump and divert water from the Foster Park Diversion in a manner that contributes to water levels in Ventura River falling below the 2 cfs threshold. Supp. Cooper Dec., Ex. R (Production and Flows Summary Table) at 1028-29, Ex. G (Draft Biological Opinion) at 378, Ex. O (Ventura Flows Study) at 659; Supp. Cooper Dec. Ex. BB (Foster Park Production vs. River Flow) at 1217; Supp. Cooper Dec., Ex. Y (Updated Production and Flows Summary Table) at 1164-1167.

145. Ventura's self-reported existing pumping and diversion capacity at the Foster Park Diversion is 4,200 acre-feet of water per year. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171.

146. In 2015, Ventura had the existing capacity at Foster Park to pump and divert all water that would have remained in the river if all non-overlying groundwater users in the Ojai Basin and all other reported users in the entire Ventura River watershed reduced their pumping and diversions from the Ventura River watershed by 50%. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171.

147. In 2016, Ventura had the existing capacity at Foster Park to pump and divert all water that would have remained in the river if all non-overlying groundwater users in the Ojai Basin and all

other reported users in the entire Ventura River watershed reduced their pumping and diversions from the Ventura River watershed by 50%. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171.

148. Ventura has stated that it intends to extract 6,700 acre-feet of water from the Ventura River at the Foster Park Diversion by 2020. Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

149. In 2014, 2015, and 2016, extractions of 6,700 acre-feet of water from the Ventura River would have exceeded the amount of water left behind for the river if all non-overlying groundwater users in the Ojai Basin and all other reported users in the entire Ventura River watershed reduced their pumping and diversions from the Ventura River watershed by 50%. Supp. Cooper Dec. Ex. V (Ventura Pumping Capacity Comparisons) at 1060.

150. In 2014, 2015, and 2016, given its existing pumping capacity at Foster Park, Ventura would have consumed all water left behind if the Ventura River Water District and Meiners Oaks Water District completely eliminated 100% of their pumping and diversions. Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

151. In 2015 and 2016, given its projected future pumping capacity and water budget at Foster Park, Ventura would have consumed all water left behind if all other non-overlying users in the Ojai Basin and every other pumper or diverter had completely eliminated their pumping and diversions. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171.

152. Channelkeeper is informed and believes, and thereon alleges, that if all other pumping and diversions from non-overlying users in the Ojai Basin along with every other pumper or diverter in the watershed stopped there would be no benefit to the instream uses of the Ventura River given Ventura's intended pumping and/or diversion capacity at Foster Park. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

153. Channelkeeper is informed and believes, and thereon alleges, that if all junior appropriators stopped their pumping and diversions there would be no benefit to the instream uses of the Ventura River given Ventura's intended pumping and/or diversion capacity at Foster Park. Supp.

Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

154. Channelkeeper is informed and believes, and thereon alleges, that if there is water remaining in the Upper Ventura River Basin because all non-overlying users in the Ojai Basin and every other user in the watershed stop their pumping and diversions, there would be no benefit to the instream beneficial uses of the Ventura River given Ventura's asserted right to use 72,397 acre-feet per year from Reach 4 of the Ventura River. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

155. Channelkeeper is informed and believes, and thereon alleges, that if there is water remaining in the Upper Ventura River Basin because all junior appropriators stop their pumping and diversions, there would be no benefit to the instream beneficial uses of the Ventura River given Ventura's asserted right to use 72,397 acre-feet per year from Reach 4 of the Ventura River. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

156. Channelkeeper is informed and believes, and thereon alleges, that if there is water remaining in the Upper Ventura River Basin because all non-overlying users in the Ojai Basin and every other user in the watershed stop their pumping and diversions, there would be no benefit to the instream beneficial uses of the Ventura River given Ventura's historic pumping and/or diversion from Reach 4 of the Ventura River. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

157. Channelkeeper is informed and believes, and thereon alleges, that if there is water remaining in the Upper Ventura River Basin because all junior appropriators stop their pumping and diversions, there would be no benefit to the instream beneficial uses of the Ventura River given Ventura's historic pumping and/or diversion from Reach 4 of the Ventura River. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

158. Channelkeeper is informed and believes, and thereon alleges, that if there is any water

remaining in the Upper Ventura River Basin because all non-overlying users in the Ojai Basin and every other user in the watershed stop their pumping and diversions, there would be no benefit to the instream beneficial uses of the Ventura River given Ventura's existing capacity to pump and/or divert 4,200 acre-feet of water per year from Reach 4 of the Ventura River. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

159. Channelkeeper is informed and believes, and thereon alleges, that if there is any water remaining in the Upper Ventura River Basin because all junior appropriators stop their pumping and diversions, there would be no benefit to the instream beneficial uses of the Ventura River given Ventura's existing capacity to pump and/or divert 4,200 acre-feet of water per year from Reach 4 of the Ventura River. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

160. Channelkeeper is informed and believes, and thereon alleges, that if there is any water remaining in the Ventura River because all non-overlying users in the Ojai Basin and every other user in the watershed stop their pumping and diversions, there would be no benefit to the instream beneficial uses of the Ventura River given Ventura's intention to pump and/or divert 6,700 acre-feet of water per year from Reach 4 of the Ventura River. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

161. Channelkeeper is informed and believes, and thereon alleges, that if there is any water remaining in the Upper Ventura River Basin because all junior appropriators stop their pumping and diversions, there would be no benefit to the instream beneficial uses of the Ventura River given Ventura's intention to pump and/or divert 6,700 acre-feet of water per year from Reach 4 of the Ventura River. Supp. Cooper Dec. Ex. Z (Ventura Pumping Capacity Comparisons) at 1168-1171; Supp. Cooper Dec. Ex. V (City of Ventura Water Claim vs. Realistic and Comparable Metrics) at 1060.

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F. **The State Board Has Failed to Conduct an Analysis of the Reasonableness of Ventura's Use of the Ventura River and Has Failed to Consider Impacts to Public Trust Resources Resulting from Ventura's Use of the River**

162. On May 3, 2013, the State Board acknowledged that it did not possess any documents that refer, relate, or pertain to a reasonable use analysis of Ventura's use of Reach 4 of the Ventura River. Supp. Cooper Dec., Ex. N (PRA Response) at 653.

163. Accordingly, Channelkeeper is informed and believes, and thereon alleges, that the State Board has never conducted an analysis of the reasonableness of Ventura's use of Reach 4 of the Ventura River.

164. On May 3, 2013, the State Board acknowledged that it did not possess any documents that refer, relate, or pertain to a public trust analysis of Ventura's use of Reach 4 of the Ventura River. Supp. Cooper Dec., Ex. N (PRA Response) at 653.

165. Accordingly, Channelkeeper is informed and believes, and thereon alleges, that the State Board has never conducted an analysis to consider impacts to public trust resources resulting from Ventura's use of Reach 4 of the Ventura River.

166. On May 3, 2013, the State Board acknowledged that it did not possess any documents that refer, relate, or pertain to modifications made to Ventura's water rights. Supp. Cooper Dec., Ex. N (PRA Response) at 654.

167. Accordingly, Channelkeeper is informed and believes, and thereon alleges, that the State Board has never made any modifications to Ventura's use of Reach 4 of the Ventura River to conform Ventura's use to the Reasonable Use Doctrine or to the Public Trust Doctrine.

G. **The Ventura River TMDL Fails to Adequately Address the Pumping and Diversion Impairments**

168. On June 28, 2013, the EPA approved the Ventura River TMDL, which established WLAs to address algae, eutrophic conditions, and nutrients in the River. Supp. Cooper Dec., Ex. L (Ventura River TMDL Approval Letter) at 622-23; Supp. Cooper Dec., Ex. M (Ventura River TMDL) at 627-28.

169. In response to public comments on the Ventura River TMDL that the TMDL will not

fully address the pumping and diversion impairments, EPA stated, "The proposed TMDLs were directed at water quality problems associated with nutrient loadings in Reaches 3 and 4 of the Venture [sic] River. USEPA acknowledges that the proposed TMDLs were not expected to address all issues in Reaches 3 and 4 of the Ventura River that might be associated with pumping and water diversions." Supp. Cooper Dec., Ex. L (Ventura River TMDL Approval Letter) at 625.

170. In response to public comments on the Ventura River TMDL that EPA should collaborate with other agencies to complete a comprehensive assessment of pumping impacts, EPA stated, "Prior to issuance of the draft TMDLs, USEPA worked with the LA RWQCB, the commenters, and other stakeholders on a draft Memorandum of Agreement to put in place an alternative program of activities to address the impacts of pumping and water diversions on steelhead trout habitat and other beneficial uses of the Ventura River. This effort ended without success in September 2012. USEPA supports further efforts by the Ventura River stakeholders to comprehensively assess the impacts of pumping and diversion activities and address its detrimental impacts. USEPA believes that the State and other Federal agencies may be in a better position to lead an assessment and planning process with the involvement of local agencies, water users, nongovernmental organizations, and other stakeholders." Supp. Cooper Dec., Ex. L (Approval Letter) at 625-26.

171. Accordingly, Channelkeeper is informed and believes, and thereon alleges that the Ventura River TMDL fails to adequately address the pumping and diversion impairments of the Ventura River.

172. Channelkeeper is informed and believes, and thereon alleges that the pumping and diversion impairments of the Ventura River will continue notwithstanding the adoption and implementation of the Ventura River TMDL.

H. Ventura's Use of the Ventura River from April through October, at a Minimum, is Unreasonable Thus the State Board is Required to Conduct a Reasonable Use Analysis and Consider Impacts to Public Trust Resources Resulting from Ventura's Unreasonable Use

173. Given Ventura's pumping and diversion from Reach 4 of the Ventura River as described in paragraphs 111-161, Channelkeeper is informed and believes, and thereon alleges, that Ventura's use

of the River from April through October, at a minimum, is unreasonable.

174. Given Ventura's pumping and diversion from Reach 4 of the Ventura River as described in paragraphs 111-161, Channelkeeper is informed and believes, and thereon alleges, that Ventura's use of the River impacts public trust resources in the River.

175. Given Ventura's claimed right to pump and divert 72,397 acre-feet per year from Reach 4 of the Ventura River, Channelkeeper is informed and believes, and thereon alleges, that adherence to Ventura's water right priority will result in an unreasonable use of the River.

176. Given Ventura's claim to pump and divert 72,397 acre-feet per year from Reach 4 of the Ventura River, Channelkeeper is informed and believes, and thereon alleges, that adherence to Ventura's water right priority will result in impacts to the public trust resources of the River.

177. Given Ventura's existing pumping and diversion capacity from Reach 4 of the Ventura River, Channelkeeper is informed and believes, and thereon alleges, that adherence to Ventura's water right priority will result in an unreasonable use of the River.

178. Given Ventura's existing pumping and diversion capacity from Reach 4 of the Ventura River, Channelkeeper is informed and believes, and thereon alleges, that adherence to Ventura's water right priority will result in impacts to the public trust resources of the River.

179. Given Ventura's intended pumping and diversion capacity from Reach 4 of the Ventura River, Channelkeeper is informed and believes, and thereon alleges, that adherence to Ventura's water right priority will result in an unreasonable use of the River.

180. Given Ventura's intended pumping and diversion capacity from Reach 4 of the Ventura River, Channelkeeper is informed and believes, and thereon alleges, that adherence to Ventura's water right priority will result in impacts to the public trust resources of the River.

181. Given that the State Board determined that the beneficial uses of Reaches 3 and 4, including cold freshwater habitat, wildlife habitat, rare, threatened, or endangered species, migration of aquatic organisms, spawning, reproduction, and/or early development, and wetland habitat, are impaired by pumping and diversion of water from those reaches of the Ventura River, Channelkeeper is informed and believes, and thereon alleges that Ventura's pumping and diversion from Reach 4 of the River is unreasonable.

182. Because the State Board listed Reaches 3 and 4 of the Ventura River as impaired for pumping and diversion in 1998, Channelkeeper is informed and believes, and thereon alleges that the State Board knew or should have known for the past 20 years that Ventura's pumping and diversion from the River is unreasonable.

183. Because Ventura's use of the Ventura River is unreasonable, Channelkeeper is informed and believes, and thereon alleges that the State Board is required to conduct an analysis of Ventura's use of the River, including but not limited to an analysis to consider the impacts to public trust resources resulting from Ventura's use.

VII. Counts for Relief

FIRST COUNT FOR RELIEF
Against Defendant City of Ventura
Pursuant to California Code of Civil Procedure § 1060 Channelkeeper Seeks a Declaration Stating that Ventura's Use of Reach 4 of the Ventura River From April through October Is an Unreasonable Use In Violation of Article X, § 2 of the Constitution.

184. Petitioner incorporates each paragraph of this complaint and petition, herein.

185. Channelkeeper contends that, given the existing conditions in the Ventura River, Ventura's use of the River is unreasonable.

186. Ventura continues to pump and divert water from the Foster Park Diversion during critical summer months, e.g., April through October, and after water levels in the River fall below levels determined to be critical minimum levels required to protect steelhead.

187. Ventura has failed and continues to fail to manage its use of the Ventura River in a manner that avoids impacts to public trust resources.

188. Thus an actual controversy between Channelkeeper and Ventura exists concerning the reasonableness of Ventura's pumping and diversion from the Ventura River.

WHEREFORE, Petitioner prays for the relief set forth below.

SECOND COUNT FOR RELIEF
Against Defendant State Board
Pursuant to California Code of Civil Procedure § 1085
The State Board Has Failed to Perform Its Mandatory Duties Under Article X, § 2 of the Constitution.

189. Petitioner incorporates each paragraph of this complaint and petition, herein.

190. Pursuant to Article X, section 2 of the California Constitution, the State Board has a mandatory duty to limit Ventura's use of the Ventura River to such water reasonably required for the River's beneficial uses.

191. The State Board has failed and continues to fail to limit Ventura's use of the Ventura River to such water reasonably required for the River's beneficial uses, as the State Board has never conducted an analysis of Ventura's use of the Ventura River based on existing conditions of the River that have changed over time.

192. The State Board has a mandatory duty to consider public trust resources in limiting Ventura's use of the Ventura River to such water reasonably required for the River's beneficial uses.

193. The State Board has failed and continues to fail to limit Ventura's use of the Ventura River to such water reasonably required for the River's beneficial uses, as the State Board has never considered impacts to public trust resources resulting from Ventura's use of the Ventura River.

194. Thus, in violation of Article X, section 2 of the California Constitution, the State Board has failed and continues to fail to carry out its mandatory duty to limit Ventura's use of the Ventura River to such water reasonably required for the River's beneficial uses.

195. The State Board's ongoing and continuing failure to perform its mandatory duties has and will cause Channelkeeper, its members, and the general public to suffer substantial, clear, and certain irreparable injury. Unless and until the State Board follows the requirements of Article X, section 2 of the California Constitution, Ventura's unreasonable use of the River will continue. As a result, Channelkeeper, its members, and the general public will not be assured of their rights to reasonable use of the State's waters as afforded by the California Constitution.

196. Channelkeeper has no plain, speedy, or adequate remedy in the ordinary course of law because the State Board will continue to fail to conduct a reasonable use analysis of Ventura's use of the Ventura River unless compelled to do so by the Court.

WHEREFORE, Petitioner prays for the relief set forth below.

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THIRD COUNT FOR RELIEF
Against Defendant State Board
Pursuant to California Code of Civil Procedure § 1085
The State Board Has Failed to Perform Its Mandatory Duty Under § 275 of the Water Code.

197. Petitioner incorporates each paragraph of this complaint and petition, herein.

198. Pursuant to section 275 of the Water Code, the State Board has a mandatory duty to prevent Ventura's unreasonable use of the Ventura River.

199. The State Board has failed and continues to fail to prevent Ventura's unreasonable use of the Ventura River, as the State Board has never taken action or instituted any proceedings to consider Ventura's use of the Ventura River.

200. Thus, in violation of section 275 of the Water Code, the State Board has failed and continues to fail to prevent Ventura's unreasonable use of the Ventura River.

201. The State Board's ongoing and continuing failure to perform its mandatory duty has and will cause Channelkeeper, its members, and the general public to suffer substantial, clear, and certain irreparable injury. Unless and until the State Board follows the requirements of section 275 of the Water Code, Ventura's unreasonable use of the River will continue. As a result, Channelkeeper, its members, and the general public will not be assured of their rights to reasonable use of the State's waters as afforded by the Water Code.

202. Channelkeeper has no plain, speedy, or adequate remedy in the ordinary course of law because the State Board will continue to fail to conduct a reasonable use analysis of Ventura's use of the Ventura River unless compelled to do so by the Court.

WHEREFORE, Petitioner prays for the relief set forth below.

FOURTH COUNT FOR RELIEF
Against Defendant State Board
Pursuant to California Code of Civil Procedure § 1085
The State Board Has Failed to Perform Its Mandatory Duty to Consider Impacts to Public Trust Resources Resulting from Ventura's Use of the Ventura River.

203. Petitioner incorporates each paragraph of this complaint and petition, herein.

204. Pursuant to the Public Trust Doctrine, the State Board has a mandatory duty to consider

impacts to public trust resources resulting from Ventura's use of the Ventura River.

205. In violation of its mandatory duty under the Public Trust Doctrine, the State Board has failed and continues to fail to consider impacts to public trust resources resulting from Ventura's use of the Ventura River.

206. The State Board's ongoing and continuing failure to perform its mandatory duty has and will cause Channelkeeper, its members, and the general public to suffer substantial, clear, and certain irreparable injury. Unless and until the State Board follows the requirements of Public Trust Doctrine, Ventura's use of the River resulting in unconsidered impacts to trust resources will continue. As a result, Channelkeeper, its members, and the general public will not be assured of their rights afforded by the Public Trust Doctrine.

207. Channelkeeper has no plain, speedy, or adequate remedy in the ordinary course of law because the State Board will continue to fail to consider the impacts to public trust resources resulting from Ventura's use of the Ventura River unless compelled to do so by the Court.

WHEREFORE, Petitioner prays for the relief set forth below.

FIFTH COUNT FOR RELIEF
Against Defendant State Board
Pursuant to California Code of Civil Procedure § 1085
The State Board Has Prejudicially Abused Its Discretion by Failing to Limit Ventura's Use of the Ventura River and by Failing to Consider Impacts to Public Trust Resources Resulting from Ventura's Use of the Ventura River.

208. Petitioner incorporates each paragraph of this complaint and petition, herein.

209. The State Board has and continues to prejudicially abuse its discretion by arbitrarily, capriciously, and without any evidentiary support failing to limit Ventura's use of the Ventura River, pursuant to Article X, section 2 of the California Constitution.

210. The State Board has and continues to prejudicially abuse its discretion by arbitrarily, capriciously, and without any evidentiary support failing to limit Ventura's use of the Ventura River by considering impacts to public trust resources resulting from Ventura's use of the River, pursuant to Article X, section 2 of the California Constitution.

211. The State Board has and continues to prejudicially abuse its discretion by arbitrarily, capriciously, and without any evidentiary support failing to prevent Ventura's unreasonable use of the

Ventura River, pursuant to section 275 of the Water Code.

212. The State Board has and continues to prejudicially abuse its discretion by arbitrarily, capriciously, and without any evidentiary support failing to consider impacts to public trust resources resulting from Ventura's use of the Ventura River, pursuant to the Public Trust Doctrine.

213. The State Board's prejudicial abuse of its discretion has and will cause Channelkeeper, its members, and the general public to suffer substantial, clear, and certain irreparable injury. Unless and until the State Board follows the requirements of the Article X, section 2 of the California Constitution, section 275 of the Water Code, and/or the Public Trust Doctrine, Ventura's unreasonable use of the River resulting in unconsidered impacts to trust resources will continue. As a result, Channelkeeper, its members, and the general public will not be assured of their rights afforded by the California Constitution, the Water Code, or the Public Trust Doctrine.

214. Channelkeeper has no plain, speedy, or adequate remedy in the ordinary course of law because the State Board will continue to prejudicially abuse its discretion of Ventura's use of the Ventura River unless compelled to exercise its discretion by the Court.

WHEREFORE, Petitioner prays for the relief set forth below.

PRAYER FOR RELIEF

215. Channelkeeper therefore prays that this Court:

a. Issue a declaratory judgment stating that Ventura's use of Reach 4 of the Ventura River from April through October is unreasonable in violation of Article X, section 2 of the California Constitution;

b. Issue a writ of mandate directing the State Board to conduct an analysis of Ventura's use of the Ventura River based on existing conditions in the River, which have changed since Ventura first began its use of the River, pursuant to Article X, section 2 of the California Constitution;

c. Issue a writ of mandate directing the State Board to conduct an analysis of Ventura's use of the Ventura River based on the State Board's consideration of impacts to public trust resources resulting from Ventura's use of the River, pursuant to Article X, section 2 of the California Constitution;

d. Issue a writ of mandate directing the State Board to conduct an analysis of Ventura's use of the Ventura River based on existing conditions in the River, which have changed since Ventura

first began its use of the River, pursuant to section 275 of the Water Code;

e. Issue a writ of mandate directing the State Board to conduct an analysis to consider impacts to public trust resources resulting from Ventura's use of the Ventura River pursuant to the Public Trust Doctrine;

f. Issue a writ of mandate enjoining the State Board from continuing to prejudicially abuse its discretion by arbitrarily, capriciously, and without any evidentiary support failing to conduct an analysis of Ventura's use of the Ventura River, pursuant to Article X, section 2 of the California Constitution, section 275 of the Water Code, and/or the Public Trust Doctrine;

g. Award Channelkeeper its costs and fees for bringing suit for the State Board's violations of State law as provided under Code of Civil Procedure section 1021.5; and/or

h. Grant such other relief as the Court deems just and proper.

Dated: September 6, 2018

Respectfully Submitted,

Daniel Cooper
LAWYERS FOR CLEAN WATER, INC.
Attorneys for Petitioner

VERIFICATION

I, the undersigned, declare:

I am the Executive Director of Santa Barbara Channelkeeper, the Petitioner in this action. I have read the foregoing petition and know its contents. The facts alleged in the above petition are within my own knowledge and I know these facts to be true.

I declare under penalty of perjury that the foregoing is true and correct. This declaration was executed on April 13, 2018, in Santa Barbara, California.

Kira Redmond
Executive Director
Santa Barbara Channelkeeper

SBCK vs City of Ventura Settlement Agreement

SETTLEMENT AGREEMENT

This Settlement Agreement ("Agreement") is entered into between Santa Barbara Channelkeeper ("Channelkeeper") and the City of San Buenaventura ("City") regarding the action entitled Santa Barbara Channelkeeper v. State Water Resources Control Board and the City of San Buenaventura, Los Angeles County Superior Court Case No. 19STCP01176 ("Action"). Channelkeeper and the City may be collectively referred to as "Parties" and individually as "Party". The Agreement is entered into and effective on the date defined in Section 23 below ("Effective Date").

RECITALS

Channelkeeper and the City recite as follows:

1. On September 19, 2014, Channelkeeper filed a Complaint for Declaratory Relief and Petition for Writ of Mandate ("Complaint") against the City and the State Water Resources Control Board ("State Board"). The Complaint alleged that the City's use of water in Reach 4 of the Ventura River from April through October is unreasonable, in violation of the California Constitution article X, section 2, and the public trust doctrine.

2. The City filed a Cross-Complaint on May 14, 2015, and a First Amended Cross-Complaint on June 11, 2015, against other users of water from the River and interconnected groundwater basins. On September 18, 2015, the trial court granted Channelkeeper's motion to strike the First Amended Cross-Complaint.

3. The City appealed the order striking its First Amended Cross-Complaint, and the Court of Appeal reversed the trial court's order. Santa Barbara Channelkeeper v. City of San Buenaventura, 19 Cal.App.5th 1176 (2018).

4. Following the appeal, on September 7, 2018, Channelkeeper filed a First Amended Complaint for Declaratory Relief and Petition for Writ of Mandate ("1st Am. Complaint") against the City and the State Board. The 1st Am. Complaint alleges that the City's use of water in Reach 4 of the Ventura River from April through October is unreasonable, in violation of the California Constitution article X, section 2, and the public trust doctrine, and requests a declaratory judgment that the City's use of the River water is unreasonable. The 1st Am. Complaint further seeks to compel and enjoin the State Board to perform its alleged mandatory duties to prevent the City's alleged unreasonable use of the River and impacts on public trust resources.

5. On September 24, 2018, the City filed a Second Amended Cross-Complaint that requests, among other things, an adjudication of water rights for the Ventura River Watershed, which includes the Upper Ventura River Groundwater Basin, Ojai Groundwater Basin, Lower Ventura River Groundwater Basin, and Upper Ojai Groundwater Basin. The 2nd Am. Cross-Complaint also requests a physical solution.

6. In consideration for the commitments made in this Agreement, Channelkeeper and the City intend to settle their past disputes while preserving claims and defenses for future alleged violations.

TERMS

7. Recitals. The above recitals are incorporated in and made a part of the terms of this Agreement.

8. Pilot Project. Within five business days after the Effective Date, the City will start the Foster Park Pilot Project ("Pilot Project").

A. Pilot Flow Operational Regime. During the Pilot Project, the City will operate its Foster Park facilities using the following flow regime:

(1) When instream flow at Foster Park, as measured as described in Section 8(B) below, is less than or equal to 4.0 cubic feet per second ("CFS"), the City will shut down its Nye well 8;

(2) When instream flow at Foster Park, as measured as described in Section 8(B) below, is less than or equal to 3.0 CFS, the City will shut down its Nye well 7; and

(3) When instream flow at Foster Park, as measured as described in Section 8(B) below, is less than or equal to 2.0 CFS, the City will not extract water using its Foster Park facilities.

B. Flow Measurement Location and Shutoff/Restart Protocols. As part of the Pilot Project, the City will install new streamflow gauges directly above and directly below its Foster Park facilities.

(1) Once the new streamflow gauges are operational, the pilot flow operational regime described in Section 8(A) above will be measured using the protocol described in this Section 8(B) at the new streamflow gauge immediately above the Foster Park facilities.

(2) Until the new streamflow gauges are operational, the pilot flow operational regime described in Section 8(A) above will be measured at the USGS streamflow gauge at the Casitas Bridge (Gauge 11118500).

(3) The CFS triggers and corresponding operational changes shall be made when the relevant streamflow gauge registers below the flow threshold at any point within a calendar day for three consecutive calendar days. If the final reading below the threshold occurs after business hours, then the operational change will take place by 8 a.m. the following

business day. The operational changes may be returned to normal when the relevant streamflow gauge registers above the flow threshold for at least 72 consecutive hours.

C. Term of Pilot Project. The term of this Pilot Project will be for a period of 164 days following the Effective Date. This Pilot Project may be modified or terminated under emergency conditions.

D. Future Flow Regimes. All parties understand and agree that the Pilot Project is not an agreement by the City to maintain any specific flow regime after completion of the Pilot Project. The information provided through the Pilot Project may be used to help inform the establishment of target instream flows that will be included in the stipulated judgment and physical solution in the adjudication. However, the flow regime in the Pilot Project is not binding on the development of those target instream flows, which the parties agree and acknowledge may be less than, greater than or entirely different than the flow regime in the Pilot Project.

9. Non-Flow Measures. The City will also implement the following non-flow measures:

A. Foster Park Fish Barriers. The City will address the following two potential low-flow fish passage barriers at Foster Park:

(1) A 36 inch raw water line that runs southeasterly across the Ventura River from the City's intake facility. The line is covered in a concrete apron that due to scour is exposed above the water surface under certain flow conditions. The City will take action to address this potential barrier.

(2) Due to scour, the crest of the subsurface dam at Foster Park is

exposed above the water surface under certain flow conditions on its eastern terminus. The City shall take action to notch or otherwise address the subsurface dam at this location to remove a potential passage barrier.

B. Flow Gauging at Casitas Vista Road Bridge (USGS Gauge No. 11118500). If the United State Geological Survey ("USGS") believes the Casitas Vista Road Bridge gauge equipment is not functioning as originally intended, the City shall work with the USGS, and other responsible parties, to repair the gauge or cause the installation of a new gauge.

C. Regulatory and Environmental Review. Completion of these non-flow measures is subject to all regulatory requirements and environmental review. The City may process the Foster Park Fish Barriers measures as one joint project that may also include operational upgrades to the City's intake facility at Foster Park to enhance operational flexibility and better manage flow at this location.

D. Construction Milestones. The City's estimated construction milestones for planning, permitting and construction of these non-flow measures are set forth below. The City shall use good faith efforts to accelerate the construction of these non-flow measures, jointly or individually, as feasible, including, but not limited to, by considering the use of statutory or categorical CEQA exemptions as provided in Section 9(C) above.

(1) The City will complete preliminary design by April 1, 2020.

(2) The City will circulate draft CEQA documents for public review by June 1, 2020.

(3) The City will submit permit applications by July 1, 2020.

(4) The City will complete CEQA review by October 1, 2020.

(5) The City will complete construction within 1 year of receiving all

permits (time for advertise/bid/award/transition process submittal review), subject to timing constraints in mitigation measures and permits on construction activity.

10. Channelkeeper's Attorney's Fees and Costs. Within thirty (30) days of the Effective Date, the City shall provide Channelkeeper's attorney, Daniel Cooper of Cooper & Lewand-Martin, Inc., a certified check in the amount of $850,000.00 payable to "Santa Barbara Channelkeeper." The City's payment is for Channelkeeper's attorney's fees and costs incurred because of the Action, but is not intended to pay Channelkeeper's attorney's fees and costs for the trial court and appellate court proceedings challenging the City's Cross-Complaint and 1st Am. Cross-Complaint. Channelkeeper alleges that it has incurred $1,041,075.29, and the Parties will defer resolving payment of the $191,075.29 difference.

11. Force Majeure. The City shall not be considered to be in default in the performance of any of their respective obligations under this Agreement when performance becomes impossible due to a Force Majeure event. A Force Majeure event is any circumstance beyond the City's control, including without limitation, any act of God, war, fire, earthquake, flood, windstorm, or natural catastrophe; criminal acts; civil disturbance, 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 authorizations or approvals from any governmental agency. A Force Majeure event shall not include normal inclement weather, economic hardship, inability to pay, or employee negligence. If the City seeks to rely upon this Section to excuse or postpone performance, it shall have the burden of establishing that it could not reasonably have been expected to avoid the Force Majeure event and that its exercise of due diligence did not overcome the failure of performance. The City shall exercise due diligence to resolve and remove any Force Majeure event. Any delays due to the City's failure to make timely and bona fide applications and to exercise diligent efforts to comply with the terms in this Agreement will not, in any event, be considered to be circumstances beyond the City's control.

12. Release of Claims. Except as provided in the Agreement, the Parties discharge, release and waive as to each other, and their respective agents, employees, Boards, Councils, members, representatives, officers, directors, insurers, attorneys, affiliates, assigns, predecessors, and successors, from any and all claims, causes of action, losses, damages, costs and attorneys' fees, whether based on case law, the California or Federal Endangered Species Acts or other statutes, constitution, contract, tort, equity, indemnity, or any other theory of recovery, which the Parties have or may have, whether known or unknown, suspected or unsuspected, which were raised or might have been raised, or arise out of, or are connected with the Action, that occurred up to the date of the execution of this Agreement.

13. Waiver of Section 1542. Except as provided in the Agreement, the Parties acknowledge that they have been informed of and are familiar with the provisions of Civil Code section 1542, which provides as follows:

> A GENERAL RELEASE DOES NOT EXTEND TO CLAIMS WHICH THE CREDITOR DOES NOT KNOW OR SUSPECT TO EXIST IN HIS OR HER FAVOR AT THE TIME OF EXECUTING THE RELEASE, WHICH IF KNOWN BY HIM OR HER MUST HAVE MATERIALLY AFFECTED HIS OR HER SETTLEMENT WITH THE DEBTOR.

The Parties waive and relinquish all rights and benefits they have under Civil Code section 1542 to the full extent that they may lawfully waive all such rights and benefits pertaining to the Released Claims.

14. Claims Not Released. The Parties do not release:

A. Future Pumping and Diversion. Channelkeeper's claim after the Pilot Project is completed but before entry of a stipulated judgment in the adjudication that future pumping and diversion of water in Reach 4 of the Ventura River is an unreasonable use in violation of the California Constitution Article X, Section 2 and the public trust doctrine.

B. Unpaid Attorney's Fees and Costs. Channelkeeper's claims for attorney's fees and costs in the amount of $191,075.29.

C. Enforcement of Agreement. Any action to enforce the Agreement.

15. Request for Dismissal. Within five business days of the Effective Date, Channelkeeper shall file a request for dismissal in the form attached as Exhibit A.

16. Joint Press Release. Within five business days of the Effective Date, the Parties shall issue a joint press release in the form attached as Exhibit B.

17. Representations and Warranties. Each of the Parties represents and warrants to the other Party that:

A. As of the date of their execution of this Agreement, they are unaware of any facts, conditions or matters relating to, arising out of or connected with the events and/or transactions which would give rise to any claims for damages or equitable relief not being released by each party pursuant to the terms of this Agreement.

B. Each of the Parties has the requisite power and authority to enter into this Agreement and to consummate the transactions contemplated by this Agreement.

C. No portion of any claim, demand, cause of action that they may have or might have, which are being released herein, has been assigned or transferred to any other person, entity, or company.

D. In executing this Agreement, the Parties have relied solely upon their

own judgment, belief and knowledge and on the advice and recommendations of their own independently selected counsel concerning the nature, extent and duration of their rights and claims. Further, that they have not been influenced by any representations or statements concerning any matters made by any other parties or by any person or attorney representing any other parties in connection with the negotiation and/or entering into of this Agreement.

18. No Admission of Liability. The Parties agree that by the execution of this Agreement, and the consummation of the settlement and release of claims as set forth herein, none of the Parties admit responsibility or liability as to any matter whatsoever, nor shall this release, or the settlement and release it effectuates, be admissible in evidence in any proceeding of any nature whatsoever except as described above.

19. Enforcement of Agreement. If legal proceedings are commenced by any of the Parties to enforce or interpret the provisions of this Agreement, the prevailing party shall be entitled to recover all of such party's attorneys' fees and costs and expenses of litigation including any and all appeals or petitions as well as fees and costs incurred in enforcing any resulting judgment or award.

20. Entire Agreement. All agreements, covenants, representations and warranties, expressed and implied, oral and written, by each Party to this Agreement concerning its subject matter are contained herein. No other agreements, covenants, representations or warranties, expressed or implied, oral or written, have been made by any Party to any other Party concerning the subject matter of this Agreement. All prior and contemporaneous conversations, covenants and warranties concerning the subject matter of this Agreement are merged herein. This is a fully integrated Agreement.

21. Drafted by All Parties. This Agreement shall be deemed drafted by all Parties

with the advice of counsel for the purposes of its interpretation, sufficiency and enforcement, and shall not be construed against either under the doctrine of *contra preferentem*.

22. All Remedies Available for Breach of the Agreement. All remedies, including without limitation specific performance, shall be available for a breach of this Agreement.

23. Effective Date. This Agreement shall become effective immediately upon the execution of this Settlement Agreement by all Parties. This Agreement may be executed in counterparts. When all Parties and their respective attorneys have signed and delivered at least one such counterpart to the other Parties, each counterpart shall be deemed an original, and when taken together with other signed counterparts, shall constitute one agreement, which shall be binding upon and effective as to all Parties. No original signatures shall be required to establish the validity or authenticity of this Agreement.

24. Governing Law. This Agreement shall be construed in accordance with, and shall be governed by, the laws of the State of California.

25. Severability. If any portion of this Agreement is declared by a court of competent jurisdiction to be invalid or unenforceable, such portion shall be deemed severed from this Agreement, and the remaining portions shall remain in full force as though such invalid or unenforceable provisions or portions had not been a part of this Agreement. However, if the provisions requiring dismissal of all actions and cross-actions with prejudice, or if the provisions for releases of claims as provided herein, are found to be invalid, then this Agreement shall be considered invalid in its entirety.

26. Perform All Acts. Each Party agrees to perform all acts and execute and deliver all documents necessary to carry out the purpose and intent of this Agreement.

Dated: September 25, 2019

SANTA BARBARA CHANNELKEEPER

By: _____

Dated: September 30 2019

CITY OF SAN BUENAVENTURA

By: _____
City Manager

APPROVED AS TO FORM:

Dated: September 25 2019

COOPER & LEWAND-MARTIN, INC.

By: _____
DANIEL COOPER
Attorneys for Petitioner SANTA BARBARA CHANNELKEEPER

Dated: September 30, 2019

BEST BEST & KRIEGER LLP

By: _____
GENE TANAKA
SHAWN HAGERTY
SARAH CHRISTOPHER POLEY
DAKOTAH BENJAMIN
Attorneys for Respondent and Cross-Complainant CITY OF SAN BUENAVENTURA

EXHIBIT A

Daniel Cooper (SBN 153576)
Cooper & Lewand-Martin, Inc.
1004B O'Reilly Avenue
San Francisco, CA 94129
(415) 360-2962
daniel@cooperlewand-martin.com
Plaintiff and Petitioner Santa Barbara Channelkeeper

SUPERIOR COURT OF CALIFORNIA, COUNTY OF Los Angeles
312 North Spring Street

Los Angeles, 90012
Spring Street Courthouse

PLAINTIFF/PETITIONER: Santa Barbara Channelkeeper

DEFENDANT/RESPONDENT: State Water Resources Control Board

REQUEST FOR DISMISSAL

CASE NUMBER: 19STCP01176

A conformed copy will not be returned by the clerk unless a method of return is provided with the document.

This form may not be used for dismissal of a derivative action or a class action or of any party or cause of action in a class action. (Cal. Rules of Court, rules 3.760 and 3.770.)

1. TO THE CLERK: Please dismiss this action as follows:
   a. (1) ☒ With prejudice (2) ☐ Without prejudice
   b. (1) ☒ Complaint (2) ☒ Petition
   (3) ☐ Cross-complaint filed by (name): on (date):
   (4) ☐ Cross-complaint filed by (name): on (date):
   (5) ☐ Entire action of all parties and all causes of action
   (6) Other (specify): *All claims adv. City of SB except its future punning at Foster Park and $191,075.29 in attorney's fees.

2. (Complete in all cases except family law cases.)
   The court ☐ did ☐ did not waive court fees and costs for a party in this case. (This information may be obtained from the clerk. If court fees and costs were waived, the declaration on the back of this form must be completed.)

Date: September , 2019

Daniel Cooper ▶

☒ ☐

* If dismissal requested is of specified parties only, of specified causes of action only, or of specified cross-complaints only, so state and identify the parties, causes of action, or cross-complaints to be dismissed.

Attorney or party without attorney for:
☒ Plaintiff/Petitioner ☐ Defendant/Respondent
☐ Cross-Complainant

TO THE CLERK: Consent to the above dismissal is hereby given. **
Date:

▶

☐☐

** If a cross-complaint – or Response (Family Law, seeking affirmative relief – is on file, the attorney for cross-complainant (respondent) must sign this consent if required by Code of Civil Procedure section 581 (i) or (j).

Attorney or party without attorney for:
☐ Plaintiff/Petitioner ☐ Defendant/Respondent
☐ Cross-Complainant

(To be completed by clerk)

4. ☐ Dismissal entered as requested on (date):
5. ☐ Dismissal entered on (date): as to only (name):
6. ☐ Dismissal not entered as requested for the following reasons (specify):
7. a. ☐ Attorney or party without attorney notified on (date):
   b. ☐ Attorney or party without attorney not notified. Filing party failed to provide
      ☐ a copy to be conformed ☐ means to return conformed copy

Date: Clerk, by _____, Deputy

PLAINTIFF/PETITIONER: Santa Barbara Channelkeeper DEFENDANT/RESPONDENT: State Water Resources Control Board	CASE NUMBER: 19STCP01176

COURT'S RECOVERY OF WAIVED COURT FEES AND COSTS

If a party whose court fees and costs were initially waived has recovered or will recover $10,000 or more in value by way of settlement, compromise, arbitration award, mediation settlement, or other means, the court has a statutory lien on that recovery. The court may refuse to dismiss the case until the lien is satisfied. (Gov. Code, § 68637.)

Declaration Concerning Waived Court Fees

1. The court waived court fees and costs in this action for *(name)*:
2. The person named in item 1 is *(check one below)*:
   a. ☐ not recovering anything of value by this action.
   b. ☐ recovering less than $10,000 in value by this action.
   c. ☐ recovering $10,000 or more in value by this action. *(If item 2c is checked, item 3 must be completed.)*
3. ☐ All court fees and court costs that were waived in this action have been paid to the court *(check one)*: ☐ Yes ☐ No

I declare under penalty of perjury under the laws of the State of California that the information above is true and correct.

Date:

☐ ☐

624100001532326103.1

EXHIBIT B

For Immediate Release:
September 30, 2019

Contacts:
Craig Jones, Ventura Water PIO
805-654-7526
cajones@cityofventura.ca.gov

Ben Pitterle, Channelkeeper Science & Policy Director
805-563-3377 ext. 3
ben@sbck.org

THE CITY OF VENTURA AND SANTA BARBARA CHANNELKEEPER PRESENT INTERIM SETTLEMENT ON VENTURA RIVER LITIGATION

Combined efforts result in an interim agreement that will protect and preserve the Ventura River Watershed, wildlife and the many diverse interests that rely on its water supply

Ventura, California – The City of San Buenaventura and Santa Barbara Channelkeeper are pleased to announce an interim settlement in the lawsuit regarding the pumping and diversion of water from the Ventura River Watershed. Both Channelkeeper and the City are dedicated to ensuring the protection of this finite water source and the habitat and species that rely on it while providing water now and for the future. This collaborative agreement brings us another step closer towards this goal.

As part of the interim settlement, the City agreed to begin a Pilot Program to reduce its pumping and diversion of water from the river when flows drop during dry times to help protect species that depend on the river. The City will also address two low-flow fish passage barriers at its Foster Park facilities and install two monitoring gauges to help better evaluate water levels in the river. These interim measures will provide temporary assurance that some water remains in the river until scientific studies are completed to establish appropriate permanent safeguards for steelhead while also meeting the community's water needs.

"We are proud to be working with Channelkeeper to put forth a plan that will protect the needs and rights of each water user in the watershed," said **Mayor Matt LaVere**. "This settlement represents a shared commitment to securing our water resources for all who rely on them now and moving forward."

"Channelkeeper is gratified that the City is engaged in good faith in a process to restore river flows for steelhead and other species throughout the length of the Ventura River," said Kira Redmond, Executive Director of Santa Barbara Channelkeeper. "While there is a long road ahead, we look forward to collaborating with the City to establish a permanent solution that ensures sufficient flows for steelhead and other aquatic life in the future."

Finding common ground with the City enabled Channelkeeper to help protect the steelhead for the upcoming dry season. Both sides had to compromise to create a vehicle to serve the needs of both the municipal customers of the City and the environment in the future.

This interim settlement represents a milestone in a collaborative process that has been underway since April in establishing a holistic, locally driven solution that protects the Ventura River and steelhead and helps preserve the City's oldest water supply for the future. By working together with the many diverse water users in the region, the State Water Resources Control Board, and the California Department of Fish and Wildlife, the objective of the City and Channelkeeper is to establish an adaptive and lasting

framework that clearly recognizes the needs and rights of each water user, ensures sufficient flows to sustain wildlife and public recreation, and shares the responsibility of preserving finite water supplies amongst all users

###

Third Amended Cross-Complaint

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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, a California State Agency;
CITY OF SAN BUENAVENTURA, a California municipal corporation, incorrectly named as CITY OF BUENAVENTURA,

Respondents.

CITY OF SAN BUENAVENTURA, a California municipal corporation,

Cross-Complainant

v.

DUNCAN ABBOTT;
AGR BREEDING, INC.;
[continued on next page]

Case No. 19STCP01176

Judge: Honorable William F. Highberger

Deemed Verified Pursuant to Cal. Civ. Proc. Code § 446

RESPONDENT AND CROSS-COMPLAINANT CITY OF SAN BUENAVENTURA'S THIRD AMENDED CROSS-COMPLAINT FOR:

1. VIOLATION OF REASONABLE USE;
2. VIOLATION OF PUBLIC TRUST;
3. DECLARATORY RELIEF - PUEBLO AND/OR TREATY WATER RIGHTS;
4. DECLARATORY RELIEF - PRESCRIPTIVE WATER RIGHTS;
5. DECLARATORY RELIEF - APPROPRIATIVE WATER RIGHTS;
6. COMPREHENSIVE ADJUDICATION;
7. DECLARATORY RELIEF - MUNICIPAL PRIORITY;
8. DECLARATORY RELIEF - HUMAN RIGHT TO WATER; and
9. DECLARATORY RELIEF

ASQUITH FAMILY LIMITED PARTNERSHIP, LTD.; TROY BECKER; BENTLEY FAMILY LIMITED PARTNERSHIP; ROBIN BERNHOFT; DEWAYNE BOCCALI; JANET BOULTON; MICHAEL BOULTON; DWAYNE BOWER; BURGESS RANCH; MICHAEL CALDWELL; CASITAS MUNICIPAL WATER DISTRICT; CASITAS MUTUAL WATER COMPANY; CHARLES CHO; JOE CLARK; KEVIN CLARK; LISA CLARK; REBECCA COLLINS; THOMAS COLLINS; MICHAEL CROMER; ROBERT C. DAVIS, JR.; LINDA EPSTEIN; ESSICK FARM MANAGEMENT COMPANY, LLC; ETCHART RANCH; JAMES FINCH; FLYING H RANCH, INC.; ERNEST FORD; WAYNE FRANCIS; FRIEND'S RANCHES, INC.; JOHN GALASKA; RICHARD GILLELAND; JURGEN GRAMCKOW and GERALDINE GRAMCKOW, individually as Trustees of the J&G Trust; GRIDLEY ROAD WATER GROUP; STEPHANIE GUSTAFSON; LAWRENCE HARTMANN; HERMITAGE MUTUAL WATER COMPANY; DOROTHY HOLMES; STEPHEN HUYLER; CHERYL JENSEN; BRETT KANTROWITZ; DENISE KANTROWITZ; JERRY KENTON; OLE KONIG; KROTONA INSTITUTE OF THEOSOPHY; TIM KROUT; BETINA LA PLANTE; LUTHERAN CHURCH OF THE HOLY CROSS OF OJAI; SCOTT LUTTENBERG; JEFFREY LUTTRULL; MEINERS OAKS WATER DISTRICT; FREDRICK MENNINGER; MARGARET MENNINGER; STEPHEN MITCHELL; BILL MOSES; NORTH FORK SPRINGS MUTUAL WATER COMPANY; OJAI WATER CONSERVATION DISTRICT; OLD CREEK ROAD MUTUAL WATER COMPANY; RANCHO DE CIELO MUTUAL WATER COMPANY; RANCHO MATILIJA MUTUAL WATER COMPANY; SHLOMO RAZ; SYLVIA RAZ; RINCON WATER AND ROAD WORKS; CHARLES RUDD; WILLIAM RUSIN; MARK SALEH; SENIOR CANYON MUTUAL WATER COMPANY; SIETE ROBLES MUTUAL WATER COMPANY; SISAR MUTUAL WATER COMPANY; SOULE PARK GOLF COURSE, LTD.; ST. JOSEPH'S ASSOCIATES OF OJAI, CALIFORNIA, INC.; ANDREW STASSE; GEORGE S. STUART; JOHN TAFT; TELOS, LLC; THACHER CREEK CITRUS, LLC, a California Corporation; THE THACHER SCHOOL; TICO MUTUAL WATER COMPANY; VICTOR TIMAR; TOPA TOPA RANCH COMPANY, LLC; LOU TOMESETTA; JOHN TOWN; TRUDIE TOWN; ERNESTO VEGA; VENTURA COUNTY WATERSHED

PROTECTION DISTRICT; VENTURA RIVER WATER DISTRICT; WOOD-CLAEYSSENS FOUNDATION; CALVIN ZARA [collectively, "Original Cross-Defendants"];

1970 RANCH ROAD, LLC; 625 N. VENTURES AVENUE, LLC; ABRAHAM MUNOZ; AHDE and GANEA LAHTI, individually; ALAN and CAROL JAMES, individually; ALESSANDRO LOBBA and MARY E. JACKSON, individually as Trustees of the LOOBA-JACKSON FAMILY Trust; ALEXANDER and MARIA DORAN, individually; ALFREDO and MONTELLE BELLO, individually; ALVIN and CLAUDIA CUNNINGHAM, individually; AMERICAN RETIREMENT FUND, INC.; AMY MATTISON, Trustee of the Amy K. Mattison Trust; ANATOLY and MARGARITA KOZUSHIN, individually; ANDREA LEIGH JENSEN, Trustee of the Jensen Trust; ANDREW and JANE HOLGUIN, individually; ANDREW D. WEST and PATRICIA G. WEST, individually as Trustees of the West Family Revocable Trust; ANGIE MARI GANASEI and CHRISTOPHER PAUL DANCH, individually as Trustees of the Genasei-Danch Family Trust; ANNE LOMBARD and FRANK HANSON, individually; ARMANDO and SENDI SANCHEZ, individually; ARTHUR TIMOTHY and MAURYA KATHLEEN FOY, individually; ASHLEN and IVY AQUILA, individually; AUBREY BALKIND; AUBURN OAK BUILDERS, INC.; BARRY and ANGELA ROSS, individually; BEHROOZ JADIDOLLAHI; BENJAMIN and STACEY VAIL, individually; BERKLEY and SUZANNE BAKER, individually; BETTINA CHANDLER, Trustee of the Bettina Chandler Trust; BLANCHE CHAPLER; BRADFORD and CHERYL BOYD, individually; BRENT and SHANNA MUTH, individually; BRIAN and IRENE MCCONVILLE, individually; BRIAN and JOAN ARCHER, individually; BRIAN and SHARON SMITH, individually; BRIAN S. STAFFORD and JANICE M. THOMAS, individually as Trustees of the Stafford Thomas Family Trust Est., March 22, 2019; BRIAN SKAGGS, Trustee of the Skaggs Trust; BRIGITTE LOVELL, Trustee of the Lovell Living Trust; BRUCE ABBOTT and KATHLEEN QUINLAN, individually; BRUCE and DIXIE GLADSTONE, individually; BRYAN WHITLEY; BRYCE and KRISTA BELGUM, individually; CARL and BARBARA ENSON, individually; CARMEN CHAVEZ and GUADALUPE PATINO, individually; CAROL NICHOLSON; CAROL ANN

TENNANT, Trustee of the Carol McDonnell Family Trust; CARRIE MURPHY and MICHAEL E. TEMPLIN, individually as Trustees of the Templin-Murphy 2016 Living Trust; CARTIN FAMILY, LLC; CATHERINE E. LEE, Trustee of the Catherine E. Lee Trust; CHAD WESCOTT and HEATHER CUSHNIE WESCOTT, individually; CHARLINE L. RICH and RICHARD GIBSON JR., individually; CHARLES E. STARBUCK, Trustee of the Charles E. Starbuck Trust; CHARLES P. WATLING, Trustee of the First Charles P. Watling Family Trust; CHRISTOPHER and TINA ABE, individually; CHRISTOPHER HART; CHRISTOPHER MOORE and MARY MOORE, individually as Trustees of the Christopher Moore and Mary Moore Trust; CINDY PROSE; CLAIR and STACEY HARDING, individually; CLAUDIA ZENOBIA LINARTE, Trustee of the Olga Trust; CLAUDIO and MAGDALENA LANDEROS, individually; COMMUNITY MEMORIAL HEALTH SYSTEM; CONNIE S. MORGAN, Trustee of the Connie S Morgan Trust; CONSERVATION ENDOWMENT FUND; CONSTANCE and JUSTIN CAMPBELL, individually; CORINNE ANNE FRAUND; CRAIG and ANA ZWIRN, individually; CURTIS and ORY NAMES, individually; CYNTHIA LEE, Trustee of the Cynthia Lee Family Trust; D & J CAMPBELL BEST, LLC; DAN NEWMAN; DAN STUART, Trustee of the Dana Stuart Trust; DAN WISEMAN; DANA and DAWN CENICEROS, individually; DANIEL and AMY YANEZ, individually; DANIEL and NANCY MCLAREN, individually; DANIEL and ROSALIND GRIMM, individually; DANNY BROADHURST; DARREN and LISA LISLE, individually; DAVID FRIEND and ANGELA MARIE FRIEND, individually; DAVID and LINDA SMITH, individually; DAVID and PATTI WICKLUND, individually; DAVID CHASE and ANNE FITZGERALD, individually; DAVID E. SISSUM, JR. and DIANA E. SISSUM, individually as Trustees of the Sissum Trust; DAVID FLICK and EMMA FLICK, individually; DAWN and MARK GOLDEN, individually; DB PROPERTIES, LLC; DEL CIELO, LLC; DENNIS and SUSAN RYDER, individually; DENNIS BROWN; DENNIS WOOD and MARGARET VIGIL WOOD, individually; DIANE RUTH WHITE, Trustee of the Diane Ruth White Living Trust; DIVE DEEP, LLC; DONALD and WENDY GIVENS, individually; DONALD CAMPBELL; DONNA and JAMES KLEEBURG, individually; DOROTHY HOLMES, Trustee of the Holmes Trust; DOROTHY LANQUIST;

DOUGLAS FREEMAN and MIRANDA MARGETTS, individually; DZ SPE, LLC; EARL G. HOLDER, Trustee of the Holder Survivors Trust; EDWARD and GERALDINE LEE, individually; EDWARD C. LEICHT and JACQUELINE M. LEICHT, individually as Trustees of the Leicht Family 2013 Revocable Trust; ELEANOR SMALL; ELENA DHYANSKY, Trustee of the Elena Dhyansky Trust; ELIZABETH KEENEN; ELTON PEDERSEN and ALMA CLAYTON PEDERSEN, individually; ERIC and JODI PERDUE, individually; ERIC and MING JUN NAKAMURA, individually; ERIC and TRISHA JOHNSON, individually; ERIC LAWRENCE BERNTHAL, SPECIAL Trustee of the Boss and Venice Trust; ERIC LEWIS and BOBBI RODERICK LEWIS, individually; ERIK and TIRICA EADS, individually; EUGENE and CHARLOTTE ELERDING, individually; EVELYN FRAMENT; FORTUNE BUILDERS, INC.; FRANK ROBERT WALKER JR. and CARRIE ELLEN WALKER, individually as Co-Trustees of the Walker Jr. Living Trust; FREDERICK and LORI PONCE, individually; GALEN and MARIA DAVID, individually; GARY HIRSCHKRON, Trustee of the Gary Hirschkron Revocable Trust; GARY L. WOLFE, SUCCESSOR Trustee of the Carolyn M. Tastad Revocable Trust; GARY and TERRI MCCASKILL, individually as Trustees of the Mccaskill Family Trust; GARY SPEEDS and LISA R. KIRBY, individually as Trustees of the Gary Speeds and Lisa Kirby Family Trust; GELB ENTERPRISES; GEORGE and PAMELA ZELLER, individually; GEORGE and ROXANNE PELT, individually; GEORGE HERNANDEZ; GEORGE LAWHEAD, Trustee of the George and Carole Lawhead Revocable Trust; GIRL SCOUTS OF CALIFORNIA'S CENTRAL COAST; GLENN and LORI AHLBERG, individually; GORDON and PATRICIA BLACK, individually; GRALAR, LLC; GRAYDON and HELEN HARRAH, individually; GREGORY and MICHELE HAMMED, individually; GREGORY CAVETTE; GREGORY GRANT and MARY KING, individually; HANS and ANNIKA GRUENN, individually; HENDRIKA MARIA VON HECHT; HENRY and GENEVA OLIVA, individually; HENRY and LESLIE SOHM, individually; HOWARD and IRENE HOOS, individually; HUGH and LINDSAY THOMSON, individually; INTELL VENTURA, LLC; IRMA TRACY; JACKIE M. SPRINGER, Trustee of the Jackie M. and Lanie Jo Springer Trust; JAMES and ANDREA PENDLETON, individually; JAMES and GAYLE DAVID, individually; JAMES and STACI

VALENCIA, individually; JAMES and SUE MILLS, individually; JAMES and TRISHA PROUD, individually; JAMES and ZELDA CARR, individually; JAMES PECK; JAMES I. PIO, Trustee of the James I. Pio Trust; JAN M. HIESTER, Trustee of the Jan M. Hiester 2014 Living Trust; JANE E. HANCHETT, Trustee of the Hanchett Family Trust; JANE SPILLER, Trustee of the Jane Spiller Trust; JANET LEWIS, Trustee of the Janet T. Lewis Family Trust; JANET PECK, Trustee of the Janet Lee Peck Living Trust; JEANNETTE CURTIS; JEFFREY E. FRANK, Trustee of the Frank Trust; JEFFREY TUBBS and LYNN DUBOWY DURAN, individually; JENNIE SCOTT, Trustee of the Jennie Scott Family Trust; JENNIFER WARE and JAMIE SELBY, individually; JEREMY AUGUST and ICOLE MARIE FERRO, individually; JESSE WADSWORTH and SUSAN HYNDS, individually; JESUS CORNEJO and IDANIA YUDITH CORNEJO, individually; JOAN KENTON, Trustee of the Joan Kenton Living Trust; JOANNA POPE; JODY CALLEGARI; JOEL HERNANDEZ; JOHANNA COLLINS; JOHN and LISA DILLARD, individually; JOHN and MARI ALLEN, individually; JOHN and NANCY BEVANS, individually; JOHN and NILA VENTRESS, individually; JOHN EDWARD and EVONNE LOUISE VACCA, individually; JOHN GUTIERREZ; JOHN MAZZOLA and APRIL GOLDEN, individually; JOHN TAFT CORPORATION; JON HANSON; JONATHAN and JACQUELINE PARKER, individually; JONATHAN and JULIE TEICHERT, individually; JOSE JUAREZ and ANA VALENCIA, individually; JOSE VALADEZ and NORMA HERNANDEZ, individually; JOSEPH PALMOUTSOS as Trustee of the Joseph Constantinos Palmoutsos Living Trust; JOSEPH POLITO, Trustee of the Joseph R Polito 1989 Trust; JOSHUA ANTELMAN; JOYCE FRENETTE; JUAN ESPINOZA and TRAVIS COKER, individually; JUANA and HENRY MURILLO; individually; JUNE M. SPAR, Trustee of the June M. Spar Living Trust; JUSTIN and RACHAEL JAYNE, individually; KAREN MENDOZA, Trustee of the Vork Family Trust; KATHERINE PATTON and VIRGINIA MCCONNELL, individually; KATHLEEN TURNER and ELIZABETH RENN, individually; KAY BURNS; KEN COLLIN; KENNETH and MARIA BAKER, individually; KENNETH S. COLLINS, Trustee of the Frank R. Walker, Jr. Trust; KENT and PATRICIA HARDLEY, individually; KEVIN K. COX and MARY C. COX, individually as Trustees of the Cox Family

Trust; KIM JIRKA, Trustee of the Kim Jirka Trust; KONSTANTIN DEMIDOV; KYLE BROWN; LANCE and DONELLE WOLESLAGLE, individually; LARRY and CECILIA HICKOK, LARRY HUBENTHAL, individually and as Trustee of the Larry Hubenthal Living Trust; individually; LASZLO and SHARON BIHARI, individually; LASZLO ENGELMAN, Trustee of the Engelman Family Trust; LAUGHING DOG RANCH, LLC; LAVERNE M. BROWNING; LAWRENCE and RACHEL CLEVENSON, individually; LEON and CECELIA CARTER, individually; LEONARD FISCHER; LORENZO GAMA and YLDA CISNERO, individually; LORETTA MAY WILLIAMS, aka LORETTA MAY BLACKBURN, Trustee of the Loretta May Williams Revocable Living Trust; LUCILLE JANE CONFORTI and RANDALL NORMAN KIRK, individually as Co-Trustees of the "Lucille Jane Conforti Trust"; LYNN and ANN HENNE, individually; LYNN GOTCH and LINDA OLIVER, individually; MANUEL and SANDY GARCIA, individually; MARILYN WALLACE, Trustee of the MARILYN Wallace Separate Property Trust; MARIO AGUIRRE and PATRICE VERNAND, individually; MARK and MEGAN STEFFY, individually; MARK ANTHONY and KIM MARIE CRANE, individually; MARK ROBBINS, Trustee of the MARK ROBBINS Trust; MARK THOMPSON; MARTIN and DARIAN O'BRIEN, individually; MARTIN and LINDA GRAMCKOW, individually; MARTIN GRAMCKOW, Trustee of the Monika G. Huss Irrevocable Trust, Trustee of the Karin W. Gramckow Irrevocable Trust, Trustee of the Kurt J. Gramckow Irrevocable Trust; MARVEL PIERCE; MARYANN HEPP HILL, Trustee of the Hill Family Trust; MARY BERGEN, Trustee of the Rosemary Hall Bergen Trust; MARY MORRISON; MARY WALKART and WILLIAM HASTINGS, individually; MATILIJA CANYON ALLIANCE; MATTHEW and CLAUDIA WILSON, individually; MATTHEW ARREOLA; MATTHEW BOWE; MATTHEW DWYER and COLLEEN WALKER, individually; MATTHEW LARREW and JORDANA KABAN, individually; MATTHEW SIMON and AMANDA VINO, individually; MICHAEL and CAROL DAVIS, individually; MICHAEL and CINDY BOEHM, individually; MICHAEL and HANNALORE GRESSER, individually; MICHAEL and KATHY OGDEN, individually; MICHAEL and KIM REGAN, individually; MICHAEL and MARIE MCTAVISH, individually; MICHAEL and PATRICIA

MCWEENEY, individually; MICHAEL COGGINS JR. and CYNTHIA COGGINS, individually; MICHAEL GREYNALD, Trustee of the Greynald Family Trust; MICHAEL L. ROCKHOLD, Trustee of the Michael Rockhold Trust; MICHAEL TELLO; MICHELE WILLIS and JOHANNA COLLINS, individually; MIGUEL A. MAYORGA, Trustee of the Edward R. Mayorga Living Trust; MITCHAEL and RUBEENA BREESE, individually; MITCHELL and ANA YOUNT, individually; MITCHELL and JOY DALBEY, individually; MITCHELL and LISA MYERS, individually; NANCY MOORE, Trustee of the Nancy Anne Moore Separate Property Trust; NIKOLAS and JULIA KRANKL, individually; OFFSHORE CRANE, INC.; OFFSHORE CRANE and SERVICE COMPANY, INC.; OFFSHORE FACILITIES; OJAI VALLEY CONSERVANCY; ORVILLE and MARION HERNVALL, individually; ORVILLE and PAMELA HIBDON, individually; OSWALDO and NORMA RUIZ, individually; PACIFIC TELEPHONE AND TELEGRAPH COMPANY; PAMELA WOOD; PATRIC and MARGARET PEAKE, individually; PATRICIA and EDWARD LANSBERG, individually; PATRICIA CUENOT; PATRICK and CATHY PAGNUSAT, individually; PAUL and ANGELA BOOTH, individually; PAUL and ASHLEY RAMSEY, individually; PAUL and MARIA LOZANO, individually; PAUL and MARTHA MEDLAR, individually; PAUL and OPAL SKAGGS, individually; PETER and KELLI FREIBERG, individually; PETER and ROBIN SHEDLOSKY, individually; PETER BROOKS and CARLA BROOKS, individually and as Trustees of the Escoda Brooks Family Trust; PETER CAMBIER, Trustee of the Peter and Marilyn Cambier Trust; PETER SCHEY, LLC; PEUVLIN VONG; PHILIP and DELIA SMITH, individually; PHILIP FERRANTE JR. and NICOLE AVERSA-FERRANTE, individually; PHILIPPE ROUSSEAU and KIMBERLY SHOBE, individually; PHYLLIS COURTNEY; RAFAEL HERNANDEZ; RAMONA L. ANDREW, Trustee of the Ramona L. Andrews Trust; RANCHO ARNAZ, LLC; RANCHO CASITAS, LLC; RANCHO SUENO, LLC; RAY and CAROLINA GUILLEN, individually; RAYMOND and ANNETTE WEST, individually; RICHARD and LAURA MANCILLA, individually; RICHARD and ALEXANDRA DUBEAU, individually; RICHARD and CYNTHIA ROBINETT, individually; RICHARD BOLTON; RICHARD MATHIEU and CLAUDIA HERRERA MATHIEU, individually; RICHARD MICHAEL and

MARGARET KENNY, individually; RICHARD WILES and PEGGY CAREY, individually; ROBERT ALAN and STACEY JEAN BOYD, individually; ROBERT and CAROLYN JARBOE, individually; ROBERT and JUDITH CLARK, individually; ROBERT and NICKEY GREGORY, individually; ROBERT and PATRICIA MCFALL, individually; ROBERT and SUSAN BENNITT, individually; ROBERT and ANNA J. AURIC, individually as Trustees of the Auric Revocable Trust of 1999; ROBERT LEVIN and LISA SOLINAS, individually; ROBERT MARK and LORRAINE MELISA LOVATO, individually; ROBERT OCONNOR; ROBERT PETRIN and BEATE SCHICKERLING, individually; ROBERT L. STONE, Trustee of the Robert L. Stone Revocable Living Trust; ROBERT S. YOUNG, Trustee of the Young Trust; RONALD and JANIS CALKINS, individually; RONALD KAPLAN and CYNTHIA DANIELS, individually; RUDOLPH and CAROL SALDAMANDO, individually; RUSSELL JAMES HALL, Trustee of the Russell James Hall Family Trust; SAM and DEBBIE TUCKER, individually; SCOTT ALAN and EVA PRINCE WEISS, individually; SCOTT and AKI FRESHMAN, individually; SCOTT and BERNADETTE KING, individually; SCOTT and SARAH MCKAY, individually; SCOTT GREGORY EROCKSON and HANNAH BETH GUZIK, individually; SCOTT R. JOHNSON and MARGARET BATES, individually; SERAFIN CALDERON and BLANCA ORTIZ; individually; SHANE and AMY WATKINS, individually; SHANE NASH; SHARON and BRUCE SPENCER, individually; SHARON BROWN, Trustee of the Sharon Brown Living Trust; SHAUN and DAISY GARMAN, individually; SHIRLEY M. PALMER, Trustee of the Shirley Palmer Revocable Trust; SKYNEST, LLC; SOCIETE D'INVESTISSEMENT IMMOBILIERS ET FINANCIERS FRANCO-ALLEMAND, a French corporation; STANLEY STEPHEN ROSLANSKY and LINDA ROSLANSKY, individually as Trustees of the Roslansky Family Trust; STEPHEN and CARIN KALLY, individually; STEPHEN and CINDY BARRACK, individually; STEPHEN CARR and DEBRA GILL, individually; STEPHEN M. JOHNSON, Trustee of the Stephen M. Johnson Living Trust; STEPHEN SANFORD; STEPHEN ZANE FRASER; STUART and NANCY RUPP, individually; SUDARSHAN GAUTAM; SUSAN GARY; SUSAN M. RALPH, Trustee of the Ralph Trust; SUSAN YARNELL; SUSHMA GUJRAL; SUZANNE RHODES, Trustee of the

Bateman-Rhodes Family Trust; T. SNYDER; TAMARRA BARBEY; TANE CHARLES ARNOLD, individually, and as Trustee of the Tane C. Arnold 2006 Living Trust; TEEN CHALLENGE OF SOUTHERN CALIFORNIA, INC; TERRA CROWLEY; TERRANCE O'CONNOR and KATHY FRANKLIN, individually; TERRIE LONGO; THE BAPTISTE FOUNDATION; THE OJAI VALLEY LAND CONSERVANCY; THEODORE and JUDY LUCAS, individually; THEODORE and NORMA SCHNEIDER, individually; THEODORE and TRACY MANDRYK, individually; THEODORE and PEARL MALOS, individually and as Trustees of the Malos Family Trust; THOMAS and CHRISTINE REED, individually; THOMAS and NIKKI YOUNG, individually; TIMOTHY and NICOLE BECKETT, individually; TOBIAS and TANIA PARKER, individually; TODD HENARD and KIBHI MARIE HENARD, individually; TROPICO, LLC; VICTOR and SHERYL SANCHEZ, individually; VICTORIA and JOHN JUNKIN, individually; VIDA VIDA, Trustee of the VIDA FAMILY Trust; VIJAY and NEETA PATEL, individually; VIRGINIA I. WILLIAMSON, individually and as Trustee of Trust of Virginia I. Williamson; VIRGINIA TREVINO; WALID A. ALAWAR, Trustee of the Walid A. Alawar Living Trust; WARREN HEATH; WILLIAM and CHERYL MEADE, individually; WILLIAM and HELEN PECK, individually; WILLIAM and IRENE SNIVELY, individually; WILLIAM and KIMBRA CARNAGHE, individually; WILLIAM and PAULA STEVENS, individually; WILLIAM LOUGHBORO; WILLIAM STARR; YONG YI; YVETTE MARIE and DANIEL JOSEPH SINOHUI, individually; ZACHARY and DIANE TOTTEN, individually [collectively, “Riparian Landowners”];

1300 SHIPPEE LANE, LLC; 3584 CALLE MORENO, LLC; AARON and ANGELA HOEKSTRA, individually; ABEL and LOURDES CARRANZA, individually; ACSLAYTON, LLC; ADAM CASEY and BRITTANY CHISUM, individually; ADAM DISTL, JR. and BARBARA B. DISTL, individually as Trustees of the Adam Distl, Jr. And Barbara B. Distl 1998 Revocable Trust; ADRIAN OGDEN; AERA ENERGY, LLC; AJR INVESTMENT PARTNERSHIP, LP; ALAN and DEBORAH SHARON, individually; ALAN and LESLIE CONNELL, individually; ALAN and MARY KIRBY, individually; ALAN and SUSAN ECKER,

individually; ALAN WALBRIDGE and DOROTHY FAY WALBRIDGE, individually; ALBERTO and ADRIANA MONTANO, individually; ALBERTO and HILDA ZAMORA, individually; ALBINE HOPCUS and ALVA LYDIA HOPCUS, individually as Trustees of the Al and Alva Trust; ALFONSO and ALEJANDRA LIMON, individually; ALLAN and JANIS PARKHURST, individually; ALLAN and KATHARINE PARIGIAN, individually; ALLAN and MARY DOANE, individually; ALLEN VAIL; ALVARO and ELVA RUIZ, individually; ALVIN and CLAUDIA CUNNINGHAM, individually; ANA CROSS, Trustee of the ANA CROSS FAMILY Trust; ANDRE KEUNZLI and FABRIENNE KEUNZLI-MONARD, individually; ANDREW and MELISSA MACCALLA, individually; ANDREW and REBECCA CHANDLER, individually; ANDREW and SHARON ENGEL, individually; ANGELA JAYNE GARDNER and JOHN PERCIVAL MAWSON, individually as Trustees of the Pleasant Avenue Living Trust; ANITA J. DIAZ; ANN H. DONLON, Trustee of the Ann H. Donlon Revocable Trust; ANNA ARCHER; ANNA KIRKWOOD; ANNE and DANIEL GOLDSTEIN, individually; ANSON B. THACHER and ANNE F. THACHER, individually as Trustees of the A. and A. Thacher Living Trust; ANTHONY BECCHIO and DENISE HEIMO, individually; ANTHONY MASIEL; ANTONIO ESPINO and MARIA TORRES, individually; ARNE ANSELM and MICHELLE VELDERRAIN, individually; ARNE ANSELM, Trustee of the Velderrain M. Trust; ASHLEY and VICTORIA EDWARDS, individually; BALDEMAR ALCANTAR and MICAELA ORTIZ ALCANTAR, individually; BARBARA A. FITZGERALD, Trustee of the Fitzgerald 1994 Trust; BARBARA BONSIGNORI; BARBARA CHEN LOWENTHA, Trustee of the 2017 Barbara Kay Chen Lowenthal Revocable Trust; BARBARA HALL, Trustee of the Barbara Hall Living Trust; BARNARD PROPERTIES, LLC; BART KENNEDY; BARTON KENNEDY; BERNARD MARTIN; BETH E. LINDLEY; BETTYANN SESSING; BIG BLACK DOG, LLC; BLAZE BUONPANE; BRADLEY and ANDREA ROE, individually; BRADLEY and IVELOU PANTOSKEY, individually; BRANDON and TRESSA KAHLER, individually; BRANDON and KELSIE SCHNEIDER, individually and as Trustees of the Brandon Schneider and Kelsie Simms-Schneider Family Trust; BREAL and KAREN ROWE, individually; BRENDAN RICHARD and CHRISTA LEE

DAWN FREEMAN, individually; BRENT and PAMELA LAMO, individually; BRETT and LYNN WILSON, individually; BRETT CUNNINGHAM; BRETT NICHOLSON and NAN DAVIS, individually; BRIAN and CYNTHIA MCDANIEL, individually; BRIAN and ERIN EDWARDS, individually; BRIAN and JEAN HARRISON, individually; BRIAN and MARIE HAASE, individually; BRIAN and SIOBHAN CALVIN, individually; BRIAN A. SCHAFFELS; BRIAN OSBORNE and KIRSTEN HINRICHS, individually; BRITTANY and ALAN FLETCHER, individually; BRUCE and LESLIE BOUCHE, individually; BRUCE and VIRGINIA HIBBERD, individually; BRUCE C. BROCKMAN and BRIDGET TSAO-BROCKMAN, individually as Trustees of the Tsao Brockman Family Trust; BRYAN and NICOLE CRAWFORD, individually; BULMARO and ALFONSA PENA, individually; BYRON and JENNIFER GREENE, individually; BYRON RADER and MYRA TOTH, individually; CAL B. LAND CO., LLC; CALATLANTIC GROUP INC.; CAMP RAMAH IN CALIFORNIA INC.; CARL and JUDITH BELL, individually; CARL and LEIGH HYNDMAN, individually; CARL GADDIS and ANNA HICKS, individually; CARLA DENNIS, Trustee of the Carla D. Dennis Trust; CARLA MELSON and CARLA J. MELSON, individually as Trustees of the Carla J. Melson Revocable Living Trust; CARMEN and CAROLINA MURILLO, individually; CAROL MARQUEZ-OLSON, Trustee of the Carol Marquez-Olson Trust; CAROL VESECKY, Trustee of the Carol B. Vesecky Revocable Living Trust; CAROLINE TURNER, Trustee of the Turner Survivors Trust; CAROLYN BOWMAN, Trustee of the Carolyn Bowman 2008 Trust; CAROLYN HUISH; CARYN MOLINELLI; CATHERINE LANCASTER; CATHERINE SELLMAN; CATHERINE SMITH, Trustee of the Catherine L. Smith Revocable Trust; CESAR and DAVIENNE GUERRA, individually; CESAR JIMENEZ and AURA MINERA, individually; CHAARENNE TORRIS and RAYMOND BRADLEY, individually; SOUTHERN CALIFORNIA ASSOCIATION OF SEVENTH DAY ADVENTISTS; CHAD CARPER; CHAD RESS and STEPHANIE WASHBURN, individually; CHAD VICK, Trustee of the Chad C. Vick Trust; CHARLENE VAN DEUSEN; CHARLES and DEANA SHERRY, individually; CHARLES and JO BENNETT, individually; CHARLES G. BARNETT, SUCCESSOR Trustee of the "Barnett Family Exemption Equivalent Trust"; CHARLES L. HOFF and KATHLEEN D.

HOFF, Co-Trustees of the Hoff Revocable Trust; CHARLES MONN and ELENA HALE, individually; CHARLES R. RUDD and LOLA L. RUDD, Trustees Under the Charles R. Rudd and Lola L. Rudd Trust; CHRISTIE MATTULL, Trustee of the Christie Lynn Mattull Trust; CHRISTINE and DONALD BOWEN, individually; CHRISTINE GOLDEN; CHRISTOPHER and ANNA RHODA, individually; CHRISTOPHER and GILLIAN BORGESON, individually; CHRISTOPHER and SHELAGH DUKE, individually; CHRISTOPHER CORSONES, Trustee of the Christopher Corsones Living Trust; CHRISTOPHER MCGUIRE; CHRISTOPHER SEWELL; CHRISTOPHER WEINER and DAMIAN BOURGUET, individually; CINDY BURKHART, Trustee of the Cindy Burkhart Living Trust; CITY OF OJAI; CLAUDIA FARR, Trustee of the Sam S. Farr And Claudia S. Farr Trust; CLAUDIA WUNDERLICH, Trustee of the Claudia A Wunderlich Trust; CLEMENTINE TURNER, Trustee of the Clementine Turner Living Trust; CODY GREEN; CODY STEVENS; CONNIE ANAISE; CONNIE and MARK CLINE, individually as Trustee of the Mark Terry Cline Family Trust; CONSTANCE EATON; CORY and NICHOLAS WINGATE, individually; COUNTY OF VENTURA; CRAIG and STEPHANIE GARDNER, individually; CRAIG YOUNG and DANIEL POLING, individually; CULBERT FAMILY PARTNERSHIP; CURTIS and CHRISTINA TOLMIE, individually; CYNTHIA ELLIS and PAMELA THOMAS, individually; DAJ PROPERTIES, LLC; DAMIAN and LORIE VOS, individually; DAMON and ANNE BRINK, individually; DANIEL and ADAYA WALSH, individually; DANIEL and DEBORAH HOYT, individually; DANIEL and ELIZABETH GEORGE, individually; DANIEL and ELIZABETH MCLAUGHLIN, individually; DANIEL and JANE KELLY, individually; DANIEL and LYDIA RUARK, individually; DANIEL and RALPH FAIRBANKS, individually; DANIEL and TOMICA MORA, individually; DANIEL and YOKO MCSWEENEY, individually; DANIEL CHRYNKO; DANIEL CRANE; DANIEL H. I. and WILLIAM D. MOSES JR., individually as Trustees of the William D. Moses, Jr. Separate Trust No. 1; DANIEL HULTGEN, Trustee of the Hultgen Living Trust; DANNY HAAR and MARISKA DE FEITER, individually; DARRELL RALSTON, Trustee of the Darrell Anthony Ralston 2009 Revocable Trust; DAVE and KATHLEEN TARRATS, individually; DAVID and BEVERLY FULTON, individually; DAVID and CAROL

CINTRON, individually; DAVID and DEBORAH TODD, individually; DAVID and DONNA BERGER, individually; DAVID and ELIZABETH SILVA, individually; DAVID and FERESCHTA SINCLAIR, individually; DAVID and KAREN BRUBAKER, individually; DAVID and KATHLEEN OSTBY, individually; DAVID and LAURA MEISCH, individually; DAVID and LAURIE MAHAN, individually; DAVID and MEGHAN SANDOVAL, individually; DAVID and MINDY BENEZRA, individually; DAVID and PEGGY STANWOOD, individually; DAVID and SANDRA MURILLO, individually; DAVID and SHANNON RICHARD, individually; DAVID and SHARRON SPARKS, individually; DAVID and STEPHANIE BERGER, individually; DAVID and TONI JOHNSON, individually; DAVID COREY and JEAN SCHOLES, individually; DAVID E. PRESSEY and AGNES E. PRESSEY, individually as Trustees of the David E. And Agnes E. Pressey Family Trust; DAVID KILLE and SHANNON FREW, individually; DAVID L. GARBER and CYNTHIA GARBER, individually as Trustees of the Garber Trust; DAVID ORBACH and EVA ARAUJO, individually; DAVID STANLEY and MONICA BEDNAR STANLEY, individually; DAWN and BARCLAY HOPE, individually; DE and JACQUE PISCIOTTA, individually; DEAN and GLORIA VADNAIS, individually; DEAN and LORINDA STRONG, individually; DEANNA GONZALES, individually; DEIRDRE LYNDS, individually; DELAVAN C. GARST and SHARON D. GARST, individually as Trustees of the Delavan and Sharon Garst Family Trust; DELL and ANNE MERCER, individually; DELORES and JERRY BERLIN, individually; DENISE WIZMAN, as Trustee of the Denise Wizman Revocable Trust; DENNIS and CHERYL JACOBS, individually; DENNIS and NADINE CORTE, individually; DEREK MEEK; DEVON and JILLIANN COLLINGE, individually; DIANA ENGLE, Trustee of the Diana L Engle Revocable Trust; DIANA PERON, Trustee of the Diana C Peron Living Trust; DIANA SYVERTSON, Trustee of the Diana Syvertson Living Trust; DIANA TRENT, Trustee of the Diana Trent Living Trust; DIANE and WILLIAM CLEGG, individually; DIANNE MCCOURTNEY, Trustee of the Dianne Louise McCourtney Trust; DOLORES KEITH; DOMINIC HABIBI; DONALD and CLARA TENPENNY, individually; DONALD BROSNAC and TWILA CARLSEN, individually; DONALD DAVIS; DONALD G. and SUSAN B. DAVIS, individually as Trustees

of the Donald G. And Susan B. Davis Revocable Family Trust of 1997; DONIS MONTOYA JR. and TERESITA MONTOYA, individually; DONNA DEITCH, Trustee of the DONNA E. DEITCH Trust; DONNA EPSTEIN, Trustee of the Epstein Survivors' Trust, Trustee of the Epstein Marital Trust, and Trustee of the Epstein Bypass Trust; DOROTHY and JAMES KEHOE, individually; DORTHEA KECK; DOUGLAS and ANN PARENT, individually; DOUGLAS and CLAUDIA WEBBER, individually; DOUGLAS and ELISABETH VERNAND, individually; DOUGLAS and KATHLEEN LEIGHTON, individually; DOUGLAS and MOIRA VOLPI, individually; DOUGLAS DRAPER; DOUGLAS WASSON, Trustee of the Wasson Trust; DUSTIN BEILKE; ED and LINDA COLBY, individually; EDSON TAFT, Trustee of the Edson B. Taft Revocable Trust; EDWARD and DEBORAH GUERRA, individually; EDWARD and LAURA SAVALA, individually; EDWARD and NANCY DENNIS, individually; EDWARD and NANCY NECKER, individually; EDWARD and ROBERTA WALSH, individually; EDWARD DUNN and JUDITH SHELBY DUNN, individually; EDWARD PRESSEY; EDWIN NORRIS PROCTER, Trustee of the "E. Norris Procter Living Trust"; EILAM BYLE, Trustee of the Eilam Byle Living Trust; EILEEN STERLING, Trustee of the Eileen M. Sterling Revocable Trust; EILEEN WALKER; EL SERENO 1225, LLC; ELAIENE KEELEY, Trustee of the Elaiene Keeley Trust; ELAINE FERGUSON; ELI and JESSICA NEIDERHISER; ELIA ALDAPA; ELIZABETH BAUER, Trustee of the Elizabeth A Bauer Trust; ELLEN LEOPOLD; ELMER and JOAN SWIFT; EMILY BENSON and LISA MARTEL, individually; EMILY CLAY and MATTHEW GOODMAN, individually; ERBAY and VELDA GARCIA, individually; ERIC and ARLENE SCHWERDTFEGER, individually; ERIC and JOLENE HARRINGTON, individually; ERIC BUSH and CRAIG YOUNG, individually; ERIC DILKS, Trustee of the Eric M. Dilks 2004 Revocable Trust; ERIC GOODE; ERIC MOORE; ERIC ROSENBERG; ERNEST and DOROTHY NICHOLS, individually; ERNEST THORNSBERRY, Trustee of the Ernest Thornsberry Revocable Trust; ESPERANZA and SANDRA GUERRERO, individually; EUGENIJUS VALIULIS, Trustee of the Eugenijus Valiulis Revocable Living Trust; EUSEBIO and LORI NAVARRO, individually; EVELYN BARAN, Trustee of the Evelyn F Baran Personal Residence Trust; EZEQUIEL and AMBER

MONARREZ, individually; FELIX and DELMY GARCIA, individually; FERNANDO PORRAS; FEROZ and MONA ZAIDI, individually; FINCH FARMS, LLC; MEREWETHER JUDSON, LLC; FLOYD and CHARLENE FITZGERALD, individually; FLOYD EUGENE WIANCKO and HIROKO WIANCKO, Trustees of the Wiancko Family Trust; FOREST HOME, INC.; FORTUNE REAL ESTATE 888, LLC; FRANCIS and SHAUNA LONGSTAFF, individually; FRANCISCO and ANGELICA VALLES, individually; FRANK and LILA SHELTREN, individually; FRANK C. URIAS and EVANGELINE S. URIAS, individually as Trustees of the Urias Family Trust; FRANK CHAROLLA; FRANK EDWARD SHELTREN, JR., aka FRANK E. SHELTREN and RITA CHERYL SHELTREM, individually as Trustees of the Sheltren Family Trust; FRED and CARINE FISHER, individually; FRED and DONNA STEVENS, individually; FRED KRAMER and MICHAELA WATKINS, individually; FREDERIC DEVAULT; FREDERICK and LAURA FULMER, individually; FREDERICK SLOMAN and NORDI HINTZE, individually; FREDRICK and ROXANNE BAKER, individually; FUTURE MHPS, LLC; GABRIEL and MARGARITA MENDOZA, individually; GALE and BERNABE GAONA JR., individually; GARY and CHARI PETROWSKI, individually; GARY and COLLEEN FRY, individually; GARY and JOLENE CLARKE, individually; GARY and JUDITH STEVER, individually; GARY and PATRICIA TUCKER, individually; GARY and TERESA DOWNARD, individually; GENE and PATTY SAITO, individually; GENNEVA MASCHLER and RICHARD YACIUK, individually; GEOFFREY and PAULA CLARKE, individually; GEOFFREY BROWN and STEPHANIE GIBSON, individually; GEORGE and LINDA BOSTON, individually; GEORGE and LYNN MALONE, individually; GEORGE and MARGARET MELTON, individually; GEORGE and SIGRID BRESSLER, individually; GEORGE STUART; GERALD and DARLENE CARLSON, individually; GERARD LINSMEIER; GERBEN and JILL HOEKSMA, individually; GINO LYNCH; GLENN MYERS, Trustee of the Glenn C. Myers Family Trust; GORDON and TERRY HANUSEK, individually; GORDON GIBBONS, Trustee of the Gordon R. Gibbons Living Trust; GRANT KEMP; GREG and JULIE TEBO, individually; GREGG and ROSIE DIERICKX, individually; GREGG OLSON, Trustee of the Gregg W. Olson Revocable Trust; GREGORY and

KAORI GOLDEN, individually; GREGORY and MARTHA LEPINE, individually; GREGORY and SARAH DELVECCHIO, individually; GREGORY and SUSAN GILBERT, individually; GREGORY and SUSAN IGNACIO, individually; GREGORY and SUZANNE COMBS; GREGORY HERAS and ROZANNE BONAVITO, individually; GREGORY JOHNSON; GREGORY N. PIMSTONE and LAURYN B. HARRIS, individually as Trustees of the Pimstone Family Trust; GRIFFIN and NICOLE WILLIAMSON, individually; GUDAZ, LLC; GUY and SHERI FLASCH, individually; GUY BRATTON; H and BEVERLY LEARD, individually; HACIENDA LADERA, LLC; HANK and ALANA GARCIA, individually; HANS and EILEEN VAN KOPPEN, individually; HARALD WAGNER; HARLAN KOSSOW; HARRISON HILL and LAUREN WILSON, individually; HARRY and MARILYN LEHR, individually; HARRY JOE; HAYDEN and RAQUEL WHITE, individually; HECTOR and ROCIO TORRES, individually; HEIDI C. KURTZ, Trustee of the Gunild Walsh Seadrift Qprt FBO Heidi C. Kurtz; HELIBERTA VALENCIA; HELP OF OJAI, INC.; HENRY and MOIRA TARMY, individually; HERMANN and GAY THOMSEN, individually; H. H. LEARD and BEVERLY LEARD, individually as Trustees of the Leard Family Trust; HICKEY BROS LAND CO. INC.; HOLLY BASSUK; HOWARD and RUTH MILLER, individually; HOWARD ALTMAN, Trustee of the Gerta Maritz Trust; HOYT TAROLA; IAN and CAROL ATKINSON, individually; IGNACIO and ROSE VEGA, individually; IMELDA MARES, Trustee of the Imelda Mares Trust; INDUSTRIAL VENTURA; INTEGRITAS OJAI, LLC; IRMA CRUZ; IRSHAD and LINDA HAQUE, individually; ISIDRO SANCHEZ; J INVESTMENTS; J MCGLINCHEY; JACK and MARIE KENTON, individually; JACK and SIMONE PATTERSON, individually; JACK and VERNA TURBYVILLE, individually; JACOB and ANJA ZIMMERMAN, individually; JACQUELINE DORFMAN, Trustee of the Jacqueline Dorfman Revocable Living Trust; JACQUELINE URBAND; JAKOB and MARIANNE VOS, individually; JAMES and ALISA VARNEY, individually; JAMES and DANIELA CASEY, individually; JAMES and DORI SANDEFER, individually; JAMES and JANET LECROY, individually; JAMES and LAURA FERNANDEZ, individually; JAMES and MARYETTA SANDERS, individually; JAMES and PENNY HARVEY, individually; JAMES and RANDI CATLETT, individually; JAMES and

WENDY OSHER, individually; JAMES DATA; JAMES FINLEY, Trustee of the James And M. Reen Finley Family Trust; JAMES FINCH, Trustee of the Finch Family Trust; JAMES J. FINCH and LORRAINE HOLVE FINCH, individually as Trustees of the James J. Finch and Loraine Holve Finch Living Trust; JAMES PAUL FINCH; JAMES KIRK and JACELYN HAYES, individually; JAMES SELMAN, Trustee of the JAMES C. SELMAN REVOCABLE INTER VIVOS Trust; JAMES W. COULTAS and MARGARET COULTAS, Trustees of the James A. And Margaret H. Coultas Intervivos Trust; TERRY COULTAS WILSON; JAMES W. COULTAS Trustee of the Coultas Living Trust; JAN and PRISCILLA GRANADE, individually; JANE MCCORD, Trustee of the Jane Ann Mccord Living Trust; JANET MCGINNIS, Trustee of the Janet Karen Mcginnis Trust; JANICE and JESSE HILLESTAD, individually; JANICE HALL, Trustee of the HALL Trust; JANIS LONG NICHOLAS and JESS E. LONG, individually as Co-Trustees of the Long Family Trust; JASON and JENE LOOMIS, individually; JASON and KATHRYN HEADLEY, individually; JASON and LANA SPEAR, individually; JASON LOOMIS; JASPER and JESSICA JONES, individually; JAYNE PENDERGAST, Trustee of the 2014 Jayne E Pendergast Trust; JEFF and CHEREE SIMONS, individually; JEFF and DESIREE WILBY, individually; JEFF MABRY; JEFFERIE SKAGGS and TIMOTHY BUNCE, individually; JEFFREY and DENISE HELM, individually; JEFFREY and DONNA MEYER, individually; JEFFREY and HOLLY LIEBER, individually; JEFFREY JENSON; JEFFREY KENTON, Trustee of the Jeffrey T. Kenton 2004 Revocable Living Trust; JEFFREY S. BACON, Trustee of the Villa Nero Trust; JEFFREY WEINSTEIN; JEFFRY and FIONA POUGHER, individually; JENNIFER KISTLER, Trustee of the Jennifer L Kistler Trust; JEREMY and BRITTANIA RENNIE, individually; JERI LEONARD; JEROME H. HITTLEMAN and LYNNE M. GOLDFARB, Trustees of the Jerome H. Hittleman And Lynne M. Goldfarb Revocable 2016 Trust; JERRY DEAN MINER and GERALDINE ANN MINER, Trustees of the Miner Trust; JESS EARL LONG; JESSIE STRICCHIOLA and ROSEMARY GARRISON, individually as Trustees of the Phoenix Revocable Trust; JESUS and MARIA RAMOS, individually; JILL OLIVARES, Trustee of the Jill Ann Olivares Revocable Living Trust; JIMMY and THERESA RAMIREZ, individually; JLB RANCHO VISTA, LLC; JOAN GEDDES and JOHN SALUPPO,

individually; JOAN ROBLES; JOANN BENSON, Trustee of the Joann Alva Benson Revocable Living Trust; JOANNE BARNES, Trustee of the Barnes Family Trust; JOEL FOX and JENNIFER DAY, individually; JOEL VUYLSTEKE, Trustee of the Country Club Trust; JOHANNA RAE LONG; JOHN and A. ELROD, individually; JOHN and ALITEA MARUSZEWSKI, individually; JOHN and CRYSTAL PEAKES, individually; JOHN and JANIS NICHOLAS, individually; JOHN and LUCILLE ELROD, individually; JOHN and MONICA HARTMANN, individually; JOHN and NORMA CURTIS, individually; JOHN and PARRIS COLLINS, individually; JOHN and PATRICIA ESSICK, individually; JOHN and TONYA PERALTA, individually; JOHN and VICTORIA BORTOLUSSI, individually; JOHN BATTEL, Trustee of the John J Battel Living Trust; JOHN BROOMFIELD, Trustee of the John Nicholas Broomfield Trust; JOHN F. JOHNSTON and KATHERINE M. JOHNSTON, individually as Trustees of the John Fraser Johnston Family Trust; JOHN HAIGH, JR.; JOHN KERTIS; JOHN MUTLOW; JOHN PACE, Trustee of the John Brice Pace Family Trust; JOHN RICHARDSON; JOHN VINEYARD; JOHN WARNER and JENNIFER DUNN, individually; JOHN WILLINGHAM; JOHN WINSPEAR; JOHN YOUNG; JONATHAN WONG and JAN KOMURA, individually; JOSE and IMELDA HURTADO, individually; JOSE and LISA MENDEZ, individually; JOSE ARREOLA JR. and PAOLA CARRENO, individually; JOSE OLVERA and ALMA VALENCIANO, individually; JOSEPH and DRENDA PLEDGER, individually; JOSEPH LYNN and ELVIRA LILLY BARTHELEMY, individually and Trustees of the Joseph Lynn Barthelemy and Elvira Lilly Barthelemy 2002 Family Trust; JOSEPH and KATHLEEN LASALLE, individually; JOSEPH and MICHELLE HARWELL, individually; JOSEPH and NINA NEULIGHT, individually; JOSEPH and SHIRLEY GHOLSON, individually; JOSEPH LAM; JOSEPH RANDALL, Trustee of the Joseph Darden Randall Revocable Trust; JOSEPH RESEIGH; JOSEPH TOOKER; JOSHUA and JENNIFER GOLDSTEIN, individually; JOSHUA MOREAU; JOYCE and FRANK PATOTA, individually; JUAN and GLORIA ESTRADA, individually; JUAN and MARIA MARTINEZ, individually; JUDITH REICHMAN and HAROLD BROWN, individually; JULIANNE BLOOMER and PHILIP RABE, individually; JULIE CENTENO; JULIO LUNA and DEBBIE LUN, individually;

JUNE SEARS, Trustee of the June Katherine Sears Living Trust; JUPETO PROPERTIES, LLC; KAC LLC; KAREN L. HANSON and LAWRENCE S. HANSON, Trustees of the Hanson L.S. Revocable Living Trust; KAREN PHIPPS, Trustee of the Phipps Family Trust; KARIN DRON, Trustee of the Boyd S. Dron and Karin K. Dron Joint Living Trust; KARIN L. JAMES, Trustee of the James Family Trust; KARL and BEVERLEY MALLETTE, individually; KATHARINE and JOHN BROESAMLE, individually; KATHLEEN and ADAM MORRISON, individually; KATHLEEN and THOMAS GERMAN, individually; KATHLEEN BACHELOR; KATHLEEN NOLAN, Trustee of the Kathleen Ann Nolan Revocable 2006 Family Trust; KATHRYN BARTHOLOMEW, Trustee of the Kathryn Oconnor Bartholomew Living Trust; KATHY ALDERMAN; KATZ PINCETL ORCHARD, LLC; KAY DORNBUSCH, Trustee of the Dornbusch Family Living Trust; KEITH and ANAHID JEWETT, individually; KEITH and ROBIN LAWSON, individually; KEITH and VICTORIA NIGHTINGALE, individually; KELLEY and JOHN DYER IV, individually; KELVIN DODD and DEBORAH GOMEZ, individually; KENETT NIESSEN; KENNETH and ANNE BOYDSTON, individually; KENNETH and BRENDA WHITTEKER, individually; KENNETH and CAROL FERGESON, individually; KENNETH and ELIZABETH GRUBER, individually; KENNETH and LAURA BROWN, individually; KENNETH and MICHAEL BALLARD, individually; KENNETH and SARAH VAN DYKE, individually; KENNETH MORGAN; KENNETH VADNAIS; KERN COUNTY; KEVIN and ASLI RUF, individually; KEVIN and JENNIFER WHITE, individually; KEVIN and JOANNE OLSLAND, individually; KEVIN and JODI DUNN, individually; KHALED A. AL-AWAR and SHERYL L. AL-AWAR, individually as Trustees of the K. and S. Al-Awar Family Trust; KIKI LYON, Trustee of the Kiki Lyon Living Trust; KIM HANNA, Trustee of the Hanna Family Trust; KRISTAN ALTIMUS; KURT and DAYNA ROGGENSTROH, individually; KURT and LUISA NEHER, individually; KURT PATRICK ZIERHUT and STEPHANIE LEE ZIERHUT, Co-Trustees of the Living Trust of Kurt Patrick Zierhut and Stephanie Lee Zierhut; LANSPRING, LP; LARRY and JOYCE HEATH, individually; LARRY DAVIS; LARRY HUBENTHAL, Trustee of the Larry Hubenthal Living Trust; LARRY NEFF, Trustee of the Larry Neff Trust; LAS ENCINAS MOBILE HOME PARK;

LAURA B. PECK and ANDREW D. VILES, individually as Trustees of the William L. and LAURA B. PECK Trust - Marital Trust; LAURA GREEN, Trustee of the Green Survivors Trust; LAURIE JOHNSON, Trustee of the Laurie A. Johnson Living Trust; LAURIE SMITH; LAWRENCE and SHARON MCMILLAN, individually; LAWRENCE I and PATRICIA A. HARTMANN, individually as Trustees of the Larry and Pat Hartmann Family Trust; LEE and JANET CASSEL, individually; LEE FITZGERALD, Trustee of the Lee I Fitzgerald 2007 Revocable Living Trust; LEE LEBECK; LEE ROSENBAUM, Trustee of the Chief Cornerstone Trust; LEON and CAROLINE PAHLE, individually; LEONARD PETITT and KAY ROLFE, individually; LESLEE and TERRY GUSTAFSON, individually; LESLIE MCCLEARY; LESTER L. and LINDA L. BARBEE, individually as Trustees of the Lester L. Barbee and Linda L. Barbee Joint Revocable Living Trust; LIANA HARP and NATHAN JONES, individually; LILIAN RUVALCABA; LINDA CHAPMAN, Trustee Linda of the Jean Chapman Living Trust; LINDA GRIFFIN; LINDA MCLAUGHLIN, Trustee of the Linda Landrieu McLaughlin Living Trust; LINDA OLIVER, Trustee of the Linda A Oliver 2005 Revocable Living Trust; LIPKA RICHARD, Trustee of the Lorraine Trust; LISA LOPEZ and BRIAN MERRILL, individually; LISA SMITH and NATHANIEL COX, individually; LLOYD SMITH; LOGAN and MISTY HAGEGE, individually; LOGAN and TIFFANY GOULD, individually; LOIS STONE ERBURU, as Trustee of the Surviving Spouse's Trust Created in the Robert and Lois Erburu Living Trust; LON and MARGARETA KIRKGAARD, individually; LONGHORN LANE, LLC; LORENE CLEARY; LORI SCHLOREDT; LOU and BARTON MATTHEWS, individually; LOUIS GUTIERREZ, JR. and IRENE GUTIERREZ, individually; LOUIS PRICE; LOUISE and GARY CULVER, individually; LOUISE KONSTANZER, Trustee of the Ron and Louise Konstanzer Family Trust; LOUISE TINDLE, SOLE Trustee of the "Bypass Trust" Created Under The Tindle Trust; LUIS HERRERA and KIMBERLY OYAMA, individually; LUPE MILNER, Trustee of the Lupe Milner Family Trust; LYDIA JIMENEZ; LYLE and CECILIA HALLBLOM, individually; LYNDON HEBENSTREIT; LYNN COLEMAN; LYNN PIKE, Trustee of the Lynn 2016 Trust; LYSIANE WALLIS; M. SNYDER; MALCOLM and BRENDA KNIGHT, individually; MALCOLM and KELLEY MCDOWELL, individually; MANDY

MACALUSO, Trustee of the Living Trust of Mandy Macaluso; MANUEL ALMEIDA and KEVIN BAGLEY, individually; MARCUS and AMY HUEPPE, individually; MARCUS and EVA KETTLES, individually; MARGARET M. ALDRICH, Trustee of the Russell F. Aldrich and Margaret M. Aldrich "Decedent's Trust," and Trustee of the Russell F. Aldrich and Margaret M. Aldrich Living Trust; MARGO KELLY, Trustee of the Kelly Trust; MARIA BLASCO; MARIA COLLINS; MARIE W. WALLACE, Trustee of the Marie Weismiller Wallace Separate Property Trust; MARIKA ZOLL; MARILYN SWEENEY, Trustee of the Marilyn Sweeney Revocable Living Trust; MARIO and SHAWN REYES, individually; MARION and BETTY EARNEST, individually; MARK and COLLEEN RUSIN, individually; MARK and CONNIE CLINE, individually; MARK and HELEN MOSKOVITZ, individually; MARK and MARCIA ALBERTSEN, individually; MARK BELLINI; MARK W. ETCHART, Trustee of the Mark W. Etchart Separate Property Trust, and Trustee of the Michel A. Etchart Separate Property Trust; MARSHA MACDONALD; MARSHALL and DINA MURPHY, individually; MARTHA FAST, Trustee of the Martha L Fast Living Trust; MARTHA LALIBERTE; MARTHA MORAN; MARTIN and BARBARA POPS, individually; MARTIN and NATALIE EHRLICH, individually; MARTIN and PATRICIA HENDERSON, individually; MARY and THOMAS SNOW, individually; MARY DOWNER, Trustee of the Arthur and Mary Downer Family Trust; MARY L. VOMUND, Trustee of the Mary L. Vomund 1987 Trust; MARY THOMAS, Trustee of the Thomas Survivors Trust; MARY WINGATE, Trustee of the Mary Louise Wingate Trust; MATTAWA and ROND LARUE CLEMENTS, individually; MATTHEW and JUDY FARMER, individually; MATTHEW and KIMBERLY HULTGEN, individually; MAX REED; MAXIMIANO and NORMA ORTIZ, individually; J. MCGLIINCHEY; MCNELL CREEK RANCH, A GENERAL PARTNERSHIP; MCNELL PROPERTIES, LLC; MELESIO RAMIREZ; MELISSA VAN SICLEN; MERL and KIM MELSTRAND, individually; MICHAEL and ALLISON SEDLAK, individually; MICHAEL and ANNELL LA BARGE, individually; MICHAEL and BARBARA MCCARTHY, individually; MICHAEL and BERNARD CLARK, individually; MICHAEL and CAROL JACKSON, individually; MICHAEL and DIANNA FARRAR, individually; MICHAEL and HEIDI BRADBURY,

individually; MICHAEL and KIMBERLY ROBERTSON, individually; MICHAEL and NANCY KRUMPSCHMIDT, individually; MICHAEL and SHARON WILLIAMS, individually; MICHAEL and SONJA BARRETT, individually; MICHAEL and TERRI IMWALLE, individually; MICHAEL CHAMBLISS; MICHAEL HOOVER, Trustee of the Michael Hoover Living Trust; MICHAEL KELLEY; MICHAEL L. DELAMOREand DEBORAH FINLEY-DELAMORE, individually as Trustees of the Delamore Finley Family Trust; MICHAEL LOMBARDO, Trustee of the Michael Lombardo Living Trust; MICHAEL MARIETTA, individually and as Trustee of the Marietta Separate Property Trust; MICHAEL PRENTICE; MICHAEL PURDY, Trustee of the Purdy Family Revocable Trust; MICHAEL SALEH, Trustee of the Saleh and Lea Saleh 1984 Family Trust; MICHAEL T. MARSHALL and LISA SKYHEART MARSHALL, individually as Trustees of the Marshall Living Trust; MICKY FROELICH; MIGUEL and ELVIA RAMIREZ, individually; MIGUEL ESTRADA; MURELLE STEVENS, Trustee of the Stevens Family Trust; NANCY FERRELL, Trustee of the Nancy A. Ferrell Family Trust; NANCY GRAHAM; NANCY JACKSON, Trustee of the Nancy J. Jackson Living Trust; NATALIA MOORE, Trustee of the Moore Family Trust; NATHAN ALLEN; NATHANIEL and SUZETTE O'GRADY, individually; NATHANIEL TRAUDT and KAREN TRAUDT, individually and as Trustees of the Traudt Family Trust; NEIL and PATRICIA FRIEDRICHSEN, individually; NEIL KREITMAN, Trustee of the Neil Kreitman Living Trust; NICK and MORNA TAMINICH, individually; NICK DAILY; NINA MENCONI; NYE RANCH, LLC; OAK HAVEN, LLC; OAK VIEW SANITARY DISTRICT; KRISHNAMURTI FOUNDATION OF AMERICA; OILFIELD SERVICE and TRUCK CO.; OILFIELD SERVICE and TRUCK, INC.; OJAI ASSEMBLY OF GOD, INC., DBA OJAI'S CHURCH OF THE LIVING CHRIST, INC.; OJAI HOME, LLC; OJAI UNIFIED SCHOOL DISTRICT; OJAI VALLEY ATHLETIC CLUB; OJAI VALLEY LAND CONSERVANCY; OJAI-JACKMAN, LLC; OLE BEHRENDTSEN; OLGA and TRENT JONES, individually; ORIN JR. and KAREN CHAPPELL, individually; ORVILLE HERNVALL, Trustee of Hervnall Orville and Marion Orville Trust; OSCAR and MARY KAAS, individually; OSCAR ACOSTA, Trustee of the Acosta Trust; OST TRUCKS and CRANES; OVIS, LLC; PAMELA GRAU, Trustee of the

Pamela Grau Living Trust; PAMELA MELONE, Trustee of the Pamela M. Melone Living Trust; PATRICIA BOAN and ALINA HOFFMAN, individually; PATRICIA BOAN and JOHN HOFFMAN, individually; PATRICIA MARSHALL, Trustee of the Patricia Ann Marshall Trust; PATRICIA MCPHERSON; PATRICIA MCGANN; PATRICIA UNRUHE and ANDREW JARVIS, individually; PATRICK HENDERSON and JESSICA MAHARRY, Trustees of the Maharry Henderson Family Trust; PATRICK TUMAMAIT; PAUL and ALDINE HENNIGAN, individually; PAUL and JANET BAILEY, individually; PAUL and JUNE CLEM, individually; PAUL and KIM ROBIE, individually; PAUL and MAELYN EBERT, individually; PAUL and SALLY CENTENO, individually; PAUL FONTEYN, individually; PAUL HOLAHAN and JULIE GRIST, individually; PAUL LEPIANE and BO BENGTSON, individually; PAULA BROWN, Trustee of the Paula Jean Brown Trust; PAULA LASITER; PAULA MCCULLOUGH, Trustee of the Paula J. McCullough Living Trust; PAULINE MERCADO, Trustee of the Pauline Mercado Revocable Trust; PEDRO CISNEROS; PEDRO TEPESANO; PER and INGE CHRISTIANSEN, individually; PERRY FAMILY, LLC; PETER and LINDA DAPRIX, individually; PETER and NORMA DWORKIS, individually; PETER DUFAU; PETER PASSELL; PETER STRAUSS and RACHEL TICOTIN, individually; PETROCHEM DEVELOPMENT I, LLC; PHILIP and DARYLYN LONG, individually; PHILIP and MARY PIERPONT, individually; PHILIP and ROBERT PIERPONT, individually; PHILIPPE and BETSY CALAND, Trustees of the Philippe M. and Betsy C. Trust; PREPARATORY VILLANOVA; QUINT MORRIS; RACHEL KONDOR and BRIAN SEGEE, individually; RAFAEL and MAGDALENA VILLALPANDO, individually; RAFFI J. MESROBIAN and MYRNA R. MESROBIAN, individually as Trustees of the Mesrobian Family Trust; RAINER BUSCHMANN and JOHN JOHNSTON, individually; RALPH and LYNNE LUNDY, individually; RAMAA MOSLEY; RANDAL R. O'CONNOR, SUCCESSOR Trustee of the Red Clay Trust, and successor Trustee of the Le Cedre Trust; RANJIT SEVAPRAKASAM; RAY HALL, Trustee-in-Trust of the 30 Acre Trust; RAYMOND and ESTHER KARDLY, individually; RAYMOND and EVA LYONS, individually; RAYMOND MAGEE and LINDA TAYLOR, individually; RDK LAND, LLC; REBECCA ADAMS; RED MOUNTAIN LAND

and FARMING, LLC; REEVES ORCHARD, LLC; REFUGIO GOMEZ; REX and HEIDI LANNING, individually; REYNOLDS FLEMING; RICARDO GONZALEZ; RICHARD and BILLIE SUMNER, individually; RICHARD and EMILY CARGILL, individually; RICHARD and KATHERINE GODFREY, individually; RICHARD and LEE HARPER, individually; RICHARD and MARILYN KALLAS;, individually RICHARD and NANCY FRANCIS, individually; RICHARD and TERESA TURNER, individually; RICHARD DODSON, Trustee of the Richard E. Dodson 2010 Revocable Trust; RICHARD FRANCIS; RICHARD FREY and WENDY APPLEBY, individually; RICHARD and EMMA KLINE, individually; RICHARD LOWEN; RICHARD MAGANA; RICHARD MCGRATH, Trustee of the Richard K McGrath Living Trust; RICHARD SOJKA; RJPR LTD. PARTNERSHIP; ROBERT and ANAMARIA SCHMID, individually; ROBERT and ANTOINETTE TIVY, individually; ROBERT and DIANA PETROPULOS, individually; ROBERT and DIANNE STONE, individually; ROBERT and DOMINQUE DANIELS, individually; ROBERT and DORA BALITZER, individually; ROBERT and EMILY MARTIN, individually; ROBERT and GAEA CANNADAY, individually; ROBERT and GERALDINE HUNSAKER, individually; ROBERT and JACQUELINE MCDANIEL, individually; ROBERT and JANICE HASTIE, individually; ROBERT and MARILYN SALAS, individually; ROBERT and MAUREEN YOUNG, individually; ROBERT and SHEILA GHEN, individually; ROBERT and SONIA RODARTE, individually; ROBERT and TAUNDRA RODDICK, individually; ROBERT and ANNA J. AURIC, individually as Trustees of the Auric Anna J. Family Trust; ROBERT CALDER DAVIS, JR., Trustee of the Robert Davis Surviving Spouse's Trust, Trustee of the Davis Family Bypass Trust and Trustee of the Davis Family Trust; ROBERT DEKKERS; ROBERT ERICKSON and RONALD WILSON, individually; ROBERT GRASMERE; ROBERT POLIDORI and BRITTANY SANDERS, individually; ROBERTO and MARIA ALONSO, individually; ROCKY MANN; RODERICK and JOYCE GREENE, individually; ROGER and SUSAN DICKENS, individually; ROGER BURKE; ROGER HALEY; Trustee of the Roger and Christina Haley Survivors Trust; ROGER WALKER; ROGERS-COOPER MEMORIAL FOUNDATION; RONALD and BETTE BLUHM, individually; RONALD and JULIA BRUNS, individually;

RONALD BLOOD and LINDA JORDAN, individually; RONALD E. NOVAK and LINDA L. LEWIS, individually as Trustees of the Novak Family Trust; RONALD K. FREELAND and DOREEN FREELAND, individually as Trustees or their successors in interest of the Freeland Trust and any amendment; RONALD L.R. HILL and DEBI R. HILL, Trustees of the R&D Hill Family Trust; RONALD VOGT; ROSEMARIE SINGER; ROSEMARY PAYNE, Trustee of the Rosemary Payne Trust; ROSS ANDERSON; ROWLAND A. HILL II and BRENDA M. HILL, individually as Trustees of the Trust dated November 1, 2002; ROY HICKS, Trustee of the Roy and Jacquelyn Hicks Family Trust; RUBEN and MARISA MARTINEZ, individually; RUBEN CHAVEZ; RUBEN MAGANA and JANETTE LUPERCIO, individually; RUDY BAEZ; RUSSEL and LAURA ALFORD, individually; RUSSELL and GOLDEN WILEY, individually; RUSSELL WALDROP, Trustee of the Russell B. Waldrop Living Trust; RYAN and LAUREN NICHOLS, individually; SABINO and NICKI PEREZ, individually; SABRINA VENSKUS, Trustee of the Sabrina Venskus Living Trust; SALLY CRAIN; SALVATORE SCARPATO; SAMUEL and JOANNA SCHINDEL, individually; SAMUEL EATON; SANTA ANA RANCH, INC.; SARAH YOUNG; SAUNIE KREWSON; SCOTT and BRITTANY DENTON, individually; SCOTT and CAROL RASMUSSEN, individually; SCOTT and KEELA ALLISON, individually; SCOTT and MARIA HERTZOG, individually; SCOTT and MICHELE SUPAN; SCOTT CHASSE, Trustee of the Scott Chasse Revocable Living Trust; SCOTT FORSYTH and JOY FEDELE, individually; SCOTT LUNDY, Trustee of the Scott Lundy Trust; SCOTT LUTTENBERGER and NATASHA WILCOX, individually; SCOTTIE MONICAL; SEAN and LESLIE BENNETT, individually; SERAFIN and MARTHA FLORES, individually; SEVAN GERARD; SHAHRAM SHAHROKHFAR and DINA NAVA, individually; SHANKS INVESTMENT GROUP, LLC; SHAWN FULBRIGHT, Trustee of the Shawn Fulbright 2014 Revocable Trust; SHAWN REED; SHELL OIL CO.; SHERRICE and JOHN WEECES, individually; SHERRIE DAILY; SHERYL SHUSHAN; SHIPPEE, LLC; SHULL BONSALL, JR., Trustee of the SHULL BONSALL FAMILY Trust; EVANGELINE BONSALL SMITH, a married woman; SIDNEY and JAYNE RICE, individually; STEVEN P. SMITH and LYNN DAVIS-SMITH, individually as Trustees of the Smith Revocable Living Trust; SOUTHERN

CALIFORNIA EDISON CO.; SOUTHERN CALIFORNIA ASSOCIATED INVESTORS, LTD.; SPENCER and BAILEY HILL, individually; SRPS, LP; STACY CADENASSO; STANLEY and THERESA WYATT, individually; STANLEY and W HUBBELL, individually; STATE OF CALIFORNIA, DEPARTMENT OF TRANSPORTATION; STEFAN KOZAK and ANA LOPES, individually; STEPHANIE and CHERYL BEAS, individually; STEPHEN MATZKIN, Trustee of the Stephen Matzkin Trust; STEPHEN TURNER, Trustee of the Stephen R. Turner Living Trust; STEVEN and BRENT KANALY, individually; STEVEN and CHRISTINE VAUGHAN, individually; STEVEN and KA RAPHOLZ, individually; STEVEN and KAREN ERICKSON, individually; STEVEN and KRISSELL DUTTER, individually; STEVEN ELLIOT EDELSON, Trustee of the Los Angeles Entertainment Trust; SUMEET BHATIA and MICHAEL MCDONALD, individually; SUMPURAN KHALSA, Trustee of the Sumpuran S. Khalsa Living Trust; SURIA and JOHN GOTTESMAN, individually; SUSAN BEE, Trustee of the John and Susan Bee Family Trust; SUSAN CONLEY, Trustee of the William and Susan Conley Family Trust; SUSAN DILLER, Trustee of the Susan J Diller Trust; SUSAN GARAND; SUSAN GRUBER, individually and as Trustee of the Susan Gruber Living Trust; SUSAN MCCORD-NEUFELD; SUSAN MOLL; SUSAN WEBSTER; SUZANNE HARVEY, individually and as Trustee of the Suzanne G. Harvey Revocable Trust; T BONE HOLDINGS, LLC; TANYA SMITH and MICHAEL MONTANO, individually; TANYA STARCEVICH; TED ROBINSON, Trustee of the Robinson Family Trust; TELOS DEVELOPMENT OJAI, LLC; TERRY WILSON, Trustee of the Terry Coultas Wilson Living Trust; THE OJAI RENTAL, LLC; THE ROMAN CATHOLIC ARCHBISHOP OF LOS ANGELES, a sole corporation; THEODOR and LORE EXNER, individually; THERESA STARK; THOMAS and CYNTHIA CARVER, individually; THOMAS and NANETTE BENBROOK, individually; THOMAS and JADONA COLLER HARPER, individually; THOMAS JACKSON; THOMAS TAMPLIN and MICHELLE WELLS, individually; THOMAS WALBRIDGE, Trustee of the Thomas C Walbridge Trust; THREE OAKS, LLC; THREE SISTERS ORCHARD, LP; TIMOTHY and CHERYL AUSTIN, individually; TIMOTHY and KATHLEEN MCHUGH, individually; TIMOTHY and KATHRYN MORAN, individually; TIMOTHY and LINDA TURNER,

individually; TIMOTHY and MARY WILLIAMSON, individually; TIMOTHY JONES; TODD and CHRISTINA MCGINLEY, individually; TODD RYAN and JESSICA CLICK, individually; TODD TULLETT, Trustee of the Todd Tullett Revocable Living Trust; TOM and NANCY ROLAND, individually; TONY and HEATHER CARLOS, individually; TRACEY and MELANIE BOULTON, individually; TRENT and KRIS GRECO, individually; TYLER and MARIA BARRELL, individually; TYLER LABINE and CARRIE RUSCHEINSKY, individually; ULDINE and FABIEN CASTEL, individually; URIEL and CHIEKO LOPEZ, individually; US NATURAL RESOURCES, INC.; VALLEY OAK CHARTER; VANLAW INVESTMENT CORP.; VENTURA LAND Trust; VENTURA UNIFIED SCHOOL DISTRICT; VICENTE GUZMAN; VICKI DAW; VICKI L. HOLLINGSWORTH, Trustee of the Hollingsworth Trust; VIRGINIA M. MCCARTHY, Trustee of the Virginia M. McCarthy Living Trust; VIRGINIA SIEGFRIED, Trustee of the Virginia A. Siegfried Revocable Trust; VIVIAN ARBER; VIVIENNE MOODY; WALTER and EVELYN GOLIS, individually; WALTER and LINDA BOYSIEWICK, individually; WALTER MCGOWAN, individually and as Trustee of the Walter Robert McGowan 1995 Trust; WANDA and MENIFORD CANTERBERRY, individually; WATERMARK CARP II LLC; WAYNE TATE and JANICE PRIEBE-TATE, individually as Trustees of the Tate Trust, as community property; WEISS INVESTMENT PROPERTIES; WENDY and DAVID CHURCHILL, individually; WERNER and ELVA FISCHER, individually; WESLEY SCOTT and KASEY PERINS, individually; WEST CRAG GLEN SMITH, successor Trustee of the Melissa Irene Elizabeth Smith Irrevocable Special Needs Trust - 1993; WILLI and STEFANIE U. COELER, individually and as Trustees of the W. and S. Coeler Living Trust; WILLIAM and CYNTHIA ANDERSON, individually; WILLIAM and JACQUELINE BOCH, individually; WILLIAM and LORRAINE WALSH, individually; WILLIAM and MELINDA WELCH, individually; WILLIAM and SUSAN LUTHER, individually; WILLIAM B. HART, JR., Trustee of the Constance Eaton Personal Residence Trust; WILLIAM BAILEY, Trustee of the William F. Bailey Living Trust; WILLIAM BROTHERS, Trustee of the William C. Brothers Living Trust; WILLIAM ERICKSON; WILLIAM F. NEWTON and CHARLOTTE R. NEWTON, individually as Trustees of the

NEWTON FAMILY Trust; WILLIAM GILBRETH, Trustee of the William J. Gilbreth Trust; WILLIAM HAWKSWORTH; WILLIAM LOWES; WILLIAM L. REYNOLDS; WILLIAM WHITE, Trustee of the William C. White Trust; WILLIAM WHORF; WILMETTA DAVIS; WINFRIED and CAROL BOERSCH, individually; WYNN JOHNSON and LISA AYALA JOHNSON, individually; YAN and ALILI COMMENT, individually; YARROW and CAROLINE CHENEY, individually; YITZHAK and SMADAR ORLANS, individually; YVON and MALINDA CHOUINARD, individually; ZOBEIDA OLSON [collectively "Riparian and Overlying Landowners"];

ALL PERSONS WHO OWN AN INTEREST IN LAND ADJACENT TO THE VENTURA RIVER OR ITS TRIBUTARIES OR IN LAND OVERLYING THE VENTURA RIVER WATERSHED'S GROUNDWATER BASINS AND CLAIM AN INTEREST TO DIVERT, PUMP, EXTRACT OR STORE GROUNDWATER FROM, UNDER OR ON THAT LAND [collectively "Interested Persons"]

and ROES 1-1,000,

collectively, Cross-Defendants.

LAW OFFICES OF
BEST BEST & KRIEGER LLP
2001 N. MAIN STREET, SUITE 390
WALNUT CREEK, CALIFORNIA 94596

THIRD AMENDED CROSS-COMPLAINT

Cross-Complainant City of San Buenaventura ("City") alleges as follows:

INTRODUCTION

1. This Cross-Complaint seeks a judicial determination of rights to all water within the Ventura River Watershed ("Watershed"), including a comprehensive adjudication of the waters of the Ventura River and the groundwater basins located within the Watershed and their interconnected surface waters and for the imposition of a physical solution. An adjudication is necessary to protect and conserve the limited water supply that is vital to the public health, safety, and welfare of all persons and entities that depend upon waters from the Watershed and to ensure the reasonable use, pursuant to Article X, section 2 of the California Constitution, of the waters in the Watershed. For these reasons, City files this Cross-Complaint to promote the general public welfare in the Watershed; protect City's rights to pump and divert water and provide water to the public; protect from a loss of the public's water supply; prevent degradation of the quality of the public water supply; and avoid higher water costs to the public.

PARTIES

2. City is a charter city and municipal corporation of the State of California and located in the County of Ventura ("Ventura County"). The City operates wells and diversions which extract surface and/or subsurface water from the Ventura River and receives water deliveries from Lake Casitas.

Original Cross-Defendants

3. Cross-Defendant Duncan Abbott ("Abbott") is an individual. City is informed and believes that Abbott operates wells and/or diversions which extract surface and/or subsurface water from Coyote Creek.

4. Cross-Defendant AGR Breeding, Inc. ("AGR") is a California corporation organized and existing under the laws of the State of Colorado and doing business in Ventura County. City is informed and believes that AGR operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

5. Cross-Defendant Asquith Family Limited Partnership, Ltd. ("Asquith Family") is a California Corporation organized and existing under the laws of the State of California and doing business in Ventura County. City is informed and believes that Asquith Family operates well(s) which extract water from the Ojai Valley Groundwater Basin.

6. Cross-Defendant Troy Becker ("Becker") is an individual. City is informed and believes that Becker operates well(s) which extract water from the Ojai Valley Groundwater Basin.

7. Cross-Defendant Bentley Family Limited Partnership ("Bentley") is a California corporation registered in Delaware and does business in Ventura County. City is informed and believes that Bentley operates well(s) which extract water from the Ojai Valley Groundwater Basin.

8. Cross-Defendant Robin Bernhotf ("Bernhoft") is an individual. City is informed and believes that Bernhoft operates well(s) which extract water from the Ojai Valley Groundwater Basin.

9. Cross-Defendant Dwayne Boccali ("Boccali") is an individual. City is informed and believes that Bernhoft operates well(s) which extract water from the Ojai Valley Groundwater Basin.

10. Cross-Defendant Janet Boulton ("J. Boulton") is an individual. City is informed and believes that J. Boulton operates well(s) which extract water from the Ojai Valley Groundwater Basin.

11. Cross-Defendant Michael Boulton ("M. Boulton") is an individual. City is informed and believes that M. Boulton operates well(s) which extract water from the Ojai Valley Groundwater Basin.

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12. Cross-Defendant Dwayne Bower ("Bower") is an individual. City is informed and believes that Bower operates well(s) which extract water from the Ojai Valley Groundwater Basin.

13. Cross-Defendant Burgess Ranch ("Burgess") is a California corporation organized and existing under the laws of the State of Colorado and doing business in Ventura County. City is informed and believes that Burgess operates well(s) which extract water from the Ojai Valley Groundwater Basin.

14. Cross-Defendant Michael Caldwell ("Caldwell") is an individual. City is informed and believes that Caldwell operates wells and/or diversions which extract surface and/or subsurface water from the Upper Ventura River.

15. Cross-Defendant Casitas Municipal Water District ("Casitas") is a California special district organized and existing under the laws of the State of California and located in Ventura County. City is informed and believes that Casitas obtains water from Lake Casitas which contains natural flows from Coyote and Santa Ana Creeks and Ventura River diversions transported to the lake via the 5.4-mile Robles Canal from the Robles Diversion and Fish Passage Facility. City is informed and believes that in 2017, Casitas acquired Golden State Water Company ("Golden State"), a California corporation previously organized and existing under the laws of the State of California and doing business in Ventura County. Golden State was a public utility regulated by the California Public Utilities Commission. City is informed and believes that Golden State operated and that Casitas now operates wells that extract water from the Ojai Valley Groundwater Basin, affecting outflows from the Ojai Valley Groundwater Basin to a tributary of the Ventura River.

16. Cross-Defendant Casitas Mutual Water Company ("CMWC") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that CMWC operates wells that extract water from the Upper Ventura River Groundwater Basin, affecting outflows from that basin to Watershed.

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17. Cross-Defendant Charles Cho ("Cho") is an individual. City is informed and believes that Cho operates well(s) which extract water from the Ojai Valley Groundwater Basin.

18. Cross-Defendant Joe Clark ("J. Clark") is an individual. City is informed and believes that J. Clark operates well(s) which extract water from the Ojai Valley Groundwater Basin.

19. Cross-Defendant Kevin Clark ("K. Clark") is an individual. City is informed and believes that K. Clark operates well(s) which extract water from the Ojai Valley Groundwater Basin.

20. Cross-Defendant Lisa Clark ("L. Clark") is an individual. City is informed and believes that L. Clark operates well(s) which extract water from the Ojai Valley Groundwater Basin.

21. Cross-Defendant Rebecca Collins ("R. Collins") is an individual. City is informed and believes that R. Collins operates well(s) which extract water from the Ojai Valley Groundwater Basin.

22. Cross-Defendant Thomas Collins ("T. Collins") is an individual. City is informed and believes that T. Collins operates well(s) which extract water from the Ojai Valley Groundwater Basin.

23. Cross-Defendant Michael Cromer ("Cromer") is an individual. City is informed and believes that Cromer operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

24. Cross-Defendant Robert C. Davis, Jr. ("Davis") is an individual. City is informed and believes that Davis operates well(s) which extract water from the Ojai Valley Groundwater Basin.

25. Cross-Defendant Linda Epstein ("Epstein") is an individual. City is informed and believes that Epstein operates well(s) which extract water from the Ojai Valley Groundwater Basin.

26. Cross-Defendant Essick Farm Management Company, LLC ("Essick") is a California corporation organized and existing under the laws of the State of California and doing

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business in Ventura County. City is informed and believes that Essick operates well(s) which extract water from the Ojai Valley Groundwater Basin.

27. Cross-Defendant Etchart Ranch ("Etchart") is located in Ventura County. City is informed and believes that Etchart operates wells and/or diversions which extract surface and/or subsurface water from the Upper Ventura River.

28. Cross-Defendant James Finch ("Finch") is an individual. City is informed and believes that Finch operates wells and/or diversions which extract surface and/or subsurface water from the Lower Ventura River.

29. Cross-Defendant Flying H Ranch, Inc. ("Flying") is a California corporation organized and existing under the laws of the State of California and doing business in Ventura County. City is informed and believes that Flying operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

30. Cross-Defendant Ernest Ford ("Ford") is an individual. City is informed and believes that Ford operates wells and/or diversions which extract surface and/or subsurface water from the Upper Ventura River.

31. Cross-Defendant Wayne Francis ("Francis") is an individual. City is informed and believes that Francis operates well(s) which extract water from the Ojai Valley Groundwater Basin.

32. Cross-Defendant Friend's Ranches, Inc. ("Friend's") is a California corporation organized and existing under the laws of the State of California and doing business in Ventura County. City is informed and believes that Friend's operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek and the Upper Ventura River.

33. Cross-Defendant John Galaska ("Galaska") is an individual. City is informed and believes that Galaska operates well(s) which extract water from the Ojai Valley Groundwater Basin.

34. Cross-Defendant Richard Gilleland ("Gilleland") is an individual. City is informed and believes that Gilleland operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

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35. Cross-Defendant Jurgen Gramckow ("Gramckow") is an individual. City is informed and believes that Gramckow operates wells and/or diversions which extract surface and/or subsurface water from Coyote Creek.

36. Cross-Defendant Gridley Road Water Group ("Gridley") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that Gridley operates wells that extract water from the Ojai Valley Groundwater Basin, affecting outflows from that basin to Watershed.

37. Cross-Defendant Stephanie Gustafson ("Gustafson") is an individual. City is informed and believes that Gustafson operates well(s) which extract water from the Ojai Valley Groundwater Basin.

38. Cross-Defendant Lawrence Hartmann ("Hartmann") is an individual. City is informed and believes that Hartmann operates well(s) which extract water from the Ojai Valley Groundwater Basin.

39. Cross-Defendant Hermitage Mutual Water Company ("Hermitage") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that Hermitage operates wells that extract water from the Ojai Valley Groundwater Basin, affecting outflows from that basin to Watershed.

40. Cross-Defendant Dorothy Holmes ("Holmes") is an individual. City is informed and believes that Holmes operates wells and/or diversions which extract surface and/or subsurface water from North Fork Matilija Creek.

41. Cross-Defendant Stephen Huyler ("Huyler") is an individual. City is informed and believes that Huyler operates well(s) which extract water from the Ojai Valley Groundwater Basin.

42. Cross-Defendants Jurgen Gramckow and Geraldine Gramckow are Trustees of the J&G Trust ("Gramckows"). City is informed and believes that Gramckows operate wells and/or diversions which extract surface and/or subsurface water from the Upper Ventura River

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Groundwater Basin. City is informed and believes that Gramckows are owners of or are beneficial interest holders in real property located within the Ventura River Watershed, and they claim riparian rights to divert and/or extract surface and/or subsurface water from the Ventura River and/or its tributaries, whether or not they have exercised such riparian rights.

43. Cross-Defendant Cheryl Jensen ("Jensen") is an individual. City is informed and believes that Jensen operates well(s) which extract water from the Ojai Valley Groundwater Basin.

44. Cross-Defendant Brett Kantrowitz ("B. Kantrowitz") is an individual. City is informed and believes that B. Kantrowitz operates well(s) which extract water from the Ojai Valley Groundwater Basin.

45. Cross-Defendant Denise Kantrowitz ("D. Kantrowitz")is an individual. City is informed and believes that D. Kantrowitz operates well(s) which extract water from the Ojai Valley Groundwater Basin.

46. Cross-Defendant Jerry Kenton ("Kenton") is an individual. City is informed and believes that Kenton operates wells and/or diversions which extract surface and/or subsurface water from North Fork Matilija Creek.

47. Cross-Defendant Ole Konig ("Konig") is an individual. City is informed and believes that Konig operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

48. Cross-Defendant Krotona Institute of Theosophy ("Krotona") is a 501(c)(3) California non-profit corporation located in Ventura County. City is informed and believes that Krotona claims water rights to surface water and/or groundwater in the Ventura River Watershed.

49. Cross-Defendant Tim Krout ("Krout") is an individual. City is informed and believes that Krout operates well(s) which extract water from the Ojai Valley Groundwater Basin.

50. Cross-Defendant Betina La Plante ("La Plante")is an individual. City is informed and believes that La Plante operates well(s) which extract water from the Ojai Valley Groundwater Basin.

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51. Cross-Defendant Lutheran Church of the Holy Cross of Ojai ("Lutheran Church") is a California Non-profit Corporation. City is informed and believes that Lutheran Church operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

52. Cross-Defendant Scott Luttenberg ("Luttenberg") is an individual. City is informed and believes that Luttenberg operates well(s) which extract water from the Ojai Valley Groundwater Basin.

53. Cross-Defendant Jeffrey Luttrull ("Luttrull") is an individual. City is informed and believes that Luttrull operates well(s) which extract water from the Ojai Valley Groundwater Basin.

54. Cross-Defendant Meiners Oaks Water District ("Meiners Oaks") is a California special district organized and existing under the laws of the State of California and located in Ventura County. City is informed and believes that Meiners Oaks operates wells that extract surface and/or subsurface water from the Ventura River and/or Watershed.

55. Cross-Defendant Fredrick Menninger ("F. Menninger") is an individual. City is informed and believes that F. Menninger operates well(s) which extract water from the Ojai Valley Groundwater Basin.

56. Cross-Defendant Margaret Menninger ("M. Menninger") is an individual. City is informed and believes that M. Menninger operates well(s) which extract water from the Ojai Valley Groundwater Basin.

57. Cross-Defendant Stephen Mitchell ("Mitchell") is an individual. City is informed and believes that Mitchell operates well(s) which extract water from the Ojai Valley Groundwater Basin.

58. Cross-Defendant Bill Moses ("Moses") is an individual. City is informed and believes that Moses operates well(s) which extract water from the Ojai Valley Groundwater Basin.

59. Cross-Defendant North Fork Springs Mutual Water Company ("North Fork Springs") is a California corporation organized and existing under the laws of the State of

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California and doing business as a mutual water company in Ventura County. City is informed and believes that North Fork Springs operates wells that extract water from the Upper Ventura River Groundwater Basin, affecting outflows from that basin to Watershed.

60. Cross-Defendant Ojai Water Conservation District ("Ojai WCD") is a California special district organized and existing under the laws of the State of California and located in Ventura County. City is informed and believes that Ojai WCD operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

61. Cross-Defendant Old Creek Road Mutual Water Company ("Old Creek Road") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that Old Creek Road obtains water from Casitas, which obtains water from Lake Casitas which contains water diverted from the Ventura River.

62. Cross-Defendant Rancho de Cielo Mutual Water Company ("Rancho de Cielo") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that Rancho de Cielo obtains water from Casitas, which obtains water from Lake Casitas which contains water diverted from the Ventura River.

63. Cross-Defendant Rancho Matilija Mutual Water Company ("Rancho Matilija") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that Rancho Matilija operates wells that extract surface and/or subsurface water from the Ventura River and/or Watershed.

64. Cross-Defendant Shlomo Raz is an individual. City is informed and believes that Shlomo Raz operates well(s) which extract water from the Ojai Valley Groundwater Basin.

65. Cross-Defendant Sylvia Raz is an individual. City is informed and believes that Sylvia Raz operates well(s) which extract water from the Ojai Valley Groundwater Basin.

66. Cross-Defendant Rincon Water and Road Works ("Rincon") is a California corporation organized and existing under the laws of the State of California and doing business in

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Ventura County. City is informed and believes that Rincon claims water rights to surface water and/or groundwater in the Ventura River Watershed.

67. Cross-Defendant Charles Rudd ("Rudd") is an individual. City is informed and believes that Rudd operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

68. Cross-Defendant William Rusin ("Rusin") is an individual. City is informed and believes that Rusin operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

69. Defendant Mark Saleh ("Saleh") is an individual. City is informed and believes that Saleh operates well(s) which extract water from the Ojai Valley Groundwater Basin.

70. Cross-Defendant Senior Canyon Mutual Water Company ("Senior Canyon") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that Senior Canyon operates wells that extract water from the Ojai Valley Groundwater Basin, affecting outflows from the Ojai Valley Groundwater Basin to a tributary of the Ventura River.

71. Cross-Defendant Siete Robles Mutual Water Company ("Siete Robles") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that Siete Robles operates wells that extract water from the Ojai Valley Groundwater Basin, affecting outflows from that basin to Watershed.

72. Cross-Defendant Sisar Mutual Water Company ("Sisar") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual water company in Ventura County. City is informed and believes that Sisar operates wells that extract water from the Upper Ojai Valley Groundwater Basin, affecting outflows from that basin to Watershed.

73. Cross-Defendant Soule Park Golf Course, Ltd. ("Soule Park") is a California corporation organized and existing under the laws of the State of California and doing business in

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Ventura County. City is informed and believes that Soule Park operates well(s) which extract water from the Ojai Valley Groundwater Basin.

74. Cross-Defendant St Joseph's Associates of Ojai, California, Inc. ("St. Joseph's") is a California corporation organized and existing under the laws of the State of California and doing business in Ventura County. City is informed and believes that St. Joseph's operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

75. Cross-Defendant Andrew Stasse ("Stasse") is an individual. City is informed and believes that Stasse operates well(s) which extract water from the Ojai Valley Groundwater Basin.

76. Cross-Defendant George S. Stuart ("Stuart") is an individual. City is informed and believes that Stuart operates well(s) which extract water from the Ojai Valley Groundwater Basin.

77. Cross-Defendant John Taft ("Taft") is an individual. City is informed and believes that Taft operates wells and/or diversions which extract surface and/or subsurface water from Coyote Creek.

78. Cross-Defendant Telos, LLC ("Telos") is a California Corporation organized and existing under the laws of the State of California and doing business in Ventura County. City is informed and believes that Telos operates well(s) which extract water from the Ojai Valley Groundwater Basin.

79. Cross-Defendant Thacher Creek Citrus, LLC ("Thacher Creek") is a California corporation organized and existing under the laws of the State of California and doing business in Ventura County. City is informed and believes that Thacher Creek operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

80. Cross-Defendant The Thacher School ("Thacher School") is a California non-profit organization organized and existing under the laws of the State of California and doing business in Ventura County. City is informed and believes that Thacher School operates well(s) which extract water from the Ojai Valley Groundwater Basin.

81. Cross-Defendant Tico Mutual Water Company ("Tico") is a California corporation organized and existing under the laws of the State of California and doing business as a mutual

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water company in Ventura County. City is informed and believes that Tico operates wells that extract water from the Upper Ventura River Groundwater Basin, affecting outflows from that basin to Watershed.

82. Cross-Defendant Victor Timar ("Timar") is an individual. City is informed and believes that Timar operates well(s) which extract water from the Ojai Valley Groundwater Basin.

83. Cross-Defendant Topa Topa Ranch Company, LLC ("Topa") is a California corporation organized and existing under the laws of the State of California and doing business in Ventura County. City is informed and believes that Topa operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

84. Cross-Defendant Lou Tomesetta ("Tomesetta") is an individual. City is informed and believes that Tomesetta operates well(s) which extract water from the Ojai Valley Groundwater Basin.

85. Cross-Defendant John Town ("J. Town") is an individual. City is informed and believes that J. Town operates well(s) which extract water from the Ojai Valley Groundwater Basin.

86. Cross-Defendant Trudie Town ("T. Town") is an individual. City is informed and believes that T. Town operates well(s) which extract water from the Ojai Valley Groundwater Basin.

87. Cross-Defendant Ernesto Vega ("Vega") is an individual. City is informed and believes that Vega operates well(s) which extract water from the Ojai Valley Groundwater Basin.

88. Cross-Defendant Ventura County Watershed Protection District ("VCWPD") is a California special district organized and existing under the laws of the State of California and located in Ventura County. City is informed and believes that VCWPD operates wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

89. Cross-Defendant the Ventura River Water District ("VRWD") is a California special district organized and existing under the laws of the State of California and located in

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Ventura County. City is informed and believes that VRWD operates wells that extract surface and/or subsurface water from the Ventura River and/or Watershed.

90. Cross-Defendant Wood-Claeyssens Foundation ("Foundation") is a 501(c)(3) charitable foundation registered in Delaware that owns the Taylor Ranch property and does business in Ventura County. Foundation operates wells, extracts groundwater, and has operated a surface diversion that extracts surface and/or subsurface water from the Ventura River and/or Watershed.

91. Cross-Defendant Calvin Zara ("Zara") is an individual. City is informed and believes that Zara operates wells and/or diversions which extract surface and/or subsurface water from Matilija Creek.

Riparian Landowners

92. City is informed and believes that the following Cross-Defendants ("Riparian Landowners") are owners of or are beneficial interest holders in real property located within the Ventura River Watershed, and they claim riparian rights to divert and/or extract surface and/or subsurface water from the Ventura River and/or its tributaries, whether or not they have exercised such riparian rights:

1970 Ranch Road, LLC;
625 N. Ventures Avenue, LLC;
Abraham Munoz;
Ahde and Ganea Lahti, individually;
Alan and Carol James, individually;
Alessandro Lobba and Mary E. Jackson, individually as Trustees of the Looba-Jackson Family Trust;
Alexander and Maria Doran, individually;
Alfredo and Montelle Bello, individually;
Alvin and Claudia Cunningham, individually;
American Retirement Fund, Inc.;
Amy Mattison, Trustee of the Amy K. Mattison Trust;
Anatoly and Margarita Kozushin, individually;
Andrea Leigh Jensen, Trustee of the Jensen Trust;
Andrew and Jane Holguin, individually;
Andrew D. West and Patricia G. West, individually as Trustees of the West Family Revocable Trust;
Angie Mari Ganasei and Christopher Paul Danch, individually as Trustees of the Genasei-Danch Family Trust;
Anne Lombard and Frank Hanson, individually;
Armando and Sendi Sanchez, individually;
Arthur Timothy and Maurya Kathleen Foy, individually;
Ashlen and Ivy Aquila, individually;
Aubrey Balkind;
Auburn Oak Builders, Inc.;
Barry and Angela Ross, individually;
Behrooz Jadidollahi;
Benjamin and Stacey Vail, individually;

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Berkley and Suzanne Baker, individually;
Bettina Chandler, Trustee of the Bettina Chandler Trust;
Blanche Chapler;
Bradford and Cheryl Boyd, individually;
Brent and Shanna Muth, individually;
Brian and Irene McConville, individually;
Brian and Joan Archer, individually;
Brian and Sharon Smith, individually;
Brian S. Stafford and Janice M. Thomas, individually as Trustees of the Stafford Thomas Family Trust;
Brian Skaggs, Trustee of the Skaggs Trust;
Brigitte Lovell, Trustee of the Lovell Living Trust;
Bruce Abbott and Kathleen Quinlan, individually;
Bruce and Dixie Gladstone, individually;
Bryan Whitley;
Bryce and Krista Belgum, individually;
Carl and Barbara Enson, individually;
Carmen Chavez and Guadalupe Patino, individually;
Carol Nicholson;
Carol Ann Tennant, Trustee of the Carol McDonnell Family Trust;
Carrie Murphy and Michael E. Templin, individually as Trustees of the Templin-Murphy 2016 Living Trust;
Cartin Family, LLC;
Catherine E. Lee, Trustee of the Catherine E. Lee Trust;
Chad Westcott and Heather Cushnie Wescott, individually;
Charles E. Starbuck, Trustee of the Charles E. Starbuck Trust;
Charles P. Watling, Trustee of the First Charles P. Watling Family Trust;
Charline L. Rich and Richard Gibson Jr., individually;
Christopher and Tina Abe, individually;
Christopher Hart;
Christopher Moore and Mary Moore, individually as Trustees of the Christopher Moore and Mary Moore Trust;
Cindy Prose;
Clair and Stacey Harding, individually;
Claudia Zenobia Linarte, Trustee of the Olga Trust;
Claudio and Magdalena Landeros, individually;
Community Memorial Health System;
Connie S. Morgan, Trustee of the Connie S. Morgan Trust;
Conservation Endowment Fund;
Constance and Justin Campbell, individually;
Corinne Anne Fraund;
Craig and Ana Zwirn, individually;
Curtis and Ory Names, individually;
Cynthia Lee, Trustee of the Cynthia Lee Family Trust;
D & J Campbell Best, LLC;
Dan Newman;
Dan Stuart, Trustee of the Dana Stuart Trust;
Dan Wiseman;
Dana and Dawn Ceniceros, individually;
Daniel and Amy Yanez, individually;
Daniel and Nancy Mclaren, individually;
Daniel and Rosalind Grimm, individually;
Danny Broadhurst;
Darren and Lisa Lisle, individually;
David Friend and Angela Marie Friend, individually;
David and Linda Smith, individually;
David and Patti Wicklund, individually;
David Chase and Anne Fitzgerald, individually;
David E. Sissum, Jr. and Diana E. Sissum, individually as Trustees of the Sissum Trust;
David Flick and Emma Flick, individually;
Dawn and Mark Golden, individually;
DB Properties, LLC;
Del Cielo, LLC;
Dennis and Susan Ryder, individually;
Dennis Brown;
Dennis Wood and Margaret Vigil Wood, individually;
Diane Ruth White, Trustee of the Diane Ruth White Living Trust;
Dive Deep, LLC;
Donald and Wendy Givens, individually;
Donald Campbell;
Donna and James Kleeburg, individually;
Dorothy Holmes, Trustee of the Holmes Trust;

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Dorothy Lanquist;
Douglas Freeman and Miranda MargettGunild Seadrifts, individually;
DZ SPE, LLC;
Earl G. Holder, Trustee of the Holder Survivors Trust;
Edward and Geraldine Lee, individually;
Edward C. Leicht and Jacqueline M. Leicht, individually as Trustees of the Leicht Family 2013 Revocable Trust;
Eleanor Small;
Elena Dhyansky, Trustee of the Elena Dhyansky Trust;
Elizabeth Keenen;
Elton Pedersen and Alma Clayton Pedersen, individually;
Eric and Jodi Perdue, individually;
Eric and Ming Jun Nakamura, individually;
Eric and Trisha Johnson, individually;
Eric Lawrence Bernthal, Special Trustee of the Boss and Venice Trust;
Eric Lewis and Bobbi Roderick Lewis, individually;
Erik and Tirica Eads, individually;
Eugene and Charlotte Elerding, individually;
Evelyn Frament;
Fortune Builders, Inc.;
Frank Robert Walker Jr. and Carrie Ellen Walker, individually as Co-Trustees of the Walker Jr. Living Trust;
Frederick and Lori Ponce, individually;
Galen and Maria David, individually;
Gary Hirschkron, Trustee of the Gary Hirschkron Revocable Trust;
Gary L. Wolfe, Successor Trustee of the Carolyn M. Tastad Revocable Trust;
Gary and Terri McCaskill, individually as Trustees of the McCaskill Family Trust;
Gary Speeds and Lisa R. Kirby, individually as Trustees of the Gary Speeds and Lisa Kirby Family Trust;
Gelb Enterprises;
George and Pamela Zeller, individually;
George and Roxanne Pelt, individually;
George Hernandez;
George Lawhead, Trustee of the George and Carole Lawhead Revocable Trust;
Girl Scouts Of California's Central Coast;
Glenn and Lori Ahlberg, individually;
Gordon and Patricia Black, individually;
Gralar, LLC;
Graydon and Helen Harrah, Individually;
Gregory and Michele Hammed, individually;
Gregory Cavette;
Gregory Grant and Mary King, individually;
Hans and Annika Gruenn, individually;
Hendrika Maria Von Hecht;
Henry and Geneva Oliva, individually;
Henry and Leslie Sohm, individually;
Howard and Irene Hoos, individually;
Hugh and Lindsay Thomson, individually;
Intell Ventura, LLC;
Irma Tracy;
Jackie M. Springer, Trustee to the Jackie M. and Lanie Jo Springer Trust;
James and Andrea Pendleton, individually;
James and Gayle David, individually;
James and Staci Valencia, individually;
James and Sue Mills, individually;
James and Trisha Proud, individually;
James and Zelda Carr, individually;
James Peck;
James I. Pio, Trustee of the James I. Pio Trust;
Jan M. Hiester, Trustee of the Jan M. Hiester 2014 Living Trust;
Jane E. Hanchett, Trustee of the Hanchett Family Trust;
Jane Spiller, Trustee of the Jane Spiller Trust;
Janet Lewis, Trustee of the Janet T. Lewis Family Trust;
Janet Peck, Trustee of the Janet Lee Peck Living Trust;
Jeannette Curtis;
Jeffrey E. Frank, Trustee of The Frank Trust;
Jeffrey Tubbs and Lynn Dubowy Duran, individually;
Jennie Scott, Trustee of the Jennie Scott Family Trust;
Jennifer Ware and Jamie Selby, individually;
Jeremy August and Icole Marie Ferro, Individually;
Jesse Wadsworth and Susan Hynds, individually;
Jesus Cornejo and Idania Yudith Cornejo,

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individually;
Joan Kenton, Trustee of The Joan Kenton Living Trust;
Joanna Pope;
Jody Callegari;
Joel Hernandez;
Johanna Collins;
John and Lisa Dillard, individually;
John and Mari Allen, individually;
John and Nancy Bevans, individually;
John and Nila Ventress, individually;
John Edward and Evonne Louise Vacca, individually;
John Gutierrez;
John Mazzola and April Golden, individually;
John Taft Corporation;
Jon Hanson;
Jonathan and Jacqueline Parker, individually;
Jonathan and Julie Teichert, individually;
Jose Juarez and Ana Valencia, individually;
Jose Valadez and Norma Hernandez, individually;
Joseph Palmoutsos as Trustee of the Joseph Constantinos Palmoutsos Living Trust;
Joseph Polito, Trustee of the Joseph R Polito 1989 Trust;
Joshua Antelman;
Joyce Frenette;
Juan Espinoza and Travis Coker, individually;
Juana and Henry Murillo; individually;
June M. Spar, Trustee of the June M. Spar Living Trust;
Jurgen Gramckow and Geraldine Gramckow, individually as Trustees of the J&G Trust;
Justin and Rachael Jayne, individually;
Karen Mendoza, Trustee of the Vork Family Trust;
Katherine Patton and Virginia Mcconnell, individually;
Kathleen Turner and Elizabeth Renn, individually;
Kay Burns;
Ken Collin;
Kenneth and Maria Baker, individually;
Kenneth S. Collins, Trustee of the Frank R. Walker, Jr. Trust;
Kent and Patricia Hardley, individually;
Kevin K. Cox and Mary C. Cox, individually as Trustees of the Cox Family Trust;
Kim Jirka, Trustee of the Kim Jirka Trust;
Konstantin Demidov;
Kyle Brown;
Lance and Donelle Woleslagle, individually;
Larry and Cecilia Hickok, individually;
Larry Hubenthal, individually and as Trustee of the Larry Hubenthal Living Trust;
Laszlo and Sharon Bihari, individually;
Laszlo Engelman, Trustee of the Engelman Family Trust
Laughing Dog Ranch, LLC;
Laverne M. Browning;
Lawrence and Rachel Clevenson, individually;
Leon and Cecelia Carter, individually;
Leonard Fischer;
Lorenzo Gama and Ylda Cisnero, individually;
Loretta May Williams, aka Loretta May Blackburn, Trustee of the Loretta May Williams Revocable Living Trust;
Lucille Jane Conforti and Randall Norman Kirk, individually as Co-Trustees of the "Lucille Jane Conforti Trust";
Lynn and Ann Henne, individually;
Lynn Gotch and Linda Oliver, individually;
Manuel and Sandy Garcia, individually;
Marilyn Wallace, Trustee of the Marilyn Wallace Separate Property Trust;
Mario Aguirre and Patrice Vernand, individually;
Mark and Megan Steffy, individually;
Mark Anthony and Kim Marie Crane, individually;
Mark Robbins, Trustee of the Mark Robbins Trust;
Mark Thompson;
Martin and Darian O'brien, individually;
Martin and Linda Gramckow, individually;
Martin Gramckow, Trustee of the Monika G. Huss Irrevocable Trust, Trustee of the Karin W. Gramckow Irrevocable Trust, Trustee of the Kurt J. Gramckow Irrevocable Trust;

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Marvel Pierce;
MaryAnn Hepp Hill, Trustee of the Hill Family Trust;
Mary Bergen, Trustee of the Rosemary Hall Bergen Trust;
Mary Morrison;
Mary Walkart and William Hastings, individually;
Matilija Canyon Alliance;
Matthew and Claudia Wilson, individually;
Matthew Arreola;
Matthew Bowe;
Matthew Dwyer and Colleen Walker, individually;
Matthew Larrew and Jordana Kaban, individually;
Matthew Simon and Amanda Vino, individually;
Michael and Carol Davis, individually;
Michael and Cindy Boehm, individually;
Michael and Hannalore Gresser, individually;
Michael and Kathy Ogden, individually;
Michael and Kim Regan, individually;
Michael and Marie Mctavish, individually;
Michael and Patricia Mcweeney, individually;
Michael Coggins Jr. and Cynthia Coggins, individually;
Michael Greynald, Trustee of the Greynald Family Trust;
Michael L. Rockhold, Trustee of the Michael Rockhold Trust;
Michael Tello;
Michele Willis and Johanna Collins, individually;
Miguel A. Mayorga, Trustee of the Edward R. Mayorga Living Trust;
Mitchael and Rubeena Breese, individually;
Mitchell and Ana Yount, individually;
Mitchell and Joy Dalbey, individually;
Mitchell and Lisa Myers, individually;
Nancy Moore, Trustee of the Nancy Anne Moore Separate Property Trust;
Nikolas and Julia Krankl, individually;
Offshore Crane, Inc.;
Offshore Crane and Service Company, Inc.;
Offshore Facilities;
Ojai Valley Conservancy;
Orville and Marion Hernvall, individually;
Orville and Pamela Hibdon, individually;
Oswaldo and Norma Ruiz, individually;
Pacific Telephone and Telegraph Company;
Pamela Wood;
Patric and Margaret Peake, individually;
Patricia and Edward Lansberg, individually;
Patricia Cuenot;
Patrick and Cathy Pagnusat, individually;
Paul and Angela Booth, individually;
Paul and Ashley Ramsey, individually;
Paul and Maria Lozano, individually;
Paul and Martha Medlar, individually;
Paul and Opal Skaggs, individually;
Peter and Kelli Freiberg, individually;
Peter and Robin Shedlosky, individually;
Peter Brooks and Carla Brooks, individually and as Trustees of the Escoda Brooks Family Trust;
Peter Cambier, Trustee of the Peter and Marilyn Cambier Trust;
Peter Schey, LLC;
Peuvlin Vong;
Philip and Delia Smith, individually;
Philip Ferrante Jr. and Nicole Aversa-Ferrante, individually;
Philippe Rousseau and Kimberly Shobe, individually;
Phyllis Courtney;
Rafael Hernandez;
Ramona L. Andrew, Trustee of the Ramona L. Andrews Trust;
Rancho Arnaz, LLC;
Rancho Casitas, LLC;
Rancho Sueno, LLC;
Ray and Carolina Guillen, individually;
Raymond and Annette West, individually;
Richard and Laura Mancilla, individually;
Richard and Alexandra Dubeau, individually;
Richard and Cynthia Robinett, individually;
Richard Bolton;
Richard Mathieu and Claudia Herrera Mathieu, individually;
Richard Michael and Margaret Kenny, individually;
Richard Wiles and Peggy Carey,

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individually;
Robert Alan and Stacey Jean Boyd, individually;
Robert and Carolyn Jarboe, individually;
Robert and Judith Clark, individually;
Robert and Nickey Gregory, individually;
Robert and Patricia Mcfall, individually;
Robert and Susan Bennitt, individually;
Robert and Anna J. Auric, individually as Trustees of the Auric Revocable Trust of 1999;
Robert Levin and Lisa Solinas, individually;
Robert Mark and Lorraine Melisa Lovato, individually;
Robert OConnor;
Robert Petrin and Beate Schickerling, individually;
Robert L. Stone, Trustee of the Robert L. Stone Revocable Living Trust;
Robert S. Young, Trustee of the Young Trust;
Ronald and Janis Calkins, individually;
Ronald Kaplan and Cynthia Daniels, individually;
Rudolph and Carol Saldamando, individually;
Russell James Hall, Trustee of the Russell James Hall Family Trust;
Sam and Debbie Tucker, individually;
Scott Alan and Eva Prince Weiss, individually;
Scott and Aki Freshman, individually;
Scott and Bernadette King, individually;
Scott and Sarah Mckay, individually;
Scott Gregory Erockson and Hannah Beth Guzik, individually;
Scott R. Johnson and Margaret Bates, individually;
Serafin Calderon and Blanca Ortiz; individually;
Shane and Amy Watkins, individually;
Shane Nash;
Sharon and Bruce Spencer, individually;
Sharon Brown, Trustee of the Sharon Brown Living Trust;
Shaun and Daisy Garman, individually;
Shirley M. Palmer, Trustee of the Shirley Palmer Revocable Trust;
Skynest, LLC;
Societe d'Investissement Immobiliers et Financiers Franco-Allemand, a French corporation;
Stanley Stephen Roslansky and Linda Roslansky, individually as Trustees of the Roslansky Family Trust;
Stephen and Carin Kally, individually;
Stephen and Cindy Barrack, individually;
Stephen Carr and Debra Gill, individually;
Stephen M. Johnson, Trustee of the Stephen M. Johnson Living Trust;
Stephen Sanford;
Stephen Zane Fraser;
Stuart and Nancy Rupp, individually;
Sudarshan Gautam;
Susan Gary;
Susan M. Ralph, Trustee of the Ralph Trust;
Susan Yarnell;
Sushma Gujral;
Suzanne Rhodes, Trustee of the Bateman-Rhodes Family Trust;
T. Snyder
Tamarra Barbey;
Tane Charles Arnold, individually and as Trustee of the Tane C. Arnold 2006 Living Trust
Teen Challenge of Southern California, Inc.;
Terra Crowley;
Terrance O'Connor and Kathy Franklin, individually;
Terrie Longo;
The Baptiste Foundation;
The Ojai Valley Land Conservancy;
Theodore and Judy Lucas, individually;
Theodore and Norma Schneider, individually;
Theodore and Tracy Mandryk, individually;
Theodore Willis Malos, Jr. and Pearl B. Malos, individually and as Trustees of the Malos Family Trust,;
Thomas and Christine Reed, individually;
Thomas and Nikki Young, individually;
Timothy and Nicole Beckett, individually;
Tobias and Tania Parker, individually;
Todd Henard and Kibhi Marie Henard, individually;
Tropico, LLC;

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Victor and Sheryl Sanchez, individually;
Victoria and John Junkin, individually;
Vida Vida, Trustee of the Vida Family Trust;
Vijay and Neeta Patel, individually;
Virginia I. Williamson, individually and as Trustee of Trust of Virginia I. Williamson;
Virginia Trevino;
Walid A. Alawar, Trustee of the Walid A. Alawar Living Trust;
Warren Heath;
William and Cheryl Meade, individually;
William and Helen Peck, individually;
William and Irene Snively, individually;
William and Kimbra Carnaghe, individually;
William and Paula Stevens, individually;
William Loughboro;
William Starr;
Yong Yi;
Yvette Marie and Daniel Joseph Sinohui, individually;
Zachary and Diane Totten, individually

Riparian and Overlying Landowners

93. City is informed and believes that the following Cross-Defendants ("Riparian and Overlying Landowners") are owners of or are beneficial interest holders in real property located within the Ventura River Watershed and overlying one or more of Watershed's Groundwater Basins (Upper Ventura River Groundwater Basin; Ojai Valley Groundwater Basin; Lower Ventura River Groundwater Basin; and Upper Ojai Valley Groundwater Basin), and they claim riparian rights to divert and/or extract surface and/or subsurface water from the Ventura River and/or its tributaries, whether or not they have exercised such riparian rights, and/or they claim overlying rights to extract groundwater from one or more of the Watershed's Groundwater Basins, whether or not they have exercised such overlying rights:

1300 Shippee Lane, LLC;
3584 Calle Moreno, LLC;
Aaron and Angela Hoekstra, individually;
Abel and Lourdes Carranza, individually;
Acslayton, LLC;
Adam Casey and Brittany Chisum, individually;
Adam Distl, Jr. and Barbara B. Distl, individually as Trustees of the Adam Distl, Jr. and Barbara B. Distl 1998 Revocable Trust;
Adrian Ogden;
Aera Energy, LLC;
Ajr Investment Partnership, LP;
Alan and Deborah Sharon, individually;
Alan and Leslie Connell, individually;
Alan and Mary Kirby, individually;
Alan and Susan Ecker, individually;
Alan Walbridge and Dorothy Fay Walbridge, individually;
Alberto and Adriana Montano, individually;
Alberto and Hilda Zamora, individually;
Albine Hopcus and Alva Lydia Hopcus, individually as Trustees of the Al and Alva Trust;
Alfonso and Alejandra Limon, individually;
Allan and Janis Parkhurst, individually;
Allan and Katharine Parigian, individually;
Allan and Mary Doane, individually;
Allen Vail;
Alvaro and Elva Ruiz, individually;
Alvin and Claudia Cunningham, individually;

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Ana Cross, Trustee of the Ana Cross Family Trust;
Andre Keunzli and Fabrienne Keunzli-Monard, individually;
Andrew and Melissa Maccalla, individually;
Andrew and Rebecca Chandler, individually;
Andrew and Sharon Engel, individually;
Angela Jayne Gardner and John Percival Mawson, individually as Trustees of the Pleasant Avenue Living Trust;
Anita J. Diaz;
Ann H. Donlon, Trustee of the Ann H. Donlon Revocable Trust;
Anna Archer;
Anna Kirkwood;
Anne and Daniel Goldstein, individually;
Anson B. Thacher and Anne F. Thacher, individually as Trustees of the A. and A. Thacher Living Trust;
Anthony Becchio and Denise Heimo, individually;
Anthony Masiel;
Antonio Espino and Maria Torres, individually;
Arne Anselm and Michelle Velderrain, individually;
Arne Anselm, Trustee of the Velderrain M. Trust;
Ashley and Victoria Edwards, individually;
Baldemar Alcantar and Micaela Ortiz Alcantar, individually;
Barbara A. Fitzgerald, Trustee of the Fitzgerald 1994 Trust;
Barbara Bonsignori;
Barbara Chen Lowentha, Trustee of the 2017 Barbara Kay Chen Lowenthal Revocable Trust;
Barbara Hall, Trustee of the Barbara Hall Living Trust;
Barnard Properties, LLC;
Bart Kennedy;
Barton Kennedy;
Bernard Martin;
Beth E. Lindley;
Bettyann Sessing;
Big Black Dog, LLC;
Blaze Buonpane;
Bradley and Andrea Roe, individually;
Bradley and Ivelou Pantoskey, individually;
Brand and Tressa Kahler, individually;
Brandon and Kelsie Schneider, individually and as Trustees of the Brandon Schneider and Kelsie Simms-Schneider Family Trust;
Breal and Karen Rowe, individually;
Brendan Richard and Christa Lee Dawn Freeman, individually;
Brent and Pamela Lamo, individually;
Brett and Lynn Wilson, individually;
Brett Cunningham;
Brett Nicholson and Nan Davis, individually;
Brian and Cynthia McDaniel, individually;
Brian and Erin Edwards, individually;
Brian and Jean Harrison, individually;
Brian and Marie Haase, individually;
Brian and Siobhan Calvin, individually;
Brian A. Schaffels;
Brian Osborne and Kirsten Hinrichs, individually;
Brittany and Alan Fletcher, individually;
Bruce and Leslie Bouche, individually;
Bruce and Virginia Hibberd, individually;
Bruce C. Brockman and Bridget Tsao-Brockman, individually as Trustees of the Tsao Brockman Family Trust;
Bryan and Nicole Crawford, individually;
Bulmaro and Alfonsa Pena, individually;
Byron and Jennifer Greene, individually;
Byron Rader and Myra Toth, individually;
Cal B. Land Co., LLC;
Calatlantic Group Inc.;
Camp Ramah in California Inc.;
Carl and Judith Bell, individually;
Carl and Leigh Hyndman, individually;
Carl Gaddis and Anna Hicks, individually;
Carla Dennis, Trustee of the Carla D. Dennis Trust;
Carla Melson and Carla J. Melson, individually as Trustees of the Carla J. Melson Revocable Living Trust;
Carmen and Carolina Murillo, individually;
Carol Marquez-Olson, Trustee of the Carol Marquez-Olson Trust;
Carol Vesecky, Trustee of the Carol B. Vesecky Revocable Living Trust;

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Caroline Turner, Trustee of the Turner Survivors Trust;
Carolyn Bowman, Trustee of the Carolyn Bowman 2008 Trust;
Carolyn Huish;
Caryn Molinelli;
Catherine Lancaster;
Catherine Sellman;
Catherine Smith, Trustee of the Catherine L. Smith Revocable Trust;
Cesar and Davienne Guerra, individually;
Cesar Jimenez and Aura Minera, individually;
Chaarenne Torris and Raymond Bradley, individually;
Southern California Association of Seventh Day Adventists;
Chad Carper;
Chad Ress and Stephanie Washburn, individually;
Chad Vick, Trustee of the Chad C. Vick Trust;
Charlene Van Deusen;
Charles and Deana Sherry, individually;
Charles and Jo Bennett, individually;
Charles G. Barnett, Successor Trustee of the "Barnett Family Exemption Equivalent Trust";
Charles L. Hoff and Kathleen D. Hoff, Co-Trustees of the Hoff Revocable Trust;
Charles Monn and Elena Hale, individually;
Charles R. Rudd and Lola L. Rudd, Trustees under the Charles R. Rudd and Lola L. Rudd Trust;
Christie Mattull, Trustee of the Christie Lynn Mattull Trust;
Christine and Donald Bowen, individually;
Christine Golden;
Christopher and Anna Rhoda, individually;
Christopher and Gillian Borgeson, individually;
Christopher and Shelagh Duke, individually;
Christopher Corsones, Trustee of the Christopher Corsones Living Trust;
Christopher McGuire;
Christopher Sewell;
Christopher Weiner and Damian Bourguet, individually;
Cindy Burkhart, Trustee of the Cindy Burkhart Living Trust;
City of Ojai;
Claudia Farr, Trustee of the Sam S. Farr and Claudia S. Farr Trust;
Claudia Wunderlich, Trustee of the Claudia A Wunderlich Trust;
Clementine Turner, Trustee of the Clementine Turner Living Trust;
Cody Green;
Cody Stevens;
Connie Anaise;
Connie and Mark Cline, Trustee of the Mark Terry Cline Family Trust;
Constance Eaton;
Cory and Nicholas Wingate, individually;
County of Ventura;
Craig and Stephanie Gardner, individually;
Craig Young and Daniel Poling, individually;
Culbert Family Partnership;
Curtis and Christina Tolmie, individually;
Cynthia Ellis and Pamela Thomas, individually;
Daj Properties, LLC;
Damian and Lorie Vos, individually;
Damon and Anne Brink, individually;
Daniel and Adaya Walsh, individually;
Daniel and Deborah Hoyt, individually;
Daniel and Elizabeth George, individually;
Daniel and Elizabeth Mclaughlin, individually;
Daniel and Jane Kelly, individually;
Daniel and Lydia Ruark, individually;
Daniel and Ralph Fairbanks, individually;
Daniel and Tomica Mora, individually;
Daniel and Yoko Mcsweeney, individually;
Daniel Chrynko;
Daniel Crane;
Daniel H. I. and William D. Moses Jr., individually as Trustees of the William D. Moses, Jr. Separate Trust No. 1;
Daniel Hultgen, Trustee of the Hultgen Living Trust;
Danny Haar and Mariska De Feiter, individually;
Darrell Ralston, Trustee of the Darrell Anthony Ralston 2009 Revocable Trust;

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Dave and Kathleen Tarrats, individually;
David and Beverly Fulton, individually;
David and Carol Cintron, individually;
David and Deborah Todd, individually;
David and Donna Berger, individually;
David and Elizabeth Silva, individually;
David and Fereschta Sinclair, individually;
David and Karen Brubaker, individually;
David and Kathleen Ostby, individually;
David and Laura Meisch, individually;
David and Laurie Mahan, individually;
David and Meghan Sandoval, individually;
David and Mindy Benezra, individually;
David and Peggy Stanwood, individually;
David and Sandra Murillo, individually;
David and Shannon Richard, individually;
David and Sharron Sparks, individually;
David and Stephanie Berger, individually;
David and Toni Johnson, individually;
David Corey and Jean Scholes, individually;
David E. Pressey and Agnes E. Pressey, individually as Trustees of the David E. and Agnes E. Pressey Family Trust;
David Kille and Shannon Frew, individually;
David L. Garber and Cynthia Garber, individually as Trustees of the Garber Trust;
David Orbach and Eva Araujo, individually;
David Stanley and Monica Bednar Stanley, individually;
Dawn and Barclay Hope, individually;
De and Jacque Pisciotta, individually;
Dean and Gloria Vadnais, individually;
Dean and Lorinda Strong, individually;
Deanna Gonzales, individually;
Deirdre Lynds, individually;
Delavan C. Garst and Sharon D. Garst, individually as Trustees of the Delavan and Sharon Garst Family Trust;
Dell and Anne Mercer, individually;
Delores and Jerry Berlin, individually;
Denise Wizman, as Trustee of the Denise Wizman Revocable Trust;
Dennis and Cheryl Jacobs, individually;
Dennis and Nadine Corte, individually;
Derek Meek;
Devon and Jilliann Collinge, individually;
Diana Engle, Trustee of the Diana L Engle Revocable Trust;
Diana Peron, Trustee of the Diana C Peron Living Trust;
Diana Syvertson, Trustee of the Diana Syvertson Living Trust;
Diana Trent, Trustee of the Diana Trent Living Trust;
Diane and William Clegg, individually;
Dianne Mccourtney, Trustee of the Dianne Louise Mccourtney Trust;
Dolores Keith;
Dominic Habibi;
Donald and Clara Tenpenny, individually;
Donald Brosnac and Twila Carlsen, individually;
Donald Davis;
Donald G. and Susan B. Davis, individually as Trustees of the Donald G. and Susan B. Davis Revocable Family Trust of 1997;
Donis Montoya Jr. and Teresita Montoya, individually;
Donna Deitch, Trustee of the Donna E. Deitch Trust;
Donna Epstein, Trustee of the Epstein Survivors' Trust, Trustee of the Epstein Marital Trust, and Trustee of the Epstein Bypass Trust;
Dorothy and James Kehoe, individually;
Dorthea Keck;
Douglas and Ann Parent, individually;
Douglas and Claudia Webber, individually;
Douglas and Elisabeth Vernand, individually;
Douglas and Kathleen Leighton, individually;
Douglas and Moira Volpi, individually;
Douglas Draper;
Douglas Wasson, Trustee of the Wasson Trust;
Dustin Beilke;
Ed and Linda Colby, individually;
Edson Taft, Trustee of the Edson B. Taft Revocable Trust;
Edward and Deborah Guerra, individually;
Edward and Laura Savala, individually;
Edward and Nancy Dennis, individually;
Edward and Nancy Necker, individually;
Edward and Roberta Walsh, individually;

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Edward Dunn and Judith Shelby Dunn, individually;
Edward Pressey;
Edwin Norris Procter, Trustee of the "E. Norris Procter Living Trust";
Eilam Byle, Trustee of the Eilam Byle Living Trust;
Eileen Sterling, Trustee of the Eileen M. Sterling Revocable Trust;
Eileen Walker;
El Sereno 1225, LLC;
Elaiene Keeley, Trustee of the Elaiene Keeley Trust;
Elaine Ferguson;
Eli and Jessica Neiderhiser;
Elia Aldapa;
Elizabeth Bauer, Trustee of the Elizabeth A Bauer Trust;
Ellen Leopold;
Elmer and Joan Swift;
Emily Benson and Lisa Martel, individually;
Emily Clay and Matthew Goodman, individually;
Erbay and Velda Garcia, individually;
Eric and Arlene Schwerdtfeger, individually;
Eric and Jolene Harrington, individually;
Eric Bush and Craig Young, individually;
Eric Dilks, Trustee of the Eric M. Dilks 2004 Revocable Trust;
Eric Goode;
Eric Moore;
Eric Rosenberg;
Ernest and Dorothy Nichols, individually;
Ernest Thornsberry, Trustee of the Ernest Thornsberry Revocable Trust;
Esperanza and Sandra Guerrero, individually;
Eugenijus Valiulis, Trustee of the Eugenijus Valiulis Revocable Living Trust;
Eusebio and Lori Navarro, individually;
Evelyn Baran, Trustee of the Evelyn F Baran Personal Residence Trust;
Ezequiel and Amber Monarrez, individually;
Felix and Delmy Garcia, individually;
Fernando Porras;
Feroz and Mona Zaidi, individually;
Finch Farms, LLC;
Merewether Judson, LLC;
Floyd and Charlene Fitzgerald, individually;
Floyd Eugene Wiancko and Hiroko Wiancko, Trustees of the Wiancko Family Trust;
Forest Home, Inc.;
Fortune Real Estate 888, LLC;
Francis and Shauna Longstaff, individually;
Francisco and Angelica Valles, individually;
Frank and Lila Sheltren, individually;
Frank C. Urias and Evangeline S. Urias, individually as Trustees of the Urias Family Trust;
Frank Charolla;
Frank Edward Sheltren, Jr., aka Frank E. Sheltren and Rita Cheryl Sheltrem, individually as Trustees of the Sheltren Family Trust;
Fred and Carine Fisher, individually;
Fred and Donna Stevens, individually;
Fred Kramer and Michaela Watkins, individually;
Frederic Devault;
Frederick and Laura Fulmer, individually;
Frederick Sloman and Nordi Hintze, individually;
Fredrick and Roxanne Baker, individually;
Future Mhps, LLC;
Gabriel and Margarita Mendoza, individually;
Gale and Bernabe Gaona Jr., individually;
Gary and Chari Petrowski, individually;
Gary and Colleen Fry, individually;
Gary and Jolene Clarke, individually;
Gary and Judith Stever, individually;
Gary and Patricia Tucker, individually;
Gary and Teresa Downard, individually;
Gene and Patty Saito, individually;
Genneva Maschler and Richard Yaciuk, individually;
Geoffrey and Paula Clarke, individually;
Geoffrey Brown and Stephanie Gibson, individually;
George and Linda Boston, individually;
George and Lynn Malone, individually;
George and Margaret Melton, individually;
George and Sigrid Bressler, individually;
George Stuart;
Gerald and Darlene Carlson, individually;

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Gerard Linsmeier;
Gerben and Jill Hoeksma, individually;
Gino Lynch;
Glenn Myers, Trustee of the Glenn C. Myers Family Trust;
Gordon and Terry Hanusek, individually;
Gordon Gibbons, Trustee of the Gordon R. Gibbons Living Trust;
Grant Kemp;
Greg and Julie Tebo, individually;
Gregg and Rosie Dierickx, individually;
Gregg Olson, Trustee of the Gregg W. Olson Revocable Trust;
Gregory and Kaori Golden, individually;
Gregory and Martha Lepine, individually;
Gregory and Sarah Delvecchio, individually;
Gregory and Susan Gilbert, individually;
Gregory and Susan Ignacio, individually;
Gregory and Suzanne Combs;
Gregory Heras and Rozanne Bonavito, individually;
Gregory Johnson;
Gregory N. Pimstone and Lauryn B. Harris, individually as Trustees of the Pimstone Family Trust;
Griffin and Nicole Williamson, individually;
Gudaz, LLC;
Guy and Sheri Flasch, individually;
Guy Bratton;
H and Beverly Leard, individually;
Hacienda Ladera, LLC;
Hank and Alana Garcia, individually;
Hans and Eileen Van Koppen, individually;
Harald Wagner;
Harlan Kossow;
Harrison Hill and Lauren Wilson, individually;
Harry and Marilyn Lehr, individually;
Harry Joe;
Hayden and Raquel White, individually;
Heidi C. Kurtz, Trustee of the Gunild Walsh Seadrift Qprt FBO Heidi C. Kurtz;
Hector and Rocio Torres, individually;
Heliberta Valencia;
Help of Ojai, Inc.;
Henry and Moira Tarmy, individually;
Hermann and Gay Thomsen, individually;
H. H. Leard and Beverly Leard, individually as Trustees to the Leard Family Trust
Hickey Bros Land Co. Inc.;
Holly Bassuk;
Howard and Ruth Miller, individually;
Howard Altman, Trustee of the Gerta Maritz Trust;
Hoyt Tarola;
Ian and Carol Atkinson, individually;
Ignacio and Rose Vega, individually;
Imelda Mares, Trustee of the Imelda Mares Trust;
Industrial Ventura;
Integritas Ojai, LLC;
Irma Cruz;
Irshad and Linda Haque, individually;
Isidro Sanchez;
J Investments;
J McGlinchey;
Jack and Marie Kenton, individually;
Jack and Simone Patterson, individually;
Jack and Verna Turbyville, individually;
Jacob and Anja Zimmerman, individually;
Jacqueline Dorfman, Trustee of the Jacqueline Dorfman Revocable Living Trust;
Jacqueline Urband;
Jakob and Marianne Vos, individually;
James and Alisa Varney, individually;
James and Daniela Casey, individually;
James and Dori Sandefer, individually;
James and Janet Lecroy, individually;
James and Laura Fernandez, individually;
James and Maryetta Sanders, individually;
James and Penny Harvey, individually;
James and Randi Catlett, individually;
James and Wendy Osher, individually;
James Data;
James Finley, Trustee of the James and M. Reen Finley Family Trust;
James Finch, Trustee of the Finch Family Trust;
James J. Finch and Lorraine Holve Finch, individually as Trustees of the James J. Finch and Loraine Holve Finch Living Trust;
James Paul Finch;
James Kirk and Jacelyn Hayes, individually;
James Selman, Trustee of the James C. Selman Revocable Inter Vivos Trust;

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James W. Coultas and Margaret Coultas, Trustees of the James A. and Margaret H. Coultas Intervivos Trust;
Terry Coultas Wilson;
James W. Coultas, Trustee of the Coultas Living Trust;
Jan and Priscilla Granade, individually;
Jane Mccord, Trustee of the Jane Ann Mccord Living Trust;
Janet Mcginnis, Trustee of the Janet Karen Mcginnis Trust;
Janice and Jesse Hillestad, individually;
Janice Hall, Trustee of the Hall Trust;
Janis Long Nicholas and Jess E. Long, individually as Co-Trustees of the Long Family Trust;
Jason and Jene Loomis, individually;
Jason and Kathryn Headley, individually;
Jason and Lana Spear, individually;
Jason Loomis;
Jasper and Jessica Jones, individually;
Jayne Pendergast, Trustee of the 2014 Jayne E Pendergast Trust;
Jeff and Cheree Simons, individually;
Jeff and Desiree Wilby, individually;
Jeff Mabry;
Jefferie Skaggs and Timothy Bunce, individually;
Jeffrey and Denise Helm, individually;
Jeffrey and Donna Meyer, individually;
Jeffrey and Holly Lieber, individually;
Jeffrey Jenson;
Jeffrey Kenton, Trustee of the Jeffrey T. Kenton 2004 Revocable Living Trust;
Jeffrey S. Bacon, Trustee of the Villa Nero Trust;
Jeffrey Weinstein;
Jeffry and Fiona Pougher, individually;
Jennifer Kistler, Trustee of the Jennifer L Kistler Trust;
Jeremy and Brittania Rennie, individually;
Jeri Leonard;
Jerome H. Hittleman and Lynne M. Goldfarb, Trustees of the Jerome H. Hittleman and Lynne M. Goldfarb Revocable 2016 Trust;
Jerry Dean Miner and Geraldine Ann Miner, Trustees of the Miner Trust;
Jess Earl Long;
Jessie Stricchiola and Rosemary Garrison, individually as Trustees of the Phoenix Revocable Trust;
Jesus and Maria Ramos, individually;
Jill Olivares, Trustee of the Jill Ann Olivares Revocable Living Trust;
Jimmy and Theresa Ramirez, individually;
JLB Rancho Vista, LLC;
Joan Geddes and John Saluppo, individually;
Joan Robles;
Joann Benson, Trustee of the Joann Alva Benson Revocable Living Trust;
Joanne Barnes, Trustee of the Barnes Family Trust;
Joel Fox and Jennifer Day, individually;
Joel Vuylsteke, Trustee of the Country Club Trust;
Johanna Rae Long;
John and A. Elrod, individually;
John and Alitea Maruszewski, individually;
John and Crystal Peakes, individually;
John and Janis Nicholas, individually;
John and Lucille Elrod, individually;
John and Monica Hartmann, individually;
John and Norma Curtis, individually;
John and Parris Collins, individually;
John and Patricia Essick, individually;
John and Tonya Peralta, individually;
John and Victoria Bortolussi, individually;
John Battel, Trustee of the John J Battel Living Trust;
John Broomfield, Trustee of the John Nicholas Broomfield Trust;
John F. Johnston and Katherine M. Johnston, individually as Trustees of the John Fraser Johnston Family Trust;
John Haigh, Jr.;
John Kertis;
John Mutlow;
John Pace, Trustee of the John Brice Pace Family Trust;
John Richardson;
John Vineyard;
John Warner and Jennifer Dunn, individually;
John Willingham;
John Winspear;

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John Young;
Jonathan Wong and Jan Komura, individually;
Jose and Imelda Hurtado, individually;
Jose and Lisa Mendez, individually;
Jose Arreola Jr. and Paola Carreno, individually;
Jose Olvera and Alma Valenciano, individually;
Joseph and Drenda Pledger, individually;
Joseph Lynn and Elvira Lilly Barthelemy, individually and Trustees of the Joseph Lynn Barthelemy and Elvira Lilly Barthelemy 2002 Family Trust;
Joseph and Kathleen Lasalle, individually;
Joseph and Michelle Harwell, individually;
Joseph and Nina Neulight, individually;
Joseph and Shirley Gholson, individually;
Joseph Lam;
Joseph Randall, Trustee of the Joseph Darden Randall Revocable Trust;
Joseph Reseigh;
Joseph Tooker;
Joshua and Jennifer Goldstein, individually;
Joshua Moreau;
Joyce and Frank Patota, individually;
Juan and Gloria Estrada, individually;
Juan and Maria Martinez, individually;
Judith Reichman and Harold Brown, individually;
Julianne Bloomer and Philip Rabe, individually;
Julie Centeno;
Julio Luna and Debbie Lun, individually;
June Sears, Trustee of the June Katherine Sears Living Trust;
Jupeto Properties, LLC;
Kac LLC;
Karen L. Hanson and Lawrence S. Hanson, Trustees of the Hanson L.S. Revocable Living Trust;
Karen Phipps, Trustee of the Phipps Family Trust;
Karin Dron, Trustee of the Boyd S. Dron and Karin K. Dron Joint Living Trust;
Karin L. James, Trustee of the James Family Trust;
Karl and Beverley Mallette, individually;
Katharine and John Broesamle, individually;
Kathleen and Adam Morrison, individually;
Kathleen and Thomas German, individually;
Kathleen Bachelor;
Kathleen Nolan, Trustee of the Kathleen Ann Nolan Revocable 2006 Family Trust;
Kathryn Bartholomew, Trustee of the Kathryn Oconnor Bartholomew Living Trust;
Kathy Alderman;
Katz Pincetl Orchard, LLC;
Kay Dornbusch, Trustee of the The Dornbusch Family Living Trust;
Keith and Anahid Jewett, individually;
Keith and Robin Lawson, individually;
Keith and Victoria Nightingale, individually;
Kelley and John Dyer IV, individually;
Kelvin Dodd and Deborah Gomez, individually;
Kenett Niessen;
Kenneth and Anne Boydston, individually;
Kenneth and Brenda Whitteker, individually;
Kenneth and Carol Fergeson, individually;
Kenneth and Elizabeth Gruber, individually;
Kenneth and Laura Brown, individually;
Kenneth and Michael Ballard, individually;
Kenneth and Sarah Van Dyke, individually;
Kenneth Morgan;
Kenneth Vadnais;
Kern County;
Kevin and Asli Ruf, individually;
Kevin and Jennifer White, individually;
Kevin and Joanne Olsland, individually;
Kevin and Jodi Dunn, individually;
Khaled A. Al-Awar and Sheryl L. Al-Awar, individually as Trustees of the K. and S. Al-Awar Family Trust;
Kiki Lyon, Trustee of the Kiki Lyon Living Trust;
Kim Hanna, Trustee of the Hanna Family Trust;
Kristan Altimus;
Kurt and Dayna Roggenstroh, individually;
Kurt and Luisa Neher, individually;
Kurt Patrick Zierhut and Stephanie Lee Zierhut, Co-Trustees of the Living Trust of Kurt Patrick Zierhut and Stephanie Lee Zierhut;

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Lanspring, LP;
Larry and Joyce Heath, individually;
Larry Davis;
Larry Hubenthal, Trustee of the Larry Hubenthal Living Trust;
Larry Neff, Trustee of the Larry Neff Trust;
Las Encinas Mobile Home Park;
Laura B. Peck and Andrew D. Viles, individually as Trustees of the William L. and Laura B. Peck Trust - Marital Trust;
Laura Green, Trustee of the Green Survivors Trust;
Laurie Johnson, Trustee of the Laurie A. Johnson Living Trust;
Laurie Smith;
Lawrence and Sharon McMillan, individually;
Lawrence I. and Patricia A. Hartmann, individually as Trustees of the Larry and Pat Hartmann Family Trust;
Lee and Janet Cassel, individually;
Lee Fitzgerald, Trustee of the Lee I Fitzgerald 2007 Revocable Living Trust;
Lee Lebeck;
Lee Rosenbaum, Trustee of the Chief Cornerstone Trust;
Leon and Caroline Pahle, individually;
Leonard Petitt and Kay Rolfe, individually;
Leslee and Terry Gustafson, individually;
Leslie McCleary;
Lester L. and Linda L. Barbee, individually as Trustees of the Lester L. Barbee and Linda L. Barbee Joint Revocable Living Trust;
Liana Harp and Nathan Jones, individually;
Lilian Ruvalcaba;
Linda Chapman, Trustee Linda of the Jean Chapman Living Trust;
Linda Griffin;
Linda McLaughlin, Trustee of the Linda Landrieu McLaughlin Living Trust;
Linda Oliver, Trustee of the Linda A Oliver 2005 Revocable Living Trust;
Lipka Richard, Trustee of the Lorraine Trust;
Lisa Lopez and Brian Merrill, individually;
Lisa Smith and Nathaniel Cox, individually;
Lloyd Smith;
Logan and Misty Hagege, individually;
Logan and Tiffany Gould, individually;
Lois Stone Erburu, as Trustee of the Surviving Spouse's Trust created in the Robert and Lois Erburu Living Trust;
Lon and Margareta Kirkgaard, individually;
Longhorn Lane, LLC;
Lorene Cleary;
Lori Schloredt;
Lou and Barton Matthews, individually;
Louis Gutierrez, Jr. and Irene Gutierrez, individually;
Louis Price;
Louise and Gary Culver, individually;
Louise Konstanzer, Trustee of the Ron and Louise Konstanzer Family Trust;
Louise Tindle, Sole Trustee of the "Bypass Trust" created under the Tindle Trust;
Luis Herrera and Kimberly Oyama, individually;
Lupe Milner, Trustee of the Lupe Milner Family Trust;
Lydia Jimenez;
Lyle and Cecilia Hallblom, individually;
Lyndon Hebenstreit;
Lynn Coleman;
Lynn Pike, Trustee of the Lynn 2016 Trust;
Lysiane Wallis;
M. Snyder;
Malcolm and Brenda Knight, individually;
Malcolm and Kelley McDowell, individually;
Mandy Macaluso, Trustee of the Living Trust of Mandy Macaluso;
Manuel Almeida and Kevin Bagley, individually;
Marcus and Amy Hueppe, individually;
Marcus and Eva Kettles, individually;
Margaret M. Aldrich, Trustee of the Russell F. Aldrich and Margaret M. Aldrich "Decedent's Trust," and Trustee of the Russell F. Aldrich and Margaret M. Aldrich Living Trust;
Margo Kelly, Trustee of the Kelly Trust;
Maria Blasco;
Maria Collins;
Marie W. Wallace, Trustee of the Marie Weismiller Wallace Separate Property Trust;
Marika Zoll;

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Marilyn Sweeney, Trustee of the Marilyn Sweeney Revocable Living Trust;
Mario and Shawn Reyes, individually;
Marion and Betty Earnest, individually;
Mark and Colleen Rusin, individually;
Mark and Connie Cline, individually;
Mark and Helen Moskovitz, individually;
Mark and Marcia Albertsen, individually;
Mark Bellini;
Mark W. Etchart, Trustee of the Mark W. Etchart Separate Property Trust, and Trustee of the Michel A. Etchart Separate Property Trust;
Marsha MacDonald;
Marshall and Dina Murphy, individually;
Martha Fast, Trustee of the Martha L Fast Living Trust;
Martha Laliberte;
Martha Moran;
Martin and Barbara Pops, individually;
Martin and Natalie Ehrlich, individually;
Martin and Patricia Henderson, individually;
Mary and Thomas Snow, individually;
Mary Downer, Trustee of the Arthur and Mary Downer Family Trust;
Mary L. Vomund, Trustee of the Mary L. Vomund 1987 Trust;
Mary Thomas, Trustee of The Thomas Survivors Trust;
Mary Wingate, Trustee of the Mary Louise Wingate Trust;
Mattawa and Rond Larue Clements, individually;
Matthew and Judy Farmer, individually;
Matthew and Kimberly Hultgen, individually;
Max Reed;
Maximiano and Norma Ortiz, individually;
J. McGliinchey;
McNell Creek Ranch, a general partnership;
McNell Properties, LLC;
Melesio Ramirez;
Melissa Van Siclen;
Merl and Kim Melstrand, individually;
Michael and Allison Sedlak, individually;
Michael and Annell La Barge, individually;
Michael and Barbara McCarthy, individually;
Michael and Bernard Clark, individually;
Michael and Carol Jackson, individually;
Michael and Dianna Farrar, individually;
Michael and Heidi Bradbury, individually;
Michael and Kimberly Robertson, individually;
Michael and Nancy Krumpschmidt, individually;
Michael and Sharon Williams, individually;
Michael and Sonja Barrett, individually;
Michael and Terri Imwalle, individually;
Michael Chambliss;
Michael Hoover, Trustee of the Michael Hoover Living Trust;
Michael Kelley;
Michael L. Delamore and Deborah Finley-Delamore, individually as Trustees of the Delamore Finley Family Trust;
Michael Lombardo, Trustee of the Michael Lombardo Living Trust;
Michael Marietta, individually and as Trustee of the Marietta Separate Property Trust;
Michael Prentice;
Michael Purdy, Trustee of the Purdy Family Revocable Trust;
Michael Saleh, Trustee of the Saleh and Lea Saleh 1984 Family Trust;
Michael T. Marshall and Lisa Skyheart Marshall, individually as Trustees of the Marshall Living Trust;
Micky Froelich;
Miguel and Elvia Ramirez, individually;
Miguel Estrada;
Murelle Stevens, Trustee of the Stevens Family Trust;
Nancy Ferrell, Trustee of the Nancy A. Ferrell Family Trust;
Nancy Graham;
Nancy Jackson, Trustee of the Nancy J. Jackson Living Trust;
Natalia Moore, Trustee of the Moore Family Trust;
Nathan Allen;
Nathaniel and Suzette O'Grady, individually;

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Nathaniel Traudt and Karen Traudt, individually and as Trustees of the Traudt Family Trust;
Neil and Patricia Friedrichsen, individually;
Neil Kreitman, Trustee of the Neil Kreitman Living Trust;
Nick and Morna Taminich, individually;
Nick Daily;
Nina Menconi;
Nye Ranch, LLC;
Oak Haven, LLC;
Oak View Sanitary District;
Krishnamurti Foundation of America;
Oilfield Service and Truck Co.;
Oilfield Service and Truck, Inc.;
Ojai Assembly of God, Inc., dba Ojai's Church of the Living Christ, Inc.
Ojai Home, LLC;
Ojai Unified School District;
Ojai Valley Athletic Club;
Ojai Valley Land Conservancy;
Ojai-Jackman, LLC;
Ole Behrendtsen;
Olga and Trent Jones, individually;
Orin Jr. and Karen Chappell, individually;
Orville Hernvall, Trustee of Hervnall Orville and Marion Orville Trust;
Oscar and Mary Kaas, individually;
Oscar Acosta, Trustee of the Acosta Trust;
OST Trucks and Cranes;
Ovis, LLC;
Pamela Grau, Trustee of the Pamela Grau Living Trust;
Pamela Melone, Trustee of the Pamela M. Melone Living Trust;
Patricia Boan and Alina Hoffman, individually;
Patricia Boan and John Hoffman, individually;
Patricia Marshall, Trustee of the Patricia Ann Marshall Trust;
Patricia McPherson;
Patricia McGann;
Patricia Unruhe and Andrew Jarvis, individually;
Patrick Henderson and Jessica Maharry, Trustees of the Maharry Henderson Family Trust;
Patrick Tumamait;
Paul and Aldine Hennigan, individually;
Paul and Janet Bailey, individually;
Paul and June Clem, individually;
Paul and Kim Robie, individually;
Paul and Maelyn Ebert, individually;
Paul and Sally Centeno, individually;
Paul Fonteyn, individually;
Paul Holahan and Julie Grist, individually;
Paul Lepiane and Bo Bengtson, individually;
Paula Brown, Trustee of the Paula Jean Brown Trust;
Paula Lasiter;
Paula McCullough, Trustee of the Paula J. McCullough Living Trust;
Pauline Mercado, Trustee of the Pauline Mercado Revocable Trust;
Pedro Cisneros;
Pedro Tepesano;
Per and Inge Christiansen, individually;
Perry Family, LLC;
Peter and Linda Daprix, individually;
Peter and Norma Dworkis, individually;
Peter Dufau;
Peter Passell;
Peter Strauss and Rachel Ticotin, individually;
Petrochem Development I, LLC;
Philip and Darylyn Long, individually;
Philip and Mary Pierpont, individually;
Philip and Robert Pierpont, individually;
Philippe and Betsy Caland, Trustees of the Philippe M. and Betsy C. Trust;
Preparatory Villanova;
Quint Morris;
Rachel Kondor and Brian Segee, individually;
Rafael and Magdalena Villalpando, individually;
Raffi J. Mesrobian and Myrna R. Mesrobian, individually as Trustees of the Mesrobian Family Trust;
Rainer Buschmann and John Johnston, individually;
Ralph and Lynne Lundy, individually;
Ramaa Mosley;

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Randal R. O'Connor, Successor Trustee of the Red Clay Trust, and Successor Trustee of the Le Cedre Trust;
Ranjit Sevaprakasam;
Ray Hall, Trustee-in-Trust of the 30 Acre Trust;
Raymond and Esther Kardly, individually;
Raymond and Eva Lyons, individually;
Raymond Magee and Linda Taylor, individually;
RDK Land, LLC;
Rebecca Adams;
Red Mountain Land and Farming, LLC;
Reeves Orchard, LLC;
Refugio Gomez;
Rex and Heidi Lanning, individually;
Reynolds Fleming;
Ricardo Gonzalez;
Richard and Billie Sumner, individually;
Richard and Emily Cargill, individually;
Richard and Katherine Godfrey, individually;
Richard and Lee Harper, individually;
Richard and Marilyn Kallas;, individually
Richard and Nancy Francis, individually;
Richard and Teresa Turner, individually;
Richard Dodson, Trustee of the Richard E. Dodson 2010 Revocable Trust;
Richard Francis;
Richard Frey and Wendy Appleby, individually;
Richard and Emma Kline, individually;
Richard Lowen;
Richard Magana;
Richard Mcgrath, Trustee of the Richard K McGrath Living Trust;
Richard Sojka;
RJPR Ltd. Partnership;
Robert and Anamaria Schmid, individually;
Robert and Antoinette Tivy, individually;
Robert and Diana Petropulos, individually;
Robert and Dianne Stone, individually;
Robert and Dominque Daniels, individually;
Robert and Dora Balitzer, individually;
Robert and Emily Martin, individually;
Robert and Gaea Cannaday, individually;
Robert and Geraldine Hunsaker, individually;
Robert and Jacqueline McDaniel, individually;
Robert and Janice Hastie, individually;
Robert and Marilyn Salas, individually;
Robert and Maureen Young, individually;
Robert and Sheila Ghen, individually;
Robert and Sonia Rodarte, individually;
Robert and Taundra Roddick, individually;
Robert and Anna J. Auric, individually as Trustees of the Auric Anna J. Family Trust;
Robert Calder Davis, Jr., Trustee of the Robert Davis Surviving Spouse's Trust, Trustee of the Davis Family Bypass Trust and Trustee of the Davis Family Trust;
Robert Dekkers;
Robert Erickson and Ronald Wilson, individually;
Robert Grasmere;
Robert Polidori and Brittany Sanders, individually;
Roberto and Maria Alonso, individually;
Rocky Mann;
Roderick and Joyce Greene, individually;
Roger and Susan Dickens, individually;
Roger Burke;
Roger Haley; Trustee of the Roger and Christina Haley Survivors Trust;
Roger Walker;
Rogers-Cooper Memorial Foundation;
Ronald and Bette Bluhm, individually;
Ronald and Julia Bruns, individually;
Ronald Blood and Linda Jordan, individually;
Ronald E. Novak and Linda L. Lewis, individually as Trustees of the Novak Family Trust;
Ronald K. Freeland and Doreen Freeland, individually as Trustees or their successors in interest of the Freeland Trust and any amendment;
Ronald L.R. Hill and Debi R. Hill, Trustees of the R&D Hill Family Trust;
Ronald Vogt;
Rosemarie Singer;
Rosemary Payne, Trustee of the Rosemary Payne Trust;
Ross Anderson;

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Rowland A. Hill II and Brenda M. Hill, individually as Trustees of the Trust dated November 1, 2002;
Roy Hicks, Trustee of the Roy and Jacquelyn Hicks Family Trust;
Ruben and Marisa Martinez, individually;
Ruben Chavez;
Ruben Magana and Janette Lupercio, individually;
Rudy Baez;
Russel and Laura Alford, individually;
Russell and Golden Wiley, individually;
Russell Waldrop, Trustee of the Russell B. Waldrop Living Trust;
Ryan and Lauren Nichols, individually;
Sabino and Nicki Perez, individually;
Sabrina Venskus, Trustee of the Sabrina Venskus Living Trust;
Sally Crain;
Salvatore Scarpato;
Samuel and Joanna Schindel, individually;
Samuel Eaton;
Santa Ana Ranch, Inc.;
Sarah Young;
Saunie Krewson;
Scott and Brittany Denton, individually;
Scott and Carol Rasmussen, individually;
Scott and Keela Allison, individually;
Scott and Maria Hertzog, individually;
Scott and Michele Supan;
Scott Chasse, Trustee of the Scott Chasse Revocable Living Trust;
Scott Forsyth and Joy Fedele, individually;
Scott Lundy, Trustee of the Scott Lundy Trust;
Scott Luttenberger and Natasha Wilcox, individually;
Scottie Monical;
Sean and Leslie Bennett, individually;
Serafin and Martha Flores, individually;
Sevan Gerard;
Shahram Shahrokhfar and Dina Nava, individually;
Shanks Investment Group, LLC;
Shawn Fulbright, Trustee of the Shawn Fulbright 2014 Revocable Trust;
Shawn Reed;
Shell Oil Co.;
Sherrice and John Weeces, individually;
Sherrie Daily;
Sheryl Shushan;
Shippee, LLC;
Shull Bonsall, Jr., Trustee of the Shull Bonsall Family Trust;
Evangeline Bonsall Smith, a married woman;
Sidney and Jayne Rice, individually;
Steven P. Smith and Lynn Davis-Smith, individually as Trustees of the Smith Revocable Living Trust;
Southern California Edison Co.;
Southern California Associated Investors, Ltd.;
Spencer and Bailey Hill, individually;
SRPS, LP;
Stacy Cadenasso;
Stanley and Theresa Wyatt, individually;
Stanley and W Hubbell, individually;
State of California, Department of Transportation;
Stefan Kozak and Ana Lopes, individually;
Stephanie and Cheryl Beas, individually;
Stephen Matzkin, Trustee of the Stephen Matzkin Trust;
Stephen Turner, Trustee of the Stephen R. Turner Living Trust;
Steven and Brent Kanaly, individually;
Steven and Christine Vaughan, individually;
Steven and Ka Rapholz, individually;
Steven and Karen Erickson, individually;
Steven and Krissell Dutter, individually;
Steven Elliot Edelson, Trustee of the Los Angeles Entertainment Trust;
Sumeet Bhatia and Michael Mcdonald, individually;
Sumpuran Khalsa, Trustee of the Sumpuran S. Khalsa Living Trust;
Suria and John Gottesman, individually;
Susan Bee, Trustee of the John and Susan Bee Family Trust;
Susan Conley, Trustee of the William and Susan Conley Family Trust;
Susan Diller, Trustee of the Susan J Diller Trust;
Susan Garand;

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Susan Gruber, individually and as Trustee of the Susan Gruber Living Trust;
Susan McCord-Neufeld;
Susan Moll;
Susan Webster;
Suzanne Harvey, individually and as Trustee of the Suzanne G. Harvey Revocable Trust;
T Bone Holdings, LLC;
Tanya Smith and Michael Montano, individually;
Tanya Starcevich;
Ted Robinson, Trustee of the Robinson Family Trust;
Telos Development Ojai, LLC;
Terry Wilson, Trustee of the Terry Coultas Wilson Living Trust;
The Ojai Rental, LLC;
The Roman Catholic Archbishop of Los Angeles, a sole corporation;
Theodor and Lore Exner, individually;
Theresa Stark;
Thomas and Cynthia Carver, individually;
Thomas and Nanette Benbrook, individually;
Thomas and Jadona Coller Harper, individually;
Thomas Jackson;
Thomas Tamplin and Michelle Wells, individually;
Thomas Walbridge, Trustee of the Thomas C Walbridge Trust;
Three Oaks, LLC;
Three Sisters Orchard, LP;
Timothy and Cheryl Austin, individually;
Timothy and Kathleen McHugh, individually;
Timothy and Kathryn Moran, individually;
Timothy and Linda Turner, individually;
Timothy and Mary Williamson, individually;
Timothy Jones;
Todd and Christina McGinley, individually;
Todd Ryan and Jessica Click, individually;
Todd Tullett, Trustee of the Todd Tullett Revocable Living Trust;
Tom and Nancy Roland, individually;
Tony and Heather Carlos, individually;
Tracey and Melanie Boulton, individually;
Trent and Kris Greco, individually;
Tyler and Maria Barrell, individually;
Tyler Labine and Carrie Ruscheinsky, individually;
Uldine and Fabien Castel, individually;
Uriel and Chieko Lopez, individually;
US Natural Resources, Inc.;
Vanlaw Investment Corp.;
Ventura Land Trust;
Ventura Unified School District;
Vicente Guzman;
Vicki Daw;
Vicki L. Hollingsworth, Trustee of the Hollingsworth Trust;
Virginia M. McCarthy, Trustee of the Virginia M. McCarthy Living Trust;
Virginia Siegfried, Trustee of the Virginia A. Siegfried Revocable Trust;
Vivian Arber;
Vivienne Moody;
Walter and Evelyn Golis, individually;
Walter and Linda Boysiewick, individually;
Walter McGowan, Individually and as Trustee of the Walter Robert McGowan 1995 Trust;
Wanda and Meniford Canterberry, individually;
Watermark Carp II LLC;
Wayne Tate and Janice Priebe-Tate, individually as Trustees of the Tate Trust, as community property;
Weiss Investment Properties;
Wendy and David Churchill, individually;
Werner and Elva Fischer, individually;
Wesley Scott and Kasey Perins, individually;
West Crag Glen Smith, Successor Trustee of the Melissa Irene Elizabeth Smith Irrevocable Special Needs Trust - 1993;
Willi and Stefanie U. Coeler, individually and as Trustees of the W. and S. Coeler Living Trust;
William and Cynthia Anderson, individually;
William and Jacqueline Boch, individually;
William and Lorraine Walsh, individually;
William and Melinda Welch, individually;
William and Susan Luther, individually;
William B. Hart, Jr., Trustee of the Constance Eaton Personal Residence Trust;
William Bailey, Trustee of the William F. Bailey Living Trust;

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William Brothers, Trustee of the William C. Brothers Living Trust;
William Erickson;
William F. Newton and Charlotte R. Newton, individually as Trustees of the Newton Family Trust;
William Gilbreth, Trustee of the William J. Gilbreth Trust;
William Hawksworth;
William Lowes;
William L. Reynolds;
William White, Trustee of the William C. White Trust;
William Whorf;
Wilmetta Davis;
Winfried and Carol Boersch, individually;
Wynn Johnson and Lisa Ayala Johnson, individually;
Yan and Alili Comment, individually;
Yarrow and Caroline Cheney, individually;
Yitzhak and Smadar Orlans, individually;
Yvon and Malinda Chouinard, individually;
Zobeida Olson

Overlying Landowners

94. Pursuant to California Civil Procedure Code section 836(d)(1)(A), City will serve the owners all real property overlying the Watershed's Groundwater Basins ("Overlying Landowners") with this Third Amended Cross-Complaint and court-approved notice of adjudication and form answer. Pursuant to California Civil Procedure Code section 836(k), upon receipt of the requisite notice, Overlying Landowners interested in this proceeding shall have the duty to appear in this action and become a party if they so choose.

Interested Persons

95. All Persons Who Own an Interest in Land Adjacent to the Ventura River or Its Tributaries or in Land Overlying the Ventura River Watershed's Groundwater Basins, and Claim an Interest to Divert, Pump, Extract or Store Water From, Under or on That Land.

Roe Cross-Defendants

96. City is informed and believes that:

(a) Cross-Defendants Roes 1 through 50 operate wells and/or diversions which extract surface and/or subsurface water from the Ventura River.

(b) Cross-Defendants Roes 51 through 100 operate wells and/or diversions which extract surface and/or subsurface water from Matilija Creek.

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(c) Cross-Defendants Roes 101 through 150 operate wells and/or diversions which extract surface and/or subsurface water from North Fork Matilija Creek.

(d) Cross-Defendants Roes 151 through 200 operate wells and/or diversions which extract surface and/or subsurface water from San Antonio Creek.

(e) Cross-Defendants Roes 201 through 250 operate wells and/or diversions which extract surface and/or subsurface water from Coyote Creek.

(f) Cross-Defendants Roes 251 through 300 operate wells and/or diversions which extract surface and/or subsurface water from Cañada Larga Creek.

(g) Cross-Defendants Roes 301 through 350 operate wells and/or diversions which extract surface and/or subsurface water from Santa Ana Creek.

(h) Cross-Defendants Roes 351 through 400 operate wells which extract water from the Upper Ventura River Groundwater Basin.

(i) Cross-Defendants Roes 401 through 450 operate wells which extract water from the Ojai Valley Groundwater Basin.

(j) Cross-Defendants Roes 451 through 500 operate wells which extract water from the Lower Ventura River Groundwater Basin.

(k) Cross-Defendants Roes 501 through 550 operate wells which extract water from the Upper Ojai Valley Groundwater Basin.

(l) Cross-Defendants Roes 551 through 1,000 are the owners, lessees, or other persons or entities (i) holding or claiming to hold ownership or possessory interests in real property within the boundaries of the Watershed; (ii) extracting water from the Watershed; (iii) claiming some right, title, or interest to water located within the Watershed; or (iv) having or asserting claims adverse to City's rights and claims.

97. City is unaware of the true names and capacities of Cross-Defendants Roes 1 through 1,000. When the City becomes aware of their trues names and capacities, it will seek leave of court to amend this Cross-Complaint accordingly.

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BACKGROUND

98. The Watershed is located in western Ventura County, with a small section located in eastern Santa Barbara County. The City is informed and believes that the Watershed is fan-shaped and covers 226 square miles.

99. The Ventura River and its headwater tributary run through the center of the Watershed along a 33.5 mile stretch from its headwaters in the Transverse Ranges to the Pacific Ocean.

100. The Ventura River and its headwater tributary is fed by several major tributaries, including Matilija Creek, North Fork Matilija Creek, San Antonio Creek, Cañada Larga Creek, and Coyote Creek.

101. Lake Casitas is a man-made reservoir located in the Watershed primarily filled by runoff from Coyote Creek and Santa Ana Creek and water diverted from the Ventura River.

102. The Ventura River consists of five distinct reaches starting upstream from the Pacific Ocean: Reach 1 (Pacific Ocean to Ventura River Estuary), Reach 2 (Ventura River Estuary to Foster Park), Reach 3 (Foster Park to the San Antonio Creek Confluence), Reach 4 (just above the Ventura River's confluence with San Antonio Creek to below the Robles Diversion Facility), and Reach 5 (Robles Diversion Facility to confluence of Matilija Creek and North Folk Matilija Creek).

103. There are four significant groundwater basins in the Watershed:

(a) Upper Ventura River Groundwater Basin (DWR Bulletin 118, Groundwater Basin Number 4-3.01);

(b) Ojai Valley Groundwater Basin (DWR's Bulletin 118, Groundwater Basin Number 4-2);

(c) Lower Ventura River Groundwater Basin (DWR's Bulletin 118, Groundwater Basin Number 4-3.02); and

(d) Upper Ojai Valley Groundwater Basin (DWR's Bulletin 118 Groundwater Basin Number 4-1)

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(collectively "Watershed's Groundwater Basins"). There is a hydrological connection between the Ventura River and its tributaries and the Watershed's Groundwater Basins. Three maps of the Watershed and the Watershed's Groundwater Basins are attached as **Exhibit A**.

104. In its First Amended Complaint and Verified Petition for Writ of Mandate ("Complaint"), Plaintiff Santa Barbara Channelkeeper ("Channelkeeper") alleges that City's use of the Ventura River water harms the steelhead trout and its critical habitat and exceeds water quality standards. Channelkeeper also alleges City's use of water is unreasonable and violates the public trust doctrine. Channelkeeper further alleges that City's water rights are subordinate to upstream riparian and overlying groundwater rights in the Ventura River Watershed.

105. City is informed and believes that Cross-Defendants' use of water from the Ventura River and the Watershed's Groundwater Basins reduces the surface and/or subsurface water flow of the Ventura River.

106. City is informed and believes and thereon alleges that there are conflicting claims of rights to the Watershed and/or its water.

107. City is informed and believes and thereon alleges that it has pueblo, prescriptive, and/or appropriative rights to water in the Watershed. City is a successor to the Mission San Buenaventura pueblo water right, which gives it a priority to use sufficient water from the Ventura River Watershed to meet its needs. It has utilized water from the Watershed for more than five years prior to the filing of this Cross-Complaint. It has used the Watershed and/or its water for reasonable and beneficial purposes; and it has done so under a claim of right in an actual, open, notorious, exclusive, continuous, uninterrupted, hostile, adverse use and/or manner for a period of time of at least five years before filing this Cross-Complaint. City holds pre-1914 appropriative water rights.

108. Upon information and belief, each Cross-Defendant claims a right to utilize water and threatens to increase its taking of water without regard to the City's rights. Cross-Defendants' pumping and/or diversions reduces Watershed groundwater tables and surface flows and contributes to the deficiency of the Watershed water supply as a whole.

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109. Cross-Defendants' continued and increasing extraction and/or diversion of Watershed waters has resulted in, and will result in a diminution, reduction, and impairment of the Watershed's water supply.

110. Cross-Defendants' continued and increasing extraction and/or diversion of Watershed waters has and will deprive the City of its rights to provide water for the public health, welfare, and benefit.

FIRST CLAIM FOR RELIEF

(Cal. Const. art. X, § 2 - Against All Cross-Defendants)

111. City incorporates by reference the allegations of paragraphs 1 through 110.

112. Water resources in California must be put to reasonable and beneficial use, and parties exercising a right to use water must engage in a reasonable method of use and reasonable method of diversion.

113. City's reasonable and beneficial use of water requires consideration of Channelkeeper's claims and Cross-Defendants' uses and diversions of water from the Ventura River or the Watershed's Groundwater Basins.

114. City's reasonable and beneficial use of water also requires consideration of all other uses and users in the Watershed in the context of Statewide laws favoring domestic use of water; conservation of water; service of safe, clean, affordable, and accessible water; and protection of municipal water rights.

115. Based on those considerations, City's use of water from the Ventura River Watershed as compared to all other uses and users is reasonable and beneficial because:

(a) City's water is used for domestic purposes.

(b) City encourages conservation of water by its users, does not waste water in its operations, and only uses water for municipal purposes.

(c) City provides safe, clean, affordable, and accessible water.

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(d) City is exercising vested water rights.

116. City seeks a preliminary and permanent injunction reducing Cross-Defendants' use of surface and/or subsurface water and groundwater affecting the surface and/or subsurface flow of the Ventura River to a level of reasonable and beneficial use and a level that protects public trust resources after a consideration of all water uses and users in the Watershed pursuant the Court of Appeal's decision in Santa Barbara Channelkeeper v. City of San Buenaventura (2018) 19 Cal.App.5th 1176, 1192–1193.

SECOND CLAIM FOR RELIEF

(Public Trust Doctrine - Against All Cross-Defendants)

117. City incorporates by reference the allegations of paragraphs 1 through 110.

118. The public trust doctrine protects the environmental values of rivers and streams in California for the benefit of the public, but is subject to parties reasonably exercising their water rights. Additionally, public trust doctrine uses are limited by the doctrine of reasonable and beneficial use.

119. Evaluating the City's reasonable and beneficial use of water requires consideration of all other uses and users in the Watershed.

120. Evaluating the City's reasonable and beneficial use of water also requires consideration of Water Code provisions and Statewide laws favoring domestic use of water; conservation of water; service of safe, clean, affordable, and accessible water; and protection of municipal water rights and the potential that non-flow related mitigation measures may reasonably reduce the quantity of water required to protect the environment and public trust resources.

121. Based on those considerations, City's use of water from the Ventura River and Lake Casitas is reasonable and beneficial because:

(a) City's water is used for domestic purposes.

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(b) City encourages conservation of water by its users, does not waste water in its operations and only uses water for municipal purposes.

(c) City provides safe, clean, affordable and accessible water.

(d) City is exercising vested water rights.

122. City seeks a preliminary and permanent injunction reducing Cross-Defendants' use of surface and/or subsurface water and groundwater affecting the surface and/or subsurface flow of the Ventura River to a level of reasonable and beneficial use and a level that protects public trust resources after consideration of Channelkeeper's claims.

THIRD CLAIM FOR RELIEF

(Declaratory Relief - Pueblo and/or Treaty Water Rights - Against All Cross-Defendants)

123. City incorporates by reference the allegations of paragraphs 1 through 110.

124. The City, or a portion of it, is located within the boundaries of the former Mission San Buenaventura. The designation of the Mission San Buenaventura and its subsequent secularization led to the creation of a pueblo water right. The City is a successor to the pueblo right which gives it a priority water right to use sufficient water from the Ventura River Watershed to meet its needs.

125. City is located on land that used to be part of Mexico. While that land was part of Mexico, a vested water right was established on it that was subsequently recognized by the United States in the Treaty of Guadalupe-Hidalgo. City is a successor to the Mexican water right, which has a priority over any right established under California law.

126. City contends that each Cross-Defendant's rights to utilize water from the Watershed are subordinate to City's pueblo and/or treaty water rights and to the general welfare of the citizens, inhabitants, and customers within City's jurisdiction.

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127. An actual controversy has arisen between City and Cross-Defendants, and each of them. City alleges, on information and belief, that each Cross-Defendant disputes City's contentions, as described in the immediately preceding paragraph.

128. City seeks a judicial determination as to the correctness of its contentions and a finding as to the priority and amount of water it and each Cross-Defendant are entitled to utilize from the Watershed.

FOURTH CLAIM FOR RELIEF

(Declaratory Relief - Prescriptive Water Rights -

Against All Cross-Defendants)

129. City incorporates by reference the allegations of paragraphs 1 through 110.

130. The California Supreme Court has long recognized prescriptive water rights to both surface and groundwater. City alleges that, for more than five years and before the date of this Cross-Complaint, it has utilized water from the Watershed for reasonable and beneficial purposes, and done so under a claim of right in an actual, open, notorious, exclusive, continuous, hostile, and adverse manner. City further alleges that each Cross-Defendant had actual and/or constructive notice of these activities, either of which is sufficient to establish City's prescriptive rights.

131. City contends that each Cross-Defendant's rights to utilize water from the Watershed are subordinate to City's prescriptive rights and to the general welfare of the citizens, inhabitants, and customers within City's jurisdiction.

132. An actual controversy has arisen between City and Cross-Defendants, and each of them. City alleges, on information and belief, that each Cross-Defendant disputes City's contentions, as described in the immediately preceding paragraph.

133. City seeks a judicial determination as to the correctness of its contentions and a finding as to the priority and amount of water it and each Cross-Defendant are entitled to utilize from the Watershed.

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FIFTH CLAIM FOR RELIEF

(Declaratory Relief - Appropriative Water Rights -

Against All Cross-Defendants)

134. City incorporates by reference the allegations of paragraphs 1 through 110.

135. City alleges that, alternatively or in addition to its prescriptive rights, it has priority pre-1914 appropriative rights to utilize water from the Watershed based upon extensive historic and beneficial use of local water in the Ventura River, including local water impounded and collected in Lake Casitas.

136. An actual controversy has arisen between City and Cross-Defendants, and each of them. City alleges, on information and belief, that all Cross-Defendants, and each of them, seek to prevent City from exercising its priority pre-1914 appropriative rights to utilize water from the Watershed.

137. City seeks a judicial determination of the rights of persons and/or entities with overlying, appropriative, and prescriptive rights to utilize water from the Watershed.

SIXTH CLAIM FOR RELIEF

(Cal. Civ. Proc Code §§ 830-852 - Comprehensive Adjudication

and Physical Solution - Against All Cross-Defendants)

138. City incorporates by reference the allegations of paragraphs 1 through 110.

139. The physical solution doctrine imposes a duty on this Court to resolve competing claims to water by cooperatively satisfying the reasonable and beneficial needs of each user while protecting the substantial enjoyment of their prior rights. A physical solution can achieve this result by: compelling non-flow related improvements for the protection of public trust resources thereby preserving and protecting water supply for domestic use, the highest and best use, and for irrigation use, the next highest and best use (Water Code section 106); augmenting the Watershed's water supply; and imposing other measures. The physical solution is a practical way

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of fulfilling the mandate of the California Constitution (article X, section 2) that the water resources of the State be put to use to the fullest extent of which they are capable.

140. Further, the Code of Civil Procedure authorizes the comprehensive adjudication of groundwater rights, including interconnected surface waters, and the imposition of physical solution. Cal. Civ. Proc. Code §§ 830-852.

141. Accordingly, City seeks a physical solution among City and Cross-Defendants regarding their respective uses of surface and/or subsurface water and groundwater affecting the Ventura River.

SEVENTH CLAIM FOR RELIEF

(Declaratory Relief - Municipal Priority - Against All Cross-Defendants)

142. City incorporates by reference the allegations of paragraphs 1 through 110.

143. City has the right to utilize water from the Watershed to meet existing public water needs and also to utilize increased amounts of water from the Watershed as necessary to meet future public needs. City's rights to the Watershed's water exist both as a result of the priority and extent of its pueblo, appropriative, and prescriptive rights, and as a matter of law and public policy of the State of California: "It is hereby declared to be the established policy of this State that the use of water for domestic purposes is the highest use of water and that the next highest use is for irrigation." Cal. Water Code § 106.

144. California Water Code Section 106.5 provides: "It is hereby declared to be the established policy of this State that the right of a municipality to acquire and hold rights to the use of water should be protected to the fullest extent necessary for existing and future uses. . . ."

145. Under California Water Code Sections 106 and 106.5, City has a prior and paramount right to Watershed water as against all non-municipal uses.

146. An actual controversy has arisen between City and Cross-Defendants. City alleges, on information and belief, that Cross-Defendants dispute the contentions contained in the preceding paragraphs of this Cross-Complaint. City is informed and believes, and on that basis

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alleges, that the certain Cross-Defendants utilize water from the Watershed for non-municipal purposes.

147. City seeks a judicial determination as to the correctness of its contentions and to the amount of water the parties may utilize from the Watershed. City also seeks a declaration of its right to utilize water from the Watershed to meet its reasonable present and future needs, and that such rights are prior and paramount to the rights, if any, of Cross-Defendants to use Watershed water for non-municipal purposes.

EIGHTH CLAIM FOR RELIEF

(Declaratory Relief - Human Right to Water - Against All Cross-Defendants)

148. City incorporates by reference the allegations of paragraphs 1 through 110.

149. City has the right to utilize water from the Watershed to meet existing public water needs to protect the human right to water and also to utilize increased amounts of water from the Watershed as necessary to meet future public needs to protect the human right to water. City's rights to the Watershed's water exist both as a result of the priority and extent of its pueblo, appropriative, and prescriptive rights, and as a matter of law and public policy of the State of California: "It is hereby declared to be the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes." Cal. Water Code § 106.3.

150. Under California Water Code Section 106.3, City has a prior and paramount right to Watershed water to protect the human right to water.

151. An actual controversy has arisen between City and Cross-Defendants. City alleges, on information and belief, that Cross-Defendants dispute the contentions contained in the preceding paragraphs of this Cross-Complaint. City is informed and believes, and on that basis alleges, that the certain Cross-Defendants utilize water from the Watershed for purposes that are inferior to the paramount human right to water.

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152. City seeks a judicial determination as to the correctness of its contentions and to the amount of water the parties may utilize from the Watershed to protect the human right to water. City also seeks a declaration of its right to utilize water from the Watershed to meet its reasonable present and future needs to protect the human right to water, and that such rights are prior and paramount to the rights, if any, of Cross-Defendants to use Watershed water for purposes that are inferior to the paramount human right to water.

NINTH CLAIM FOR RELIEF

(Declaratory Relief - Against All Cross-Defendants)

153. City incorporates by reference the allegations of paragraphs 1 through 110.

154. City contends, and is informed and believes that Cross-Defendants dispute, that:

(a) City's use of the Ventura River Watershed as compared to all other users and uses is reasonable and beneficial and does not violate the public trust doctrine.

(b) Cross-Defendants' uses are not reasonable or beneficial and violate the public trust doctrine as compared to City's use of the Ventura River Watershed.

155. Therefore, an actual, present controversy exists between City and Cross-Defendants concerning City's and Cross-Defendant's use of surface and/or subsurface water and groundwater affecting the Ventura River Watershed.

156. City seeks a declaration and judicial determination as to the validity of its contentions set forth in this Cross-Complaint.

PRAYER FOR RELIEF

WHEREFORE, City prays for the following relief:

1. For a preliminary and permanent injunction reducing Cross-Defendants' uses of surface water and groundwater affecting the surface and/or subsurface flow of the Ventura River

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to a level of reasonable and beneficial use and a level that protects public trust resources after consideration of all water uses and users in the Watershed;

2. For a physical solution allocating City's and Cross-Defendants' reasonable and beneficial use of water affecting the Ventura River Watershed, and protecting the substantial enjoyment of their water rights;

3. For judicial declarations consistent with City's contentions in the Third, Fourth, Fifth, Seventh, Eighth, and Ninth Claims for Relief in this Cross-Complaint;

4. For judgment against all named cross-defendants who fail to appear in this action that they are bound by the judgment and physical solution, and their water rights in the Ventura River Watershed, if any, are limited to the terms of the physical solution.

5. For judgment against all persons who, presently or in the future, own an interest in real property adjacent to the Ventura River or its tributaries and who fail to appear in this action that they are bound by the judgment and physical solution, and their water rights in the Ventura River or its tributaries, if any, are limited to the terms of the physical solution.

6. For judgment against all persons who, presently or in the future, own an interest in real property overlying the Ventura River Watershed's Groundwater Basins and who fail to appear in this action that they are bound by the judgment and physical solution, and their water rights in the Ventura River Watershed's Groundwater Basins, if any, are limited to the terms of the physical solution.

7. For City's costs incurred in this action; and

8. For such other and further relief as the Court deems just and proper.

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Dated: January 2, 2020

BEST BEST & KRIEGER LLP

By: _____

GENE TANAKA
SHAWN HAGERTY
SARAH CHRISTOPHER FOLEY
DAKOTAH BENJAMIN
Attorneys for Respondent and Cross-Complainant CITY OF SAN BUENAVENTURA

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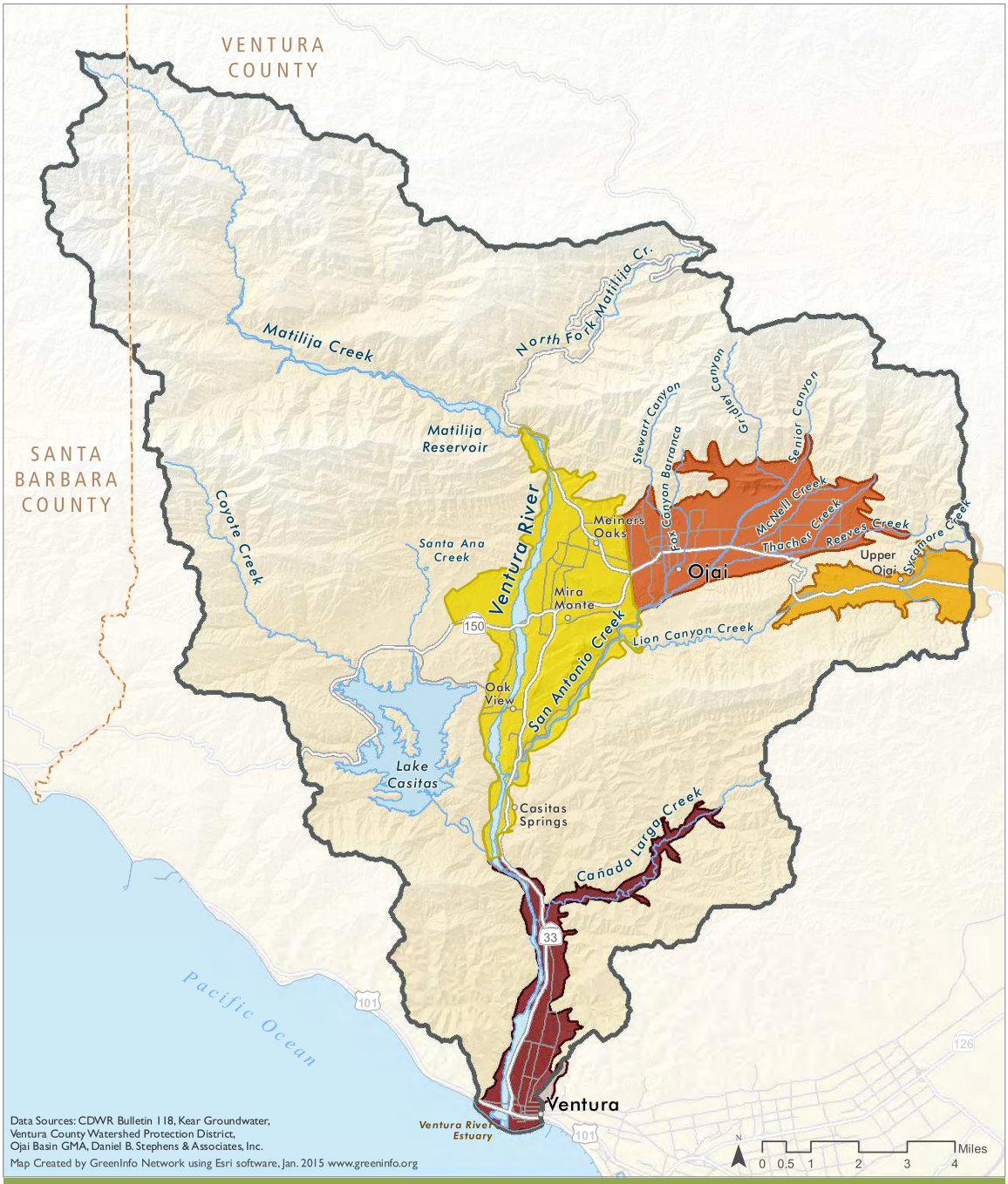
EXHIBIT A



Groundwater Basins

Ventura River Watershed

Groundwater Basin	Acres	Sq. Mi.	Shallow Depth to Water (ft.)	Max. Capacity	Avg. Well Yield	Active Wells	Approx. Safe Yield
Upper Ojai	2,840	4.4	0-40	5,681 AF	50 gpm	95	Unavail.
Ojai Valley	6,471	10.1	0-80	85,000 AF	383 gpm	149	5,026 AF
Upper Ventura River	9,360	14.6	0-5	35,118 AF	600 gpm	160	9,482 AF
Lower Ventura River	6,090	9.5	3-13	8,743 AF [a]	20 gpm	16	2,130 AF [b]

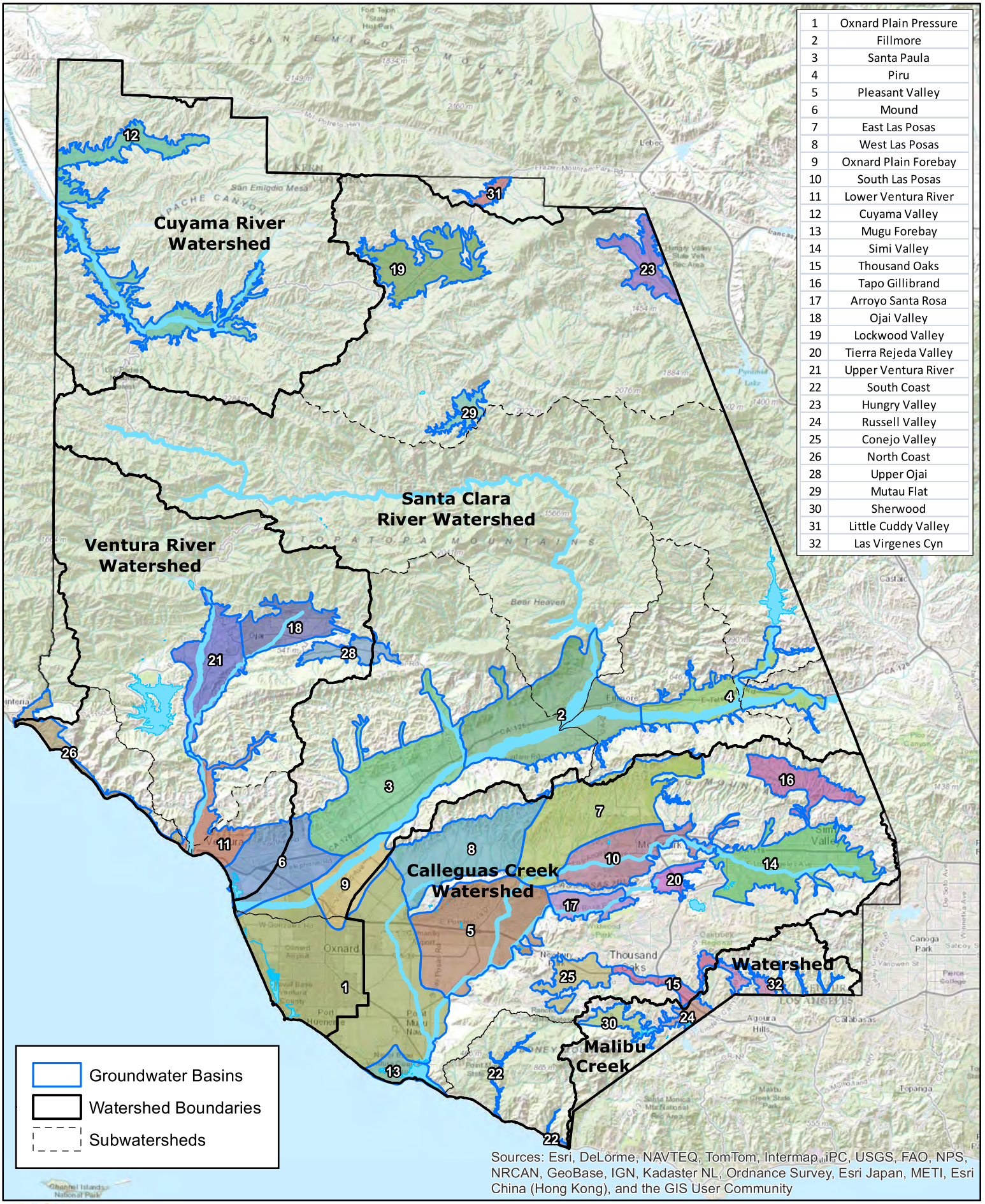
Ventura River Watershed Council

a - Represents unconsolidated alluvium
b - Preliminary estimate, based on groundwater balance for water years 1997-2007

Source: Daniel B. Stephens & Associates, Inc. 2010 & 2013

Figure 3.3.3.2 Groundwater Basins Map

Data sources: See Table 3.4.2.1.3 Groundwater Basins Map Data Sources in "3.4.2 Water Supplies" for an explanation of the various data in the table.



1	Oxnard Plain Pressure
2	Fillmore
3	Santa Paula
4	Piru
5	Pleasant Valley
6	Mound
7	East Las Posas
8	West Las Posas
9	Oxnard Plain Forebay
10	South Las Posas
11	Lower Ventura River
12	Cuyama Valley
13	Mugu Forebay
14	Simi Valley
15	Thousand Oaks
16	Tapo Gillibrand
17	Arroyo Santa Rosa
18	Ojai Valley
19	Lockwood Valley
20	Tierra Rejeda Valley
21	Upper Ventura River
22	South Coast
23	Hungry Valley
24	Russell Valley
25	Conejo Valley
26	North Coast
28	Upper Ojai
29	Mutau Flat
30	Sherwood
31	Little Cuddy Valley
32	Las Virgenes Cyn

Ventura County
Resource Management Agency
Information Systems Department
Map created on 04/07/2014

Figure 3-8
Groundwater Basins
WCVC IRWM Region

0 2 4 8 Miles

JM

Figure 3.3.1.1.1 Drainage Network Map

SBCK v. City of Ventura Settlement Agreement Amendment

AMENDMENT TO SETTLEMENT AGREEMENT

This Amendment to Settlement Agreement ("Amendment") is entered into between Santa Barbara Channelkeeper ("Channelkeeper") and the City of San Buenaventura ("City") regarding the action entitled Santa Barbra Channelkeeper v. State Water Resources Control Board and the City of San Buenaventura, Los Angeles County Superior Court, Case No. 19STCP01176 ("Action"). Channelkeeper and the City may be collectively referred to as "Parties" and individually as "Party". This Amendment is entered into and effective on the date defined in Section 2 below ("Effective Date"). This Amendment is made in light of the following recited facts (each a "Recital").

RECITALS

A. On September 30, 2019, the Parties executed a Settlement Agreement in the Action which settled past disputes while preserving certain claims and defenses for future alleged violations.

B. On June 24, 2020, at a Status Conference in the Action, Channelkeeper expressed an intent to file a motion for interim relief against the City regarding flow in the Ventura River at Foster Park, and the Court ordered Channelkeeper and the City to meet and confer regarding the motion.

C. The Parties met and conferred on multiple occasions, and now desire to settle claims for interim relief regarding flow at Foster Park through this Amendment.

TERMS

Now, therefore, in consideration of the commitments made in this Amendment, Channelkeeper and the City amend the Settlement Agreement as follows:

1. The Parties amend and modify the Settlement Agreement by adding the follows terms, which supersede, modify or amend the terms of the Settlement Agreement:

1.1 When daily average flows as measured at the VR-1 gage fall below 4.0 CFS for 3 consecutive days, the City will shut down wells Nye 7 and 8 before noon on the following business day.

1.2 If daily average flows as measured at the VR-1 gage fall below 3.0 CFS on any day of the time period in Section 1.1 above, the City would also shut down the subsurface intake at the same time as the shutdown in Section 1.1 above.

1.3 If the daily average flows as measured by the VR-1 gage fall below 4.0 CFS for 3 consecutive days, but stay above 3.0 CFS during that period, the City would shut down wells Nye 7 and 8 but would be permitted to continue to operate the subsurface intake until the daily average flows fall below 3.0 CFS for three consecutive days.

1.4 The City shall monitor the impact of pumping on instream flows for the life of this agreement. The City shall specifically evaluate the impact of continued pumping at the subsurface intake after the shutdown of wells Nye 7 and 8 pursuant to Sections 1.1 to 1.3 above. If monitoring at station VR-2 downstream demonstrates a sustained impact on instream flows after the shutdown of wells Nye 7 and 8, or after the shutdown of the subsurface intake, the parties shall meet and confer on or before 30 June of the following year to discuss whether continuing to pump groundwater when instream flows fall below 4.0 CFS may occur or whether all production should stop at 4.0 CFS. If the parties are unable to agree, either party may pursue any available legal remedy they have related to this issue by seeking resolution of the issue via the Court.

1.5 Other than as provided in Section 1.4, Channelkeeper agrees not to seek other interim relief regarding flow. This settlement relating to interim flows in no way impacts Channelkeeper's ability to comment on, support, or challenge the physical solution proposed by any party in the Action.

1.6 The City shall continue to implement this revised flow regime at least until entry of the stipulated judgment and physical solution.

1.7 The revised flow regime may be temporarily modified or suspended under emergency conditions. Emergency conditions include Act of God, unforeseen pipe failure, and the inability of the City to obtain sufficient usable replacement water from Casitas Municipal Water District or other sources to serve its customers. The City shall promptly notify Channelkeeper in writing whenever such an emergency condition exists. The notification shall include the justification for the modification, and supporting documentation. If necessary, the parties shall meet and confer about the modification or suspension to limit its impact on Southern California steelhead and other impacted species.

1.8 If the City seeks to modify the flow regime pursuant to Section 1.7 above because it is unable to obtain replacement water from Casitas Municipal Water District, the City shall provide Channelkeeper with 30 days written notice, if such notice is feasible in light of water management plans or testing trends, or as much advance notice as is feasible when the inability results from an unexpected event. If the modification is based on the inability to obtain replacement water from Casitas, the City shall implement the following specific water conservation measures in the impacted service area during the emergency period of modification or suspension:

1.8.1 City Actions.

a. Encourage maximum conservation by all customers and users in the impacted area.

b. No outdoor irrigation using potable water will be allowed.

c. All water use not required for health and safety is prohibited.

d. Suspend the issuance of any new development approvals and new water connections in the impacted area other than those required to be processed by state law. Building permits which do not create new demand for water or which are for emergencies, public safety and water conservation may be exempted by the City Manager.

1.8.2 Water Customer Actions.

a. Comply with mandatory water conservation regulations.

b. Prohibition of all outside water use unless necessary for the preservation of health and safety and the public welfare.

c. Watering with hand-held five gallon maximum bucket, filled at exterior hose bib or interior faucet (not by hose) shall be allowed at any time. This will assist in preserving vegetable gardens or fruit trees.

d. The filling of swimming and wading pools is prohibited.

1.9 Channelkeeper acknowledges that the City currently plans to construct the Foster Park notching project this fall in accordance with the Settlement Agreement. In the unlikely event that the implementation of the notching project impacts the City's ability to implement the revised flow regime, or in the possible event that the notching project temporarily impacts the City's ability to use VR-2 to monitor downstream impacts of the pumping regime, the Parties shall meet and confer to discuss any modifications or suspensions of the flow regime or the monitoring process as necessary to complete the notching project.

1.10 The City and Channelkeeper will work in good faith to prepare a joint press release regarding this amendment to the Settlement Agreement. In addition, the City and Channelkeeper will meet and confer on whether they can work collaboratively on other public relations efforts to raise awareness of the need to protect the Ventura River Watershed and its habitat, including protections for the Southern California steelhead.

2. This Amendment shall become effective immediately upon execution by the Parties. This Amendment may be executed in counterparts. When the Parties and their respective attorneys have signed and delivered at least one such counterpart of the other Party, each counterpart shall be deemed an original and when taken together with other signed counterparts, shall constitute one agreement, which shall be binding upon and effective as to the Parties. No original signatures shall be required to establish the validity or authenticity of this Amendment.

3. Except as superseded, modified or amended by this Amendment, the Settlement Agreement remains in full force and effect. In the event of conflict between the terms of the Settlement Agreement and the terms of this Amendment, the terms of this Amendment shall govern.

4. All agreements, covenants, representations and warranties, expressed or implied, oral or written, by each Party to this Amendment are contained in this Amendment. No other

agreement, covenants, representations or warranties, expressed or implied, oral or written, have been made by the Parties concerning this Amendment. All prior and contemporaneous conversations, covenants and warranties concerning this Amendment are merged in this Amendment. This is a fully integrated document.

5. This Amendment shall be deemed drafted by all Parties with the advice of counsel for the purposes of interpretation, sufficiency and enforcement, and shall not be construed against either under the doctrine of *contra preferentem*.

(Signatures on following page)

Dated: 8/19/2020

SANTA BARBARA CHANNELKEEPER

By: _____

Dated: 8/20/2020

CITY OF SAN BUENAVENTURA

By: _____
City Manager

APPROVED AS FOR FORM:

Dated: August 2020

SYCAMORE LAW, INC.

By: _____
DANIEL COOPER
Attorneys for Petitioner SANTA BARBARA CHANNELKEEPER

Dated: August 20, 2020

BEST BEST & KRIEGER LLP

By: _____
SHAWN HAGERTY
CHRISTOPHER PISANO
SARAH CHRISTOPHER FOLEY
Attorneys for Respondent and Cross-Complainant CITY OF SAN BUENAVENTURA

Proposed Stipulated Physical Solution and Judgment (May 17 2021 Draft)

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, a California State Agency; et al., Respondents.	Case No. 19STCP01176 Judge: The Honorable William F. Highberger [PROPOSED] STIPULATED PHYSICAL SOLUTION AND JUDGMENT
CITY OF SAN BUENAVENTURA, a California municipal corporation, Cross-Complainant, v. DUNCAN ABBOTT, an individual; et al. Cross-Defendants.	Action Filed: September 19, 2014 Trial Date: Not Set

[PROPOSED] STIPULATED PHYSICAL SOLUTION AND JUDGMENT

Certain **Parties**[1] to this **Action** have stipulated to entry of this **Physical Solution** and **Judgment** ("Physical Solution"). The stipulation of the Parties is conditioned on further proceedings that will result in the Physical Solution becoming binding on all **Bound Parties** in this Action. The Court, having exercised its constitutional duty to evaluate a physical solution, considered the pleadings, the stipulation of the Parties, the evidence presented, and based on the findings of fact and conclusions of law set forth below, approves the Physical Solution[2] and enters this Judgment in furtherance of the requirements of Article X, section 2 of the California Constitution. In imposing the Physical Solution, the Court has determined that the Physical Solution optimizes the reasonable and beneficial use of water in the Ventura River Watershed and avoids substantial injury, material expense, and unnecessary waste of precious water resources in a manner protective of public trust resources, that it is consistent with Code of Civil Procedure sections 830-852, as applicable, and that it conforms with California water law and policy, including because it preserves the continuing jurisdiction of the Court to enforce the Physical Solution and to address future disputes, if necessary. This Physical Solution does not determine water rights or directly limit water **Production**. Instead, it creates a specific plan to manage the Watershed to protect existing reasonable and beneficial uses of the water within the Watershed.

[1] A list of defined terms used herein is attached hereto as Exhibit A. For ease of reference, defined terms are placed in initial capitals, and bolded when first defined or used.

[2] A "physical solution" describes an agreed upon or judicially-imposed resolution of conflicting claims in a manner that advances the constitutional rule of reasonable and beneficial use of the state's water supply. (*City of Santa Maria v. Adam* (2012) 211 Cal.App.4th 266, 288.) It is defined as both a defense to the issuance of an injunction (*Tulare Irrigation District v. Lindsay-Strathmore Irrigation District* (1935) 3 Cal.2d 489, 574, 579; *Rancho Santa Margarita v. Vail* (1938) 11 Cal.2d 501, 556) and as "an equitable remedy designed to alleviate overdrafts and the consequential depletion of water resources in a particular area, consistent with the constitutional mandate to prevent waste and unreasonable water use and to maximize the beneficial use of this state's limited resource." (*California American Water v. City of Seaside* (2010) 183 Cal.App.4th 471, 480.) Physical solutions need not allocate water rights if a dispute as to water right priorities is mooted by the implementation of practical measures, such as ensuring downstream water users are not adversely affected by upstream use, raising money to improve the watershed or import water, and encouraging local water conservation. (*City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224, 1235.) A physical solution is thus a practical remedy that does not change vested rights. (*Id.* at p. 1250.) The "established practice" of reserving continuing jurisdiction enables the Court to address water rights issues, if and when required. (*Hillside Memorial Park & Mortuary v. Golden State Water Co.* (2011) 199 Cal.App.4th 658, 671.)

The Physical Solution is hereby entered as binding on all Parties to the Action, on certain parcels within the Watershed identified herein, and on all **Persons** appearing in this Action, including, without limitation, being binding on all Parties who have stipulated to this Physical Solution, on all Parties who are subject to prior settlement(s) or judgment(s) of the Court, on all real property overlying the **Basins** in the Ventura River Watershed, on all Parties who have defaulted, and on all Persons who hereafter stipulate or otherwise become Parties to this Physical Solution. The Physical Solution is also binding on all named **Cross-Defendants** owning real property adjoining or abutting the waters of the Ventura River or its tributaries, whether flowing on the surface or underground in a known and defined channel, and their successors and on all real property overlying one or more of the following four **Groundwater**[3] basins that are subject to the Physical Solution: the **Lower Ventura River Basin**, the **Upper Ventura River Basin**, the **Ojai Valley Basin**, and the **Upper Ojai Valley Basin** (collectively, "**Basins**"). The Physical Solution is also an in rem judgment binding all real property overlying the Basins. All Parties, Persons, and properties listed above as bound by this Physical Solution are referred to herein as "Bound Parties."

Based on the findings of fact and conclusions of law contained in this Physical Solution, the Court determines that the imposition of the Physical Solution is required to implement the mandate of Article X, section 2 of the California Constitution in a manner that does not cause substantial injury to water right holders, is consistent with the public trust doctrine, and Code of Civil Procedure section 849 because it preserves and protects all reasonable and beneficial uses of water of the Ventura River Watershed and reasonably balances the needs of public trust resources with the consumptive use needs of people, agriculture, and industry while establishing and implementing actions to maintain the **Fishery** in **Good Condition**. The Physical Solution establishes a long-term **Management Plan** or **Plan** that accounts for: the specific needs of the Fishery, variable hydrology of the region, periods of low and very low precipitation, and the

[3] Groundwater means 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.

condition and quality of the habitat during the lifecycle of the Fishery, including the specific reach habitat requirements pertinent to that lifecycle, and thereby ensures the viability of the Fishery through a series of coordinated management actions under the **Plan**. Collectively, these management actions undertaken by the Parties will concurrently preserve public trust resources and provide a continued water supply for the thousands of people, farms, and businesses that rely on the Ventura River Watershed for water.

1. DESCRIPTION OF LITIGATION

1.1 Initiation of Litigation

In September of 2014, Plaintiff Santa Barbara Channelkeeper ("**Channelkeeper**") filed a Complaint and Petition for Declaratory Relief and a Writ of Mandate ("**Complaint**") pursuant to Code of Civil Procedure section 1085 in the County of San Francisco Superior Court (Case No. CPF-14-513875) against Defendant and Cross-Complainant City of San Buenaventura ("**City**") and Respondent State Water Resources Control Board ("**State Board**"). Channelkeeper asked the Court to declare that the City's extraction of water from Reach 4 of the Ventura River from April through October is unreasonable, in violation of Article X, section 2 of the California Constitution and to direct the State Board to perform alleged mandatory duties under Article X, section 2, Water Code section 275, and the public trust doctrine, to prevent that alleged unreasonable use by the City.

In response to the Complaint, the City filed a Cross-Complaint, and later a First Amended Cross-Complaint, against other surface water and Groundwater users in the Ventura River Watershed who it alleged affect the flow of water in the Ventura River. As used herein, the **Ventura River Watershed** or **Watershed** includes the entire Ventura River and its tributaries, as well as the Basins.[4] Channelkeeper moved to strike the City's First Amended Cross-Complaint,

[4] Although the Physical Solution evaluates the entire Watershed and proposes measures to address habitat conditions within the Watershed, not every parcel of land within the Watershed is covered by the Judgment. The Judgment applies to Bound Parties and also extends to the Basins over which the Court has in rem jurisdiction.

and the San Francisco Superior Court granted the motion.

1.2 Appeal and Court of Appeal Decision

The City appealed the decision to strike its First Amended Cross-Complaint. On January 30, 2018, the Court of Appeal, First Appellate District, Division Two, reversed the San Francisco Superior Court's decision and remanded the matter in *Santa Barbara Channelkeeper v. City of San Buenaventura* (2018) 19 Cal.App.5th 1176.

1.3 Amended Pleadings and Transfer of Venue

Following the Court of Appeal's decision, Channelkeeper filed a First Amended Complaint and Petition ("**Amended Complaint**"), and the City filed a Second Amended Cross-Complaint. The Amended Complaint alleges one claim for relief against the City for declaratory relief and four claims for relief against the State Board for writ of mandate. On January 2, 2020, the City filed a Third Amended Cross-Complaint ("**Amended Cross-Complaint**"). The Amended Complaint and the Amended Cross-Complaint are the operative pleadings in this litigation and are collectively referred to in this Physical Solution as the "**Action**."

In the Amended Cross-Complaint, the City named approximately 2,300 Cross-Defendants who beneficially use or who have potential rights to waters of the Ventura River, including subterranean water flowing in a known and defined channel, and/or Groundwater in the Ventura River Watershed, including surface water from the Ventura River and its tributaries and Groundwater from the Basins. The Amended Cross-Complaint also alleged that the Court has in rem jurisdiction over all property overlying the Basins. The Amended Cross-Complaint alleges nine separate claims for relief, which are two claims for injunctive relief (first and second claims for relief), one claim for entry of a physical solution (sixth claim for relief), and declaratory relief claims for pueblo and/or treaty water rights, prescriptive water rights, appropriative water rights, municipal priority, the human right to water, and reasonable and beneficial use (third, fourth, fifth, seventh, eighth, and ninth claims for relief), and asserts the City's relative priority rights to

water, including, without limitation, a request for a comprehensive adjudication of the Ventura River Watershed and the imposition of a physical solution.

By stipulation, venue for the Action was transferred from the San Francisco County Superior Court to the Los Angeles County Superior Court because venue in San Francisco imposed an unnecessary burden on the numerous Parties and Persons who reside or own property in Ventura County. The Action was assigned to this Court.

1.4 Service of Parties and Default

On or about November 21, 2019, the Court granted the City's motion to approve a notice of adjudication and form answer pursuant to Code of Civil Procedure section 836. In accordance with the Court's order and pursuant to the Amended Cross-Complaint, the City has served or provided notice to: (1) all property owners overlying the Basins; (2) all property owners whose property is contiguous to the Ventura River or its tributaries, other than the federal government; and (3) all known holders of appropriative water rights, other than the federal government. Pursuant to the Court's November 21, 2019 order, the City has served a summons on approximately 2,300 Cross-Defendants owning approximately 1,750 riparian parcels and provided 12,766 notices to the owners of approximately 10,000 parcels overlying the Basins. A complete list of all Cross-Defendants is contained in Exhibit B to this Physical Solution. Exhibit C to this Physical Solution contains a list of all known parcels that (1) are owned by Cross-Defendants and/or (2) are overlying the Watershed's Basins.[5] Exhibit C thus provides a list of parcels known to be bound by the Physical Solution, but it does not necessarily constitute a complete and exhaustive list of parcels that are bound or will be bound by the Physical Solution now or in the future.

[5] On September 3, 2019, the Department of Water Resources provided a data file to the City containing information for all parcels overlying the Watershed's four Basins, and the City has inserted the assessor parcel numbers for all of those parcels into Exhibit C of this Physical Solution.

Certain Cross-Defendants, Producers, ***De Minimis* Producers**, **Non-Producers**, and overlying landowners stipulated to this Physical Solution with the understanding that the Physical Solution is not a determination of their water rights; they accordingly do not object to the Physical Solution and plan to comply with the requirement to file their water Production information as specified in Section 7.7.4.4 or *De Minimis* Production information as specified in Section 7.7.4.6. Stipulation to the Physical Solution constitutes a response to the Amended Cross-Complaint, and no default shall be taken against such stipulating Parties.

Numerous Cross-Defendants have failed to stipulate to the Physical Solution, have not responded timely, or at all, to the Amended Cross-Complaint, and their defaults have been entered. Notice of this Physical Solution and Judgment has been given to the defaulted Cross-Defendants, together with the opportunity to be heard regarding this Physical Solution, and the Court hereby enters default judgment against all defaulted Cross-Defendants and incorporates those default judgments into this Physical Solution. All defaulted Cross-Defendants, and their successors and assigns, are subject to the terms of the Physical Solution and Judgment, and this Court's continuing jurisdiction as set forth herein. All defaulted Cross-Defendants are identified in Exhibit D to this Physical Solution.[6]

In addition, in accordance with Code of Civil Procedure section 836, the City provided notice of this Action to all property owners who were not otherwise named Parties to this Action and who own property overlying the Basins. Property owners who elected to become Parties to this Action are bound by this Physical Solution as Parties. Consistent with Code of Civil Procedure section 836(k), property owners who did not elect to become Parties are also bound by this Physical Solution. Consistent with Code of Civil Procedure section 836(j), the common law of stream adjudications, and Article X, section 2 of the California Constitution, the Court has in rem jurisdiction over the real property overlying the Basins, identified herein, inclusive of

[6] Exhibit D will be completed after the Court enters defaults.

usufructuary rights to the waters of the Basins, the Ventura River and its tributaries, whether flowing on the surface or underground within a known and defined channel, or stored within the Basins, and this Physical Solution applies to those properties. Therefore, all Persons holding fee title to real property overlying one or more of the Basins, whether or not they chose to become a Party in this Action, are subject to the terms of this Physical Solution.

1.5 Answers, Cross-Complaints, and Intervention

The Court approved two form answers for use in this action, (1) "Form Answer" for overlying landowners who received mailed notice of the Action and (2) "Court-Approved Answer for Cross-Defendants Named in the City of San Buenaventura's Third Amended Cross-Complaint." Certain Cross-Defendants answered the Amended Cross-Complaint by filing the "Court-Approved Answer for Cross-Defendants Named in the City of San Buenaventura's Third Amended Cross-Complaint" or by filing some other answer thereto. Certain other property owners in the Watershed, including but not limited to those to whom City provided required notice in accordance with Code of Civil Procedure section 836, elected to become Parties in this action by filing the "Form Answer."

On or about December 6, 2019, the Court granted the unopposed motions of the State Board and the California Department of Fish & Wildlife ("**Department**") to intervene in the Action, specifically in the Amended Cross-Complaint. The State Board and the Department, with Court approval, elected not to file a complaint in intervention, but instead filed notices of appearance in connection with the Amended Cross-Complaint, subjecting themselves to the Court's jurisdiction as Bound Parties and in the absence of their tendering an affirmative pleading, limiting themselves to the issues raised in the existing pleadings in the Action.

1.6 City Settlement

On or about September 30, 2019, Channelkeeper and the City entered into a settlement agreement that resulted in the partial dismissal of Channelkeeper's cause of action against the

City, pending entry of this Physical Solution ("**City Settlement**"). On or about August 20, 2020, Channelkeeper and the City agreed to amend the City Settlement. The City Settlement, as amended, included a full waiver and release of Channelkeeper's claims, other than to a claim for certain specific attorney fees and the right to "comment on, support, or challenge the physical solution proposed by any party in the Action." This Physical Solution and Judgment implements the terms of the City Settlement, as amended, including the Foster Park Flow Protocols described in Section 7.3.4.10, and for the additional reasons discussed in Section 3.1, results in the full dismissal of Channelkeeper's Amended Complaint, overrules any objections of Channelkeeper to the Physical Solution, and resolves all issues between Channelkeeper and the City as set forth and alleged in the Amended Complaint.

2. JURISDICTION AND BASIS FOR PHYSICAL SOLUTION

This Action is a comprehensive adjudication that adopts and imposes a Physical Solution concerning the reasonable and beneficial uses of the waters of the Ventura River Watershed, including both surface water and Groundwater, without causing waste of precious water resources. The Court has original jurisdiction[7] over the subject matter of the Action and the Bound Parties sufficient to enter the Physical Solution pursuant to Article X, section 2 of the California Constitution, the public trust doctrine, Code of Civil Procedure sections 830-852 (collectively, the "**Comprehensive Adjudication Statutes**"), as applicable, and California water law and policy.

On or about March 8, 2019, the State Board submitted a letter to the Honorable Kevin C. Brazile, Presiding Judge of the Los Angeles Superior Court, regarding the judicial assignment of this Action and specifically requesting coordination with the Judicial Council. The Court finds that pursuant to Code of Civil Procedure section 838(a)(1), assignment by the Judicial Council is not required because the Action was not filed and is not being heard in a county that overlies the

[7] *Nat'l Audubon Society v. Superior Court* (1983) 33 Cal.3d 419, 451.

Basins or any portion of the Basins. In addition, the Court has conferred with the Judicial Council and has determined that no action by the Judicial Council is required. No Party challenged this determination.

The Court and the Comprehensive Adjudication Statutes require that all Persons having or claiming any right, title, or interest to Groundwater within the Basins be notified of the Action. Notice has been given pursuant to the Court's order and the Comprehensive Adjudication Statutes. All Persons having or claiming any right, title, or interest to Groundwater within the Basins have been given an opportunity to become Parties to the Action in accordance with the Code of Civil Procedure. All named Parties who have not been dismissed or defaulted have appeared or have been given adequate opportunity to appear. The Court therefore has personal jurisdiction over those Parties. In addition, the Court has in rem jurisdiction pursuant to Code of Civil Procedure section 836(j) over the real property, inclusive of usufructuary rights to the waters within the Basins, and this Physical Solution applies to those properties overlying the Basins. All known Parties having or claiming any right, title, or interest to surface waters within the Watershed have been named and served.

The Court finds and concludes that the imposition of the Physical Solution: (1) optimizes the reasonable and beneficial use of waters in the Ventura River Watershed and avoids waste in accordance with Article X, section 2 of the California Constitution; (2) avoids unreasonable injury to any water right holder and will avoid the present need for a specific allocation of water among competing water right claims; (3) fairly and reasonably ensures native waters are made available for beneficial use among all water right holders; (4) establishes a comprehensive approach to maintaining the **Southern California Steelhead** Fishery population in the Ventura River Watershed in Good Condition, consistent with the Constitutional mandate of reasonable and beneficial use and the public trust doctrine; (5) establishes a management structure to ensure implementation of the Physical Solution emphasizing local involvement (Water Code section 113); (6) facilitates water resource planning and sustainable water use and reduces uncertainty;

(7) furthers the mandates of the State Constitution and State water policy; and (8) as is customary in comprehensive adjudications, maintains continuing jurisdiction of the Court to oversee the implementation of the Physical Solution and to resolve conflicts as they may arise among the Parties to and Persons bound by the Physical Solution. As such, the Physical Solution will provide for the long-term, comprehensive, and efficient management of water in the Watershed in a manner not otherwise available under applicable law.

In addition, and as applicable, the Court finds pursuant to Code of Civil Procedure section 850(a) that the Physical Solution: (1) is consistent with Article X, section 2 of the California Constitution; (2) is consistent with the water right priorities of all Parties and any Persons who have claims that are exempted pursuant to Code of Civil Procedure section 833 as no water rights or beneficial uses will incur substantial injury by the imposition of the Physical Solution; and (3) treats all objecting Parties and any Persons who have claims that are exempted pursuant to Code of Civil Procedure section 833 equitably as compared to the stipulating Parties.

Following its complete evaluation and investigation of the Physical Solution, and based on these findings, the Court enters this Physical Solution on all Bound Parties, including any objecting Party, to this Action. Additionally, this Physical Solution binds all Persons holding fee title to real property in the Basins pursuant to Code of Civil Procedure section 836.

3. SCOPE OF PHYSICAL SOLUTION

3.1 Resolution of all Claims

As is discussed herein, all claims in the Action, Amended Complaint, and Amended Cross-Complaint are hereby resolved, either finally or conditionally, by this Physical Solution and Judgment, and this Physical Solution and Judgment shall constitute a final judgment pursuant to Code of Civil Procedure section 577.

In the Complaint, Channelkeeper asked the Court to declare that the City's extraction of water from the Ventura River from April through October is unreasonable, in violation of Article X, section 2 of the California Constitution, and to direct the State Board to perform alleged mandatory duties under Article X, section 2, Water Code section 275, and the public trust doctrine to prevent that alleged unreasonable use by the City. Channelkeeper's claims as against the City in the Amended Complaint have been resolved by the City Settlement, as amended and through this Physical Solution. Channelkeeper's claims as against the State Board are deemed moot based upon entry of the Physical Solution and the Court's ongoing jurisdiction over the subject matter of those claims.

The Amended Cross-Complaint alleges nine separate claims for relief and asserts the City's relative priority rights to water, including, without limitation, a request for a comprehensive adjudication of the Ventura River Watershed and the imposition of a physical solution. This Physical Solution is intended to serve as a stipulated judgment, resolving the City's sixth claim for relief for the imposition of a physical solution. All other claims in the Amended Cross-Complaint are conditionally reserved as is discussed in section 3.2 herein.

3.2 Reservation of Claims

The Parties stipulate and the Court finds that this Physical Solution and Judgment sufficiently resolves the current competing claims among the Bound Parties, and that it is not necessary at this time for the Court to determine the relative priority rights to water in the Watershed pursuant to other causes of action in the Amended Cross-Complaint or at this time to establish a comprehensive adjudication of water rights in the Watershed. The Judgment entered herein is conditioned upon the successful implementation of the Physical Solution. The Court specifically retains post-Judgment jurisdiction to determine the relative priority rights to all water rights subject to this Judgment and/or to establish a comprehensive adjudication of water rights that are subject to this Judgment, if it becomes necessary to do so in the future. As to the City's Amended Cross-Complaint, the Court specifically retains jurisdiction to determine the City's

first, second, third, fourth, fifth, seventh, eighth, and ninth claims for relief, if it becomes necessary to do so in the future. Any such determination shall be made pursuant to this Court's continuing jurisdiction pursuant to and in accordance with Section 9.2 herein.

Nothing in this Physical Solution shall be construed as limiting or otherwise affecting prior judicial or administrative decisions regarding water rights in the Watershed, including but not limited to:

a. Decree in Santa Ana Water Company vs. Ramon G. De La Riva, et al., 1st Judic. Dist. of CA, County of Ventura, rendered 3/10/1874;

b. Santa Ana Water Co. v. Town of San Buenaventura, 56 F. 339 (1893);

c. Rice v. Meiners (Sup. Ct. of the County of Ventura, October 22, 1902); and

d. Ventura Water, Light and Power v. Meiners and Rice (Sup. Ct. of the County of Ventura, Court, March 12, 1904).

e. Barrett v. County of Ventura (Sup. Ct. of the County of Ventura County, Case No. 51216, January 14, 1970).

f. Biological Opinion issued by the National Marine Fisheries Service in connection with Casitas' Robles diversion (March 31, 2003).

The Court makes no findings regarding these prior judicial or administrative decisions.

3.3 Role of the State Board and the Department

The State Board and the Department have intervened in this Action due to their respective administrative interests related to the Watershed and have become Parties. California's Water Action Plan ("**Action Plan**"), Action 4, identifies the Watershed as one of five priority stream systems in which the State has an interest in protecting the Fishery in Good Condition. Consistent with this goal, the Department has taken several actions.

3.3.1 Instream Flow Regime Criteria.

The Department has prepared Instream Flow Regime Criteria on a Watershed Scale for the Ventura River dated March 2020, Version 2 updated May 2020, (Watershed Criteria Report No. 2020-01) ("**Department Report**"). As stated in the Department Report:

> The Department provides this document as a tool for consideration in water management planning. It presents an analytical approach that can be implemented, if appropriate, under the specific circumstances of a watershed, stream or information need. This report and the Overview [of Analysis for Instream Flow Regime Criteria on a Watershed Scale], in and of themselves, should not be considered to provide binding guidelines, establish legal compliance, or ensure project success.

Accordingly, this Department Report is "a tool for consideration in the management planning" in the Watershed, and is considered as part of the broader goal of this Physical Solution, which considers and balances consumptive uses, Fishery needs, and other needs within the Watershed. As stated in the Overview Analysis for Instream Flow Regime Criteria on a Watershed Scale (March 2020), the Department Report presents "a range of different flow regime criteria that can be adapted to the specific needs of each selected stream and watershed." Department Report at p. 7. Pursuant to Water Code section 1257.5, the State Board must consider the Department Report and any other recommendations from the Department when acting on applications to appropriate water, and, subject to judicial review, may seek to establish flow criteria for the Watershed that balance all needs of the Watershed, which may thereafter be implemented as part of future regulatory decisions. This Physical Solution and Judgment is consistent with and achieves the goal of protection of the Fishery in Good Condition in a manner consistent with Action Plan, Action 4, by considering the criteria set forth in the Department Report and balancing them against all needs of the Watershed. In approving this Physical Solution and Judgment, the Court has considered the Department Report, exercises its Constitutional responsibilities within its original and concurrent jurisdiction with the State Board in the areas of public trust and

Constitutional reasonable use, and finds this Physical Solution and Judgment to be consistent with those recommendations and goals.

3.3.2 Draft Instream Flow Recommendations for the Lower Ventura River and Coyote Creek [UPDATE WHEN FINAL]

On February 26, 2021, the Department released its Draft Instream Flow Recommendations for the Lower Ventura River and Coyote Creek ("**Department Recommendations**") to be used "in water management planning and decision-making processes". The Department Recommendations are based upon the Department Report. The Department Recommendations state:

> Several factors limiting steelhead production and recovery have been identified in the Ventura River watershed. These factors include altered flow regimes due to dams, barriers, drought, and climate change; stream habitat that lacks sufficient spawning gravels and pool habitat; decreased riparian habitat due to urbanization; and poor water quality associated with increased water temperatures related to reduced canopy cover and water diversions (Moyle et al. 2008; Walter 2015). The loss of high quality freshwater habitat is one of the leading causes of salmonid decline in California (CDFG 2004). Currently, access to over half of the historically available spawning and rearing habitat in the Ventura River watershed is blocked by the Matilija Dam and Casitas Dam (Entrix 2003). Furthermore, land use change and water withdrawals below these dams have degraded the remaining spawning and rearing habitat (Entrix 2003).

The Department Recommendations conclude that "maintaining suitable instream flows . . . can help maintain freshwater habitat. . . ." despite the factors identified above. This Physical Solution, addresses the limiting factors described in order to balance water availability for consumptive uses in the watershed in a manner that does not cause substantial injury to water right holders, consistent with the public trust doctrine.

4. VENTURA RIVER WATERSHED, VENTURA RIVER AND THE BASINS

4.1 The Ventura River Watershed

The Ventura River Watershed is a coastal watershed located in southern California, with an approximate catchment area of 226 square miles. The majority of the Watershed is located in southwest Ventura County, with a small portion (approximately 4%) located in east Santa Barbara County. The Watershed is fan-shaped and measures eighteen miles north to south and is seventeen miles at its widest point. A depiction of the Watershed is included in Exhibit E to this Physical Solution at pages E-1 through E-4.

The upper reaches of the Watershed lie within the Topa Topa Mountains, Santa Ynez Mountains, and the greater Transverse Ranges, with ridges in these ranges delineating the upper extent of the Watershed. The altitude of the Watershed varies from approximately 6,000 feet to sea level at the coastal lagoon and estuary. The total length from the furthest headwaters to the Pacific Ocean is over thirty-three miles.

Steep mountains and foothills comprise most of the land area in the Watershed, covering most of its north half and framing it on three sides, with a large portion of this area being U.S. Forest Service land or other conserved lands. Land use in the Watershed is divided between National Forest, open space, urban or industrial, and agricultural or rural designations. The largest portion, approximately 75% of the Watershed is wildlands, composed of U.S. Forest Service land (55%) and open space lands (20%), which includes both land set aside for conservation and land currently leased for oil and gas exploration and production. Agricultural or rural areas comprise 20.5% of the Watershed and are used for grazing, orchards, or row crops. Urban or industrial lands use comprise approximately 4.5% of the Watershed and is divided among the municipalities of the City of Ojai, the western portion of the City of Ventura, and the communities of Meiners Oaks, Mira Monte, Oak View, Live Oak Acres, and Casitas Springs, a DWR-designated

disadvantaged community. Most of these developed areas are located on the valley floor near to or within the Ventura River's floodplain.

Precipitation in the Watershed is highly variable both spatially and temporally. Spatially, the upper portion of the Watershed receives, on average, double the annual volume of rainfall received in the lower portion of the Watershed. Seasonally, most rain occurs between November and April, with minimal rain occurring between May and September. Based on historical records, the Watershed experiences large differences in annual rainfall volume, with regular cycles of wet and dry years at least partially caused by El Nino and La Nina cycles. Long periods of drought are a common occurrence in the Watershed. Periodic high flow events and flooding also occur.

The Watershed is home to many species, including the Southern California Steelhead, a species listed as endangered under the federal **Endangered Species Act**, as described in more detail below. The regular periods of drought experienced in the Watershed, coupled with the historical development within the Watershed, create challenges to the survival of the steelhead population. Natural precipitation does not occur in sufficient magnitude in certain years and/or in drought condition years to enable the successful migration of the steelhead to and from the Pacific Ocean for the completion of its lifecycle. Consequently, habitat that enables the Fishery to survive during several years of low precipitation is required to maintain the steelhead population within the Watershed.

The Ventura River Watershed consists of both surface waters, including the Ventura River and its tributaries, and the Basins. These various components of the Watershed are described below.

4.2 The Ventura River

The Ventura River flows through the center of the Watershed, draining tributaries along an approximately thirty-three mile course from its headwaters to the Pacific Ocean. The main

tributaries of the Ventura River include Matilija Creek, North Fork Matilija Creek, San Antonio Creek, Coyote Creek, and Cañada Larga Creek.

The Ventura River has traditionally been divided into five reaches. For the reasons set forth below, the Physical Solution does not use this historical division of the River, but those historical reaches are: Reach 1, including the Ventura River lagoon and estuary; Reach 2, extending from the top end of the lagoon and estuary to a point upstream of where treated wastewater from the Ojai Valley Sanitary District's Wastewater Treatment Plant is discharged to the River; Reach 3, located downstream of Foster Park and extending from Weldon Canyon to the confluence of Coyote Creek; Reach 4, located between Coyote Creek and the confluence with the North Fork Matilija Creek and including Foster Park; and Reach 5, including North Fork Matilija Creek.

The upper portions of the Ventura River and its primary headwater Matilija Creek and North Fork Matilija Creek typically have perennial flow from the higher moisture in the mountainous climate and high rainfall volumes in the upper catchment. The River in this portion flows through narrow canyon formations with a steep bed slope resulting in high energy flows.

The middle section of the Ventura River, from the Robles Diversion to San Antonio Creek confluence, consists of lower-gradient braided channels incised into a wider floodplain. Due to the high permeability of the bed material, the water table gradient, and the nature of the aquifer in this location, the middle reach is often dry.

The lower section of the Ventura River, from its confluence with San Antonio Creek to the estuary, is fed by contributions from San Antonio Creek, the Ojai Valley Sanitary District's wastewater facility,[8] and small intermittent and ephemeral discharges from a number of small

[8] As described in more detail in Section 7.3 of the Physical Solution, to help maintain the important flows that are generated by this facility, the City shall dedicate any rights the City has to this effluent for instream uses.

side canyons and tributaries.

Because the historical division of the River is not linked directly to the lifecycle and needs of the Southern California Steelhead in the Watershed, this Physical Solution does not use the historical division of the River, and instead divides the River into segments consistent with the lifecycle and needs of the Southern California Steelhead in the Watershed. This Physical Solution divides the River into seven reaches based on habitat requirements, habitat function, and shared hydrologic conditions. These reaches are set forth in the table below.

Table 1 – Ventura River Reaches

Number	Reach	Fishery function
V 1	Ocean-Main Street Bridge (lagoon and estuary)	Migration
V 2	Main Street Bridge-Shell Road	Migration
V 3	Shell Road-San Antonio Creek	Migration, spawning, juvenile rearing
SA 1	San Antonio Creek to Fox Creek/Ojai Creek	Migration, spawning, juvenile rearing
V 4	San Antonio Creek-Robles Diversion	Migration
V 5	Robles Diversion-Matilija Creek/North Fork Matilija Creek confluence (including 1 km section to Matilija Dam)	Migration, spawning, juvenile rearing
NF 1	North Fork Matilija Creek	Migration, spawning, juvenile rearing

There are several major human-made flood control and water management features on the Ventura River. Matilija Dam, currently operated by the Ventura County Watershed Protection District, is located in the upper watershed above the confluence of Matilija Creek and North Fork Matilija Creek. Matilija Dam was constructed in 1946-47 with an original capacity of 7,020 acre feet; however, sedimentation and re-design of the dam has reduced its capacity, and the dam does not currently divert water for meaningful consumptive use or serve meaningful flood control functions. Matilija Dam completely blocks the migration of Southern California Steelhead into

potentially suitable spawning and rearing areas within Matilija Creek upstream of the Dam. The Dam does not, however, block access by steelhead to habitat within North Fork Matilija Creek.

A second human-made combination of features on the Ventura River is the Robles Diversion and Fish Passage Facility ("**Robles Diversion Facility**"), the Robles Canal, and Lake Casitas. These facilities are operated by Cross-Defendant Casitas Municipal Water District ("**Casitas**"). The Robles Diversion Facility is located on the Ventura River two miles downstream of the Matilija Dam and approximately fourteen river miles from the Pacific Ocean. At the Robles Diversion Facility, Casitas diverts water from the Ventura River, channels the water through the 5.4 mile Robles Canal, and conveys the water to Lake Casitas. Lake Casitas is a human-made lake designed to hold 254,000 acre feet of water. Aside from limited Groundwater resources, Lake Casitas is the primary source of drinking water for Ojai, Oak View, Casitas Springs, and the western side of the City. None of these communities has access to any sources of State-conveyed water or other imported waters. Operations of the Robles Diversion Facility are governed by a license ("**Casitas License**") issued by the State Board and a March 31, 2003 biological opinion ("**Casitas Biological Opinion**") issued by the National Marine Fisheries Service. Nothing in this Physical Solution lessens or increases, or may reasonably be interpreted to lessen or increase, the operational requirements in the Casitas License or in the Casitas Biological Opinion.

A third human-made feature on the Ventura River is the Foster Park Subsurface Dam. The Subsurface Dam extends from the Coyote Creek confluence approximately 973 feet east across most of the Ventura River. The Subsurface Dam extends five to forty feet deep from west to east. The dam does not extend across the entire canyon. There is an uncompleted "gap" approximately 300 feet in length at the eastern end. It was constructed by the City's predecessor, Ventura County Power Company, in or about 1906-1908, and is now owned by the City. At or adjacent to this location, the City operates a subsurface collector and three wells.

A fourth human-made feature is the Ventura River Levee. It borders the east side of the Ventura River, stretching northerly along the Ventura River approximately 2.65 miles from the Pacific Ocean, running parallel to State Route 33 and extending easterly terminating at high ground south of Cañada de San Joaquin (School Canyon Road). It was completed by the United States Army Corps of Engineers Los Angeles District in December 1948 to protect adjacent low-elevation areas within the City from flooding. The Ventura County Watershed Protection District operates and maintains the Levee. Several additional smaller levees and hard stabilization structures occur through other parts of the Watershed.

4.3 Groundwater Basins

The Ventura River Watershed includes the Basins; depictions of each of the Groundwater basins are contained in Exhibit E to this Physical Solution at pages E-4 through E-8. The Basins are hydrologically interconnected with the Ventura River. For clarity, the Basins do not include formations that are not underground sources of drinking water in accordance with the Safe Drinking Water Act, 42 U.S.C. 300(f) et seq., or are otherwise determined to be an "exempted aquifer" pursuant to 40 C.F.R. section 146.4 and the California Public Resources Code section 3131, and the Physical Solution does not apply to petroleum production-related wells that extract or inject fluids, including waters from or into formations that are not underground sources of drinking water or are exempted aquifers.

4.3.1 The Lower Ventura River Basin

The Lower Ventura River Basin follows the course of the Ventura River from Foster Park in the north to the Pacific Ocean at its southern end. It also includes two narrow tributary areas: the narrow area surrounding Cañada Larga Creek that flows in from the east and the Diablo Canyon Creek, which intermittently flows in from the west. The northern end of this basin is marked by the Casitas Vista Bridge, the border with the Upper Ventura River Basin below Foster Park. The east and west borders are formed by the Santa Ynez Mountains where impermeable

rocks prevent significant Groundwater flow or storage. To the south, the basin boundary is the coast of the Pacific Ocean. The Ventura River flows north to south in the basin, eventually discharging to the Pacific Ocean. Groundwater interacts in some portions of this basin with surface water along the Ventura River; the degree of this interaction varies in location and time depending on Groundwater levels, riverbed permeability, water year type, and geographic location within the basin. The Lower Ventura River Basin is designated as Basin Number 4-3.02 in the Department of Water Resources ("**DWR**") Bulletin 118 and has been designated by DWR as a very low priority basin under the Sustainable Groundwater Management Act ("**SGMA**"). The surface area of the Basin is 5,300 acres, and the estimated maximum storage capacity is approximately 264,000 acre-feet.

4.3.2 The Upper Ventura River Basin

The Upper Ventura River Basin extends through northern and central Ventura County and generally follows the Ventura River. The northernmost point is located approximately ¼ mile downstream of the junction of Matilija Creek and North Fork Matilija Creek. Its northern border is defined by the Santa Ynez Mountains where low permeability rocks do not provide additional Groundwater storage. The northeastern boundary that divides the basin from the Ojai Valley Basin is formed by a subsurface impermeable bedrock ridge. The basin narrows to the south as it follows the Ventura River Valley until it reaches Foster Park. The Casitas Vista Bridge adjacent to Foster Park marks the divide between the Upper Ventura River and Lower Ventura River Basins. The Ventura River flows north to south through the basin. Surface water interacts with Groundwater in the basin; the degree of this interaction varies in location and time depending on Groundwater levels, riverbed permeability, water year, type, and geographic location within the basin. The Upper Ventura River Basin is designated as Basin Number 4-3.01 in DWR's Bulletin 118 and has been designated by the DWR as a medium priority basin under SGMA. As a medium priority basin under SGMA, a Groundwater Sustainability Plan ("**GSP**") must be adopted for the basin by Upper Ventura River Groundwater Agency, the designated Groundwater

Sustainability Agency ("**GSA**"), on or before January 31, 2022. The DWR estimated surface area of the Basin is 7,410 acres, and the DWR-estimated maximum storage capacity is approximately 35,000 acre-feet.

4.3.3 The Ojai Valley Basin

The Ojai Valley Basin is located next to and easterly of the Upper Ventura River Basin in central Ventura County. Groundwater storage occurs within the alluvial material filling in the lower elevations of the relatively flat area in and around the City of Ojai. Alluvial sediment is composed primarily of sand, silt, and gravel. This sediment originally accumulated as alluvial fan deposits, formed by rivers and streams draining from the mountains, slowing, spreading out, and depositing material at the base of the mountain range. These deposits, therefore, are thickest at the base of the mountains to the north and east. This basin has a DWR-estimated maximum storage capacity of about 85,000 acre feet and a usable capacity of 25,000 acre feet. The surface area of the basin is 6,830 acres. The Ojai Valley Groundwater Basin is designated as Basin Number 4-2 in DWR's Bulletin 118 and has been designated by DWR as a high priority basin under SGMA. As a high priority basin under SGMA, a GSP or equivalent must be adopted for the basin by the applicable GSA on or before January 31, 2022. The Ojai Basin Groundwater Management Agency (**Ojai GMA**) submitted a GSP alternative to DWR for evaluation and assessment under SGMA. DWR did not approve the proposed alternative, citing, among other things, the fact that basin Groundwater is the primary contributor of flow, for much of the year, to San Antonio Creek, and no evidence was provided to indicate that subsequent studies of safe or sustainable yield considered impacts to stream flows, or desired or optimal minimum Groundwater discharge rates to San Antonio Creek.

The boundaries of the Ojai Valley Basin are mainly mountain ranges, where the geology does not allow Groundwater flow or storage, and faults. To the north of Ojai, the Topa Topa and Santa Ynez Mountains form the basin boundary. Black Mountain and the Santa Ana fault bound

the basin to the south, and non-permeable rock units along the eastern and western edges prevent Groundwater flow into or out of the basin. The Ojai Valley Basin is separated from the Upper Ojai Valley Basin by the San Cayetano Fault. The western boundary also marks the Groundwater divide that separates the Ojai Valley Basin from the Upper Ventura River Basin. San Antonio Creek flows across the basin from the northeast to the southwest, and surface flow contributes to Groundwater. In the southwest portion of the Basin, Groundwater discharges to San Antonio Creek, draining water from the Basin.

In addition to the planning and management efforts of the Ojai GMA, Casitas, the Ventura County Watershed Protection District, the Ojai GMA, and the Ojai Water Conservation District, have collaborated to develop a project to divert water into settling ponds along San Antonio Creek for Groundwater recharge of the Ojai Basin. Operation of this diversion is subject to a number of permits and agreements, including, without limitation, the Operations Agreement Regarding the San Antonio Creek Spreading Grounds Rehabilitation Project dated January 12, 2015 between the City and the Ventura County Watershed Protection District.

4.3.4 The Upper Ojai Valley Basin

The Upper Ojai Valley Basin is located southeast of the Ojai Valley Basin on the eastern border of the Ventura River Watershed. It is the smallest of the Basins, encompassing 3,806 acres or 5.95 square miles, and has a DWR-estimated maximum storage capacity of 6,000 acre feet. The basin is an intra-montane depression, bounded on all sides by mountain ranges and thrust faults that mark the boundary between mountains and the valley floor. On the northern edge, Black Mountain and the San Cayetano fault separate the basin from the Ojai Valley Basin. To the south, the Sulfur Mountains and the Lion fault mark the boundary of the Groundwater storage zone. The Upper Ojai Valley Basin discharges to Lion Canyon Creek, which flows to the west and is a major contributor to flows in San Antonio Creek. Groundwater in the Upper Ojai Basin contributes to surface flow in Lion Canyon Creek. The basin is split into halves by a

surface water divide, where the eastern portion lies outside of the Ventura River Watershed. The Upper Ojai Valley Basin is designated as Basin Number 4-1 in DWR's Bulletin 118 and has been designated by DWR as a very low priority basin under SGMA.

5. REASONABLE AND BENEFICIAL USES OF THE VENTURA RIVER WATERSHED

Currently, the water needs within the Ventura River Watershed, regardless of claim of right, are supplied entirely from local surface water and Groundwater sources. At the time of this Physical Solution, no imported water is used within the Watershed. Water from the Ventura River Watershed is therefore critical to life within the Watershed, to the local economy, and to the health of the region. Water from the Ventura River Watershed is vital for a variety of both consumptive and instream reasonable and beneficial uses. These reasonable and beneficial uses are described in more detail below.

5.1 Forest Land and Open Space

The upper portion and majority of the Watershed remains largely in natural condition and has been designated as National Forest land and wilderness areas. The largest portion, approximately 75% of the Watershed is wildlands, comprised of U.S. Forest Service land (55%) and open space land (20%), which includes both land set aside for conservation and land currently leased for oil and gas exploration and production and may include agricultural uses. In 1995, Ventura County passed a limited-growth initiative called SOAR (Save Open Space and Agricultural Resources) to curb urban sprawl, preserve agricultural lands, and protect open space areas in the unincorporated County land and within multiple Ventura County communities including Ventura and the greater Ojai Valley. As such, the level of development within the unincorporated portions of the Watershed has been limited for the last twenty-five years. In 2016, Ventura County voters approved the extension of this initiative to 2050.

5.2 Consumptive Uses

Water from the Ventura River Watershed supports a variety of reasonable and beneficial consumptive uses, including municipal, agricultural, and industrial uses under various claims of right, e.g., riparian, overlying, appropriative, and prescriptive. The types of uses are described below.

5.2.1 Reasonable and Beneficial Municipal Uses

Water for municipal uses accounts for approximately 55% of the total water demand from the Ventura River Watershed, with residential use making up most of urban water demand. Due to strict conservation efforts, urban water demand has not increased significantly in recent decades, despite growth in population.

There are four major municipal water suppliers in the Ventura River Watershed. Cross-Defendant Casitas is the largest water purveyor in the Watershed, providing water to both water resale agencies and retail customers. Casitas uses surface water from the Ventura River, which is diverted from the River through the Robles Diversion into Lake Casitas, runoff from the surrounding area adjacent to Lake Casitas, and Groundwater from wells in the Upper Ventura River and Ojai Valley Basins, to provide municipal service to its retail and wholesale customers. Casitas has implemented significant conservation efforts to reduce municipal demand, including a Water Shortage Contingency Plan, consistent with the Urban Water Management Planning Act. Casitas has declared Stage 3 water supply conditions and has implemented restrictions on residential irrigation, reduced customer allocations, and prohibited waste. These efforts include implementing and maintaining Stage 3 drought restrictions since April of 2016. These restrictions include prohibitions on water waste, restrictions on the timing of residential irrigation, and a 30% reduction in all customers' individual allocations for their non-essential outdoor use. Casitas also operates many conservation programs including free water surveys, free water conservation devices, and rebates for small irrigation controllers. In addition, Casitas offers an

agricultural rebate program that encourages greater water use efficiency for farms within its service area.

The City is the second largest municipal supplier within the Ventura River Watershed. The City Produces water through a subsurface diversion and three wells at Foster Park to supply its municipal customers.[9] The City has a Water Shortage Event Contingency Plan that is consistent with the Urban Water Management Planning Act. The City has implemented significant conservation efforts to reduce municipal demand. These efforts include implementing Water Shortage Regulations and Rates, complying with the mandates of the Water Conservation Act of 2009 (Senate Bill X7-7), maintaining a 20% mandatory conservation cutback, promoting the use of recycled water, offering rebates to encourage water wise landscaping, offering free high efficiency sprinkler nozzles, implementing an Advanced Metering Infrastructure program and a Smart Irrigation Controller program, providing free water efficiency surveys, enacting a Water Rights Dedication and Water Resources Net Zero (In Lieu) Fee Ordinance and Resolution, and taking other steps to reduce consumption.

Cross-Defendant the Ventura River Water District ("**VRWD**") is the third largest municipal supplier within the Ventura River Watershed. VRWD supplies water to an area of approximately 3.3 square miles, or 2,103 acres, stretching from the southwestern edge of the City of Ojai down to the northern half of Oak View, and in the eastern half of Casitas Springs. VRWD serves a population of approximately 5,700 through 2,190 connections, and its customers include residential, commercial, and industrial. VRWD does not serve agricultural water. VRWD operates six wells in the Upper Ventura River Basin. VRWD has implemented significant conservation efforts to reduce municipal demand. During the drought, VRWD customers reduced water usage by 35%, and in 2016 VRWD adopted its Water Waste and Conservation Ordinance,

[9] The City's wells are commonly referred to as Nye 7, Nye 8, and Nye 11. The subsurface diversion and Nye 7 and Nye 8 are subject to the Foster Park Flow Protocols in this Physical Solution. Nye 11 is only utilized during periods of very high flow and is not part of the Foster Park Flow Protocols.

which directed staff to expand public information campaign and increase public outreach, and adopted conservation prohibitions for customers to be enforced by fines and water restrictions. Additional conservation efforts include provision of free water saving equipment, water saving equipment rebates, irrigation efficiency equipment, free water surveys for residential customers, funding for drought education and outreach activities, and water budgets for all customers. The rate structure sends a strong conservation message by putting most costs on the commodity charge with the monthly service charge reduced from $10 to $2 effective March, 2021

Cross-Defendant the Meiners Oaks Water District ("**MOWD**") is the fourth largest municipal supplier within the Ventura River Watershed. MOWD supplies water to the community of Meiners Oaks on the east side of the Ventura River, providing potable water service to a population of approximately 4,200, through 1,280 service connections. MOWD's highest priority is to provide water for residential and commercial use, but also provides some water for agricultural use, which is declining. Agricultural connections primarily serve small citrus or avocado orchards. MOWD operates four wells in the Upper Ventura River Basin. MOWD has implemented significant conservation efforts to reduce municipal demand. In 2020 MOWD adopted an Allocation Program by which MOWD adopted and enforces all appropriate, applicable water conservation measures and policies adopted by its wholesale supplier, Cross-Defendant Casitas, and MOWD agreed to enact 5 stages of drought measures, consistent with stages that are adopted by Casitas. For each drought stage, MOWD customers are requested to reduce water usage by a given percentage. Decreased water usage is encouraged through MOWD's water rate structure and required conservation measures are enforced by fines. Since May of 2016 MOWD customers have been subject to a Stage 3 drought emergency, and MOWD has prohibited installation of new or increased in size connections. MOWD required that its customers reduce water use by at least 30%; since the drought emergency declaration, MOWD has actually realized conservation rates of up to 40%.

Other municipal suppliers of water include but are not limited to Cross-Defendants Casitas Mutual Water Company, Gridley Road Water Group, Hermitage Mutual Water Company, North Fork Springs Mutual Water Company, Old Creek Road Mutual Water Company, Rancho del Cielo Mutual Water Company, Senior Canyon Water Company, Siete Robles Mutual Water Company, Sisar Mutual Water Company, and Tico Mutual Water Company.

In addition, water for domestic use is provided by way of private wells located on private property. It is estimated that there are approximately 367 active wells in the Ventura River Watershed. Owners/Operators of these wells are either Parties to this Action or have been provided notice of this Action.

5.2.2 Reasonable and Beneficial Agricultural Uses

Use of water from the Watershed for reasonable and beneficial agricultural uses supports a significant farming economy within the Watershed. According to DWR's Agricultural Land Use and Crop Mapping from 2014, citrus and avocado are the primary crops grown within the Watershed, with citrus constituting approximately 51% of the active agricultural acreage and avocados constituting 32%. Other crops include but are not limited to grains, hay, row crops, berries, olives, grapes, apples, walnuts, flowers, Christmas trees, and other fruit tree crops.

The State Board regulates irrigated agriculture in the Watershed through the statewide Irrigated Lands Regulatory Program to prevent agricultural discharges from impairing surface water and Groundwater bodies. The regulations that apply to irrigated agriculture in Ventura County are contained in the *Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands within the Los Angeles Region* ("**Conditional Waiver**"). The Ventura River Watershed contains approximately 3,253 acres of irrigated agriculture. As of 2019, approximately 92% of those acres (2,978 acres) were enrolled in the Ventura County Agricultural Irrigated Lands Group ("**VCAILG**"). In order to protect both surface water and

Groundwater quality, the Conditional Waiver requires that growers implement best management practices that address the quantity and quality of runoff and leachate from agricultural acreage. Because adoption of efficient irrigation practices limits discharges to both surface and Groundwater, promotion of irrigation efficiency is a priority for VCAILG and other agricultural support services in Ventura County. Improvements in irrigation efficiency are promoted through outreach, education classes and on-farm demonstrations, irrigation system testing services, and grant programs for purchase and installation of water saving equipment, such as micro sprinkler and drip irrigation systems.

Water sources to support reasonable and beneficial agricultural uses include Groundwater from private wells or from small water companies, with water from Casitas used for supplemental or backup water. Agriculture has implemented significant conservation efforts; specifically, highly efficient irrigation systems (drip, micro sprinkler, and combinations thereof) are employed on the majority of irrigated agriculture, irrigation systems are routinely tested for distribution uniformity, and irrigation runoff is minimal in the Watershed.

Agricultural users within the Watershed include but are not limited to Cross-Defendants Wood-Claeyssens Foundation, Rancho Matilija Mutual Water Company, Senior Canyon Mutual Water Company, Rancho De Cielo Mutual Water Company, Gridley Road Water Group, Hermitage Mutual Water Company, Sisar Mutual Water Company, Casitas' and MOWD's agricultural customers, and family farms in the Ojai Valley.

The Wood-Claeyssens Foundation and its farm tenants and sub tenants produce water for agricultural and domestic uses on the historic Taylor Ranch property, which borders the lower Ventura River and overlies the Lower Ventura River Basin. They are working closely with the Ventura Farm Bureau and the Ventura County Irrigation Land Group to farm strawberries using best management practices including micro sprinklers and drip irrigation to minimize water use

and runoff and for the lemon and avocado orchards, planting the trees on raised beds using drip irrigation, which minimizes water use and virtually eliminates runoff.

The Rancho Matilija Mutual Water Company produces water from the Watershed for its shareholders to use for agricultural irrigation (primarily blackberries, row crops, and tangerine orchards at this time) and for domestic ranch and livestock uses on their properties located northeast of Lake Casitas. Rancho Matilija's shareholders have implemented water conservation measures such as real-time smart phone-connected moisture sensing used to determine drip irrigation frequency and duration as well as land fallowing.

5.2.3 Reasonable and Beneficial Industrial Uses

Water from the Ventura River Watershed is also used for reasonable and beneficial industrial uses. Such uses include, but are not limited to, support of oil and gas operations. Certain petroleum production-related wells extract and inject fluids, including waters, from or into formations that are not underground sources of drinking water in accordance with the Safe Drinking Water Act or are otherwise exempted from protection pursuant to 40 C.F.R. section 146.4 and the California Public Resources Code section 3131, and the Physical Solution does not apply to petroleum production-related wells that extract or inject fluids, including waters from or into formations that are not underground sources of drinking water or are exempted aquifers. The major oil field in the watershed is the Ventura oil field, an area that covers approximately 3,410 acres on both sides of Highway 33 in the lower Watershed near the coast. The Ojai oil field comprises 1,780 acres of active fields. There are over 700 active oil wells in the Watershed. Aera Energy LLC is the primary oil and gas producer in the Watershed. Although it operates the extraction wells described above, it obtains its potable water from the City. Beyond oil fields, the Watershed's major industrial land use is in the lower watershed along Ventura Avenue east of the Ventura River. Various manufacturing, construction, processing, and industrial storage facilities occupy this area, a number of which serve as support services to the oil extraction industry.

5.2.4 Changes in Consumptive Use

There was significant population growth in Ventura County from 1960 through 2010, increasing from approximately 115,000 people in 1950 to 199,000 people in 1960 and then rapidly increasing in 1970 (376,000 people), 1980 (529,000 people), 1990 (669,000 people), and 2010 (826,000 people). After 2010, population growth in the County slowed substantially and declined over the period of 2017 to 2020. Despite this significant overall population growth over time, consumptive use has not grown at a comparable rate due to conservation, changes in land use, and increased agricultural efficiency. An analysis of average daily flow data from USGS Gages 11118500, 11117500, and 11116000 indicates that instream flows metrics (e.g., 60% and 40% exceedance flows, mean annual flows, and median annual flows) have been the same or slightly higher since the construction of the Casitas and Matilija Dams in the 1950s and 1960s. Therefore, changes in consumptive use have not had a detectable effect on instream flows within the period of record analyzed (1930-2019).

5.3 Instream Uses – *Oncorhynchus mykiss*

The Ventura River Watershed is home to many instream uses. It is home to eleven endangered or threatened species, including the Southern California Steelhead, arroyo toad, California least tern, California red-legged frog, Foothill yellow-legged frog, Least Bell's vireo, southwestern willow flycatcher, and western snowy plover. This Physical Solution uses the health of the Southern California Steelhead population as a proxy for the overall health of the instream uses in the Ventura River Watershed, and that population will be referred to in this Physical Solution as the "Fishery." The life stages, habitat, and other details regarding the Southern California Steelhead within the Ventura River Watershed are described below.

The Watershed provides habitat for adult holding and spawning and juvenile rearing of both anadromous steelhead trout and resident rainbow trout (together classified taxonomically as *Oncorhynchusmykiss*, which is typically abbreviated as *O. mykiss*). *O. mykiss* have different life

history forms, including as rainbow trout or as steelhead trout. *O. mykiss* that remain in freshwater throughout their lifecycle are referred to as Rainbow Trout and have a resident life history form. *O. mykiss* that migrate to the Pacific Ocean and then return to spawn in freshwater are referred to as Steelhead Trout and have an anadromous life history form. Both life history forms can be produced by a single set of parents depending on a variety of variables. The core goal of this Physical Solution is to address the anadromous life history form of the Southern California Steelhead within the Ventura River Watershed that has been listed as endangered under the Endangered Species Act. However, for purposes of the Physical Solution's monitoring and performance evaluation, the target species has been defined as all *O. mykiss* that inhabit waters of the Ventura River and its tributaries downstream of the first impassable barrier or impediment to upstream migration and have volitional access to coastal marine waters.

The particular anadromous life history form of *O. mykiss* in the Ventura River Watershed has been designated as the Southern California Steelhead Distinct Population Segment or DPS. In 1997, the Southern California Steelhead Evolutionarily Significant Unit ("**ESU**") was listed as endangered under the Federal Endangered Species Act. (62 FR 43937-01.) In 2005, critical habitat for the Southern California Steelhead ESU was designated, including approximately 48 miles of the Ventura River and its tributaries within the Ventura River Hydrologic Unit. (70 FR 52488-01.) In 2006, the Southern California Steelhead DPS was listed as endangered.[10] (71 FR 834-01.)

The life history of a Southern California Steelhead starts when a female excavates a shallow nest, termed a "redd," in streambed gravel and deposits eggs, which males then fertilize. The period between fertilization by the male and hatching varies, lasting from about three weeks to two months depending on water temperature and other factors. After the eggs hatch, the young fish remain in the gravel nest for a period of time as they develop (termed "alevins") before

[10] Since 2006, the phrase Distinct Population Segment or DPS, has replaced ESU.

emerging into the surface waters. The young fish, known as fry, emerge from the gravel two to six weeks after hatching. The young *O. mykiss* remain in the creek or river rearing for a period of one to two years as they grow and develop into the parr stage.

Parr eventually undergo a physiological change known as smoltification that allows them to migrate to saltwater (e.g., the Pacific Ocean). After growing in the marine environment for typically one to four years, steelhead leave the marine environment to reproduce in the freshwater environment (e.g., the Ventura River). Returning adults typically migrate to their natal rivers or streams but can also spawn in non-natal streams. Steelhead, unlike salmon, may survive after spawning and migrate back downstream to the ocean to spawn again the next year. Post-spawning adult steelhead are termed Kelts. Steelhead, primarily females, may spawn two or three times before they die.

The habitat and flow needs of the Southern California Steelhead are variable depending on the life stage of the species. Primary constituent elements ("**PCEs**") have been described by the National Marine Fisheries Service for each life history stage of Southern Steelhead critical habitat as essential to the conservation of the species. (70 FR 52630). The general PCEs for steelhead are described below.

5.3.1 Spawning

Freshwater spawning sites with water quantity and quality conditions and substrate supporting spawning, egg incubation, hatching, and larval development.

5.3.2 Rearing

Freshwater rearing sites with water quantity and floodplain connectivity to form and maintain physical habitat conditions and support juvenile growth and movement; water quality

and forage supporting juvenile development; and natural cover such as shade, submerged and overhanging large wood, large rocks and boulders, and juvenile and adult forage, including aquatic invertebrates and fishes, supporting growth and maturation.

5.3.3 Migration

Freshwater migration corridors free of passage obstruction with water quantity and quality conditions suitable for juvenile and adult movement and survival.

5.3.4 Estuary

Estuarine areas with water quality, water quantity, and salinity conditions suitable for juvenile rearing and the physiological transitions between fresh- and saltwater (smolting).

5.3.5 Marine Areas

Nearshore and offshore marine areas with water quality and quantity conditions and forage, supporting growth and maturation.

5.4 Protection of Both Instream and Consumptive Uses

The purpose of this Physical Solution is to protect both the reasonable and beneficial instream and consumptive uses described above. Continued consumptive use of water from the Watershed is essential to support human life, health, and the economy that is dependent on the Watershed for this vital resource. At the same time, this Physical Solution establishes a commitment to maintain the steelhead population in the Ventura River Watershed through improvements to habitat quality and availability for all freshwater life stages of steelhead, as well as to preserve **Historical Flow Conditions**, which are conditions in the Watershed in the pre-

development period generally before 1959 as determined from gages at Casitas Bridge[11] (gage 11118500), San Antonio Creek (gage 11117500), and North Fork Matilija Creek (gage 11116000), as set forth herein in section 7.3 and in the Plan, necessary to support steelhead whenever physically practicable. This Physical Solution therefore balances the uses in the manner compelled by Article X, section 2 of the California Constitution, the public trust doctrine, and California water law by imposing the Physical Solution set forth in Section 7 of this Physical Solution.

6. INTEGRATION OF PHYSICAL SOLUTION WITH GROUNDWATER SUSTAINABILITY PLANS

GSPs are currently being developed for the Ojai Valley Basin and the Upper Ventura River Basin to meet the January 31, 2022 implementation date required by SGMA and have not been completed. In addition, GSPs may be developed for the Upper Ojai and Lower Ventura River Basins in the future. The Physical Solution is designed to minimize interference with the timely completion and implementation of the ongoing GSPs, and, in accordance with this Physical Solution, the Parties and the **Management Committee** ("**MC**"), an arm of the Court, appointed by the Court, to administer this Physical Solution and Judgment, will coordinate with the GSAs completing the GSPs in finalizing and preparing the Plan to prevent duplication of efforts, through their participation in the MC.

Water Code section 10733.6(b)(2) provides that management of a basin pursuant to an adjudication action may satisfy SGMA requirements. At the election of each GSA, portions of the Management Plan could be used to inform the management of the Upper Ventura River and Ojai Basins in accordance with SGMA. The Physical Solution is expressly designed to assist the GSAs with addressing one of the six "undesirable results" identified by SGMA—the significant and unreasonable depletion of interconnected surface water caused by groundwater pumping,

[11] USGS also refers to this gage as "Ventura R NR Ventura"

here, the impacts to the Fishery. (See Water Code § 10721 (x)(6).) The Physical Solution addresses potential undesirable effects of groundwater pumping on the depletion of interconnected surface water, as defined by SGMA, regarding the beneficial use of interconnected surface water by the Fishery. At their discretion, GSAs in the Ventura River Watershed may rely on implementation of the Physical Solution for a finding that no additional implementation measures are required to address potential significant and unreasonable effects of groundwater pumping on the beneficial use of interconnected surface water by the Fishery, in the event that any such potential significant and unreasonable effects of groundwater pumping are identified during initial GSP development or subsequent 5-year GSP updates.

7. PHYSICAL SOLUTION AND MANAGEMENT PLAN

7.1 Three Phases of the Physical Solution

The Physical Solution includes of three phases, as briefly described here and as described in detail in Section 7.3.8 below. The first phase, the **Adoption Phase**, is short, begins when the Physical Solution is entered, and allows the Parties time to establish the governance structure and adopt the Management Plan that will inform the following two phases. In addition, during the Adoption Phase, the Parties will take the specific actions set forth below to improve the Watershed during this short period. The second phase, the **Initial Implementation Phase**, is a ten-year period after adoption of the Management Plan in which the Parties will implement the Management Plan, and regularly update and adaptively manage the Plan based on new information. The third phase, the **Subsequent Implementation Phase**, is a continuing series of ten-year periods in which the Parties will continue to implement and adaptively manage the Management Plan until and so that Good Condition is achieved. Each of the three phases includes distinct management objectives and elements that must be met by the Parties, as further described in this Physical Solution. The purpose of phasing the Physical Solution is to allow the Parties to transition from the existing conditions within the Watershed (referred to as the **Baseline Conditions** and initially described in Section 7.2 below and as will be further defined in the Management Plan) to the improved conditions identified in the Management Plan.

7.2 Baseline Conditions – Reach-By-Reach Habitat Assessment and Limiting Factors

To prepare the Management Plan and to measure the success of the Physical Solution, it is necessary to first define the current conditions as of the beginning of the Adoption Phase (Baseline Conditions) in the Watershed. Defining Baseline Conditions will inform the specific actions that the Parties must take to improve conditions from the Baseline Conditions. In addition, defining Baseline Conditions will provide the Parties with a way to measure the success of the Physical Solution and the conditions under which the Court, during the Initial and Subsequent Implementation Phases, may need to exercise its continuing jurisdiction to address any material excursions below Baseline Conditions. This portion of the Physical Solution defines initial Baseline Conditions in the Watershed that exist as of the beginning of the Adoption Phase. As provided below, the Management Plan will expand upon and provide more detail regarding the definition of Baseline Conditions that exist as of the beginning of the Initial Implementation Phase.

The health and habitat needs of the Fishery vary within different portions of the Watershed and the different life stage needs of the species within those different portions of the system. Maintaining the Fishery requires an understanding of suitability and quality of habitat pertinent to the life stage habitat requirements of the species. As identified in the Department Report, "flows in the Ventura River watershed are variable throughout the year and from year to year." Department Report at p. 9. The Watershed is subject to wide variations in precipitation, occasional flooding, periodic large natural disasters such as drought and wildfires, all of which significantly impact the Watershed, its water quality, and the Fishery. As a result of the environmental variability in freshwater and ocean conditions (e.g., drought and low flow conditions, ocean upwelling, etc.), in addition to other factors such as steelhead stock-recruitment relationships (e.g., the number of spawning adults has a large influence on subsequent juvenile abundance), variations in food availability within and among years, quality and availability of

suitable habitat, and biological interactions with native and non-native species, there is high variability in *O. mykiss* population abundance within the Ventura River Watershed.

There are many different ways to divide the Watershed for purposes of establishing Baseline Conditions and efficient management of the system. Historically, and as a matter of convenience, the Ventura River has been described as having the five reaches that are identified earlier in this Physical Solution. Other methods have described the River as having more than twenty reaches, and the Department Report uses sixteen reaches. This Physical Solution uses the seven reaches and associated functions and habitat assessment described below, in which reaches are defined based on the habitat requirements of the Watershed and the specific lifecycle needs of the steelhead associated with that habitat. These seven reaches are described in Table 1 and depicted in Exhibit E to this Physical Solution at page E-2, and the Baseline Conditions of each reach at the time of this Physical Solution are described as follows:

7.2.1 Reach V1

Reach V1 begins at the Pacific Ocean and extends to the Main Street bridge crossing. Reach V1 includes the Ventura River lagoon and estuary. All adult steelhead entering the Ventura River from the Pacific Ocean, and all steelhead out-migrants (juvenile smolts and post-spawning adults) must pass through Reach V1. Steelhead smolts that can reach the lagoon and estuary from upstream rearing habitats may also continue rearing in the lagoon and estuary where prey items are generally abundant. However, the area of the historic lagoon and estuary has been reduced and habitat degraded by approximately 70%. Therefore, under Baseline Conditions, the primary steelhead lifecycle function of Reach V1 is for migration.

7.2.2 Reach V2

Reach V2 begins at the Main Street Bridge from the upstream end of the lagoon and estuary and ends where the Shell Road Bridge crosses over the Ventura River. A major limiting factor in Reach V2 is the presence of extremely dense stands of *Arundo donax* ("**Arundo**"), primrose, and other non-native aquatic macrophytes that choke the river channel and riparian zone, precluding the presence of native plants (especially willows) and blocking or impeding both upstream and downstream passage of steelhead. Arundo removes surface water (through evapotranspiration) at higher rates (three times the rate) than native plants. Combined with the abundance of non-native common carp that degrade habitat and water quality for steelhead, potential rearing habitat (pools) is severely degraded in Reach V2 at this time. Therefore, under Baseline Conditions, there is no spawning habitat within this reach, and the sole steelhead lifecycle function of Reach V2 is for migration.

7.2.3 Reach V3

Reach V3 begins at Shell Road bridge and ends at the confluence of San Antonio Creek and the Ventura River. Under Baseline Conditions, reach V3 suffers from Arundo infestation, degraded stream habitats, and an absence of boulder clusters. Reach V3 includes Foster Park. The subsurface dam and related facilities in the vicinity of Foster Park sometimes act as barriers or impediments to steelhead migration under certain conditions. Under Baseline Conditions, this reach is primarily a passage corridor for upstream and downstream migrating steelhead. However, spawning and rearing may be supported in certain portions of Reach V3, including in the area of Casitas Springs and at the confluence of San Antonio Creek. The general pattern is that fish that spawn in San Antonio Creek (Reach SA1) move to the confluence of the Ventura River and to the Casitas Springs areas of Reach V3 under favorable conditions during the spring to rear in the mainstem Ventura River over the summer and fall months.

7.2.4 Reach SA 1

Reach SA 1 includes that portion of San Antonio Creek from its confluence with the Ventura River upstream to Fox Canyon. Under Baseline Conditions, San Antonio Creek contains good spawning habitat, and relatively good habitat for young-of-the-year juvenile rearing. However, under Baseline Conditions there is a lack of rearing habitat for older juveniles due to the lack of pools throughout San Antonio Creek. The absence of pool habitat forces rearing juveniles to an early outmigration into the mainstem rearing habitat in Reach V3 adjacent to and downstream from the confluence with the Ventura River. There is also an absence of boulder clusters and other cover for juvenile rearing *O.mykiss* that would provide velocity refuges and cover, juvenile and adult steelhead holding and foraging sites, substrate for algal and macroinvertebrate production that are important to the food resources for juvenile *O. mykiss* growth and survival and also promote pool formation. The presence of Arundo is another limiting factor in this reach. An additional limiting factor in San Antonio Creek is the presence of livestock that, when unconstrained, trample the stream banks, causing sedimentation in the stream channel and spawning beds and reducing riparian vegetation as well as increased nutrient and coliform loading to the creek.

7.2.5 Reach V4

Reach V4 is located between the confluence with San Antonio Creek and the Robles Diversion Facility. Under Baseline Conditions, this reach includes what is commonly referred to as the "dry reach" downstream of the Robles Diversion Facility that often has intermittent flows or is dry during the summer and fall months. Under dry conditions, adult steelhead are unable to migrate to upper Watershed spawning and rearing habitat, and smolts that are produced in the upper Watershed (Reach V5 and Reach NF 1) are unable to out-migrate through this reach. Further, smolts that do attempt to out-migrate may be stranded in drying pools, including pools just downstream of the Robles Diversion Facility. During wet years, this reach is suitable for

steelhead migration for short periods during extended runoff from storms. Under Baseline Conditions, therefore, the lifecycle function served by Reach V4 is for migration under suitable precipitation conditions.

7.2.6 Reach V5

Reach V5 extends upstream from the Robles Diversion Facility to the confluence of Matilija Creek and North Fork Matilija Creek, including the section below Matilija Dam. Under Baseline Conditions, Reach V5 contains some rearing and spawning habitat. Its primary functions under Baseline Conditions are for migration, spawning, and juvenile rearing, but the presence of non-native predatory largemouth bass in this reach may reduce juvenile steelhead survival.

7.2.7 Reach NF 1

Reach NF 1 extends from the confluence of North Fork Matilija Creek to the upstream reaches of North Fork Matilija Creek where a complete barrier or impediment to upstream migration exists at the Wheeler Gorge Campground. Under Baseline Conditions, Reach NF 1 has good steelhead spawning and rearing habitat where available, with higher densities of *O. mykiss* spawners and both young-of-the-year and older juveniles than reaches in the lower Watershed. This reach has good pool rearing habitat. This reach also includes the presence of resident steelhead/rainbow trout that support the overall steelhead population. Limiting factors under Baseline Conditions in this reach include only marginal availability of suitably sized spawning areas and gravel, and potential competition between juvenile steelhead and resident rainbow trout.

7.2.8 Continuing Jurisdiction is Reserved for Coyote Creek and Cañada Larga Tributaries

Although no management actions are presently recommended for two tributaries of the Ventura River, they are nevertheless included in this Physical Solution, and the Court retains continuing jurisdiction over them. First, Coyote Creek from Lake Casitas to the confluence with the Ventura River is dry much of the year due to the Lake Casitas Dam, and the habitat in this reach is severely degraded. In addition, on the Cañada Larga tributary, the Highway 33 bridge creates a barrier or impediment to steelhead passage, but it cannot reasonably be removed. The stream is usually dry in summer and fall, and cattle graze along and into the streambed. The adaptive management process in this Physical Solution will allow for the reconsideration of management actions for these two tributaries in the future.

7.3 Management Plan/Mandatory Plan Elements

The core of this Physical Solution is the development, implementation, and adaptive management and updating of a Management Plan (or the "Plan") that will move the condition of the Southern California Steelhead in the Watershed from Baseline Conditions to Good Condition, as defined in the Plan and in this Physical Solution, during the life of the Physical Solution. While rainfall and flow in the Watershed has largely remained consistent over the historical period (generally 1929 through 2019), habitat conditions in the Watershed downstream of Matilija Dam have been degraded over the past 150 years through agricultural and urban development, construction of dams, water storage infrastructure, flood control infrastructure, and other factors. Historical flow records are available prior to 1958 (pre-development conditions) and post-1958 in three critical reaches in the Watershed: Ventura River near Foster Park, lower San Antonio Creek, and North Fork Matilija Creek. The population of Ventura County was substantially lower in the pre-development period, and major water infrastructure projects, e.g. Robles Diversion and Casitas Dam, did not exist, and the Fishery was reported to be in Good Condition. By 1959, Matilija Dam, Casitas Dam, and the Robles Diversion Canal were all

completed projects. Additionally, population in Ventura County rapidly increased from 1960 through 2010. Flow metrics were the same or lower during the pre-development period as compared with the post-development period in the three critical reaches. The fish population was higher in the pre-development period as compared with the post-development period, even though flows were the same or lower than post-1958 conditions. This finding coupled with the degradation of the Fishery habitat over the last century demonstrates that habitat conditions, rather than flow conditions alone, have affected the Fishery. Accordingly, improving habitat conditions with non-flow measures and preserving Historical Flow Conditions will improve the Fishery to ultimately achieve Good Condition.

Specific efforts to maintain Historical Flow Conditions upon which the Southern California Steelhead depend and habitat enhancement Plan elements are expected to contribute to improved access and migration opportunity, habitat quality, availability, and suitability. These efforts to maintain Historical Flow Conditions and implement these habitat improvements are expected to lead to improved abundance of steelhead and other fish and wildlife within the Watershed. The Plan will also provide detailed monitoring programs to assess the performance of Plan elements and status and trends in the *O. mykiss* population over time as well as provide feedback for adaptive management. The hydrogeology of the Watershed and the seasonality and variability of precipitation cause portions of the mainstem river and tributaries to exhibit intermittent flows during the summer months, regardless of human consumptive use. This creates dry reaches where no summer rearing by Steelhead or other fish is possible. These intermittent reaches usually provide passage corridors during higher flow periods in the winter and early spring. Actions to protect Historical Flow Conditions, which are largely replicated by existing flow conditions, in combination with habitat enhancement elements identified in the Plan, will be sufficient, barring extraordinary conditions, to move the Fishery from Baseline Conditions to Good Condition.

The required elements of this Plan are set forth in this Section 7.3 of the Physical Solution. During the Adoption Phase, the Parties will create more specific mandatory implementation actions and details to achieve the required elements and adopt the final Plan, subject to Court oversight. During the Initial Implementation and Subsequent Implementation Phases, the Parties will implement the Plan, annually measure its success, and adaptively manage it based on the results of the monitoring and other conditions such as project feasibility. The Court will retain jurisdiction to ensure Plan implementation and to address material excursions below Baseline Conditions, following the procedures outlined in this Physical Solution. The Plan must include the mandatory elements described in this section.

7.3.1 Management Objectives

The Plan shall develop and implement actions that are intended to move the condition of the Fishery in the Watershed from Baseline Conditions to Good Condition, as defined in the Plan and this Physical Solution.

7.3.2 Baseline Conditions Refined

The Plan shall provide a more detailed assessment of Baseline Conditions that will include the definition contained herein but shall include additional metrics to assist with determining material excursions below Baseline Conditions and improvements above Baseline Conditions. As discussed more fully in Section 7.3.3 below, these metrics will include both qualitative and quantitative assessment methods, with the final assessment being qualitative based on the weight of the evidence.

7.3.3 Healthy Fishery/Good Condition Defined

The Plan shall establish detailed criteria to be used to define and measure what constitutes a healthy Fishery and Good Condition in the Watershed. The Plan shall, at a minimum, use the following approach to Good Condition. The recognized method for determining whether a fishery is in good condition is to assess the condition of the fishery at the individual, population, and community levels or tiers. Under this method, the Fishery in the Watershed will be considered to be in a Good Condition when the qualitative individual, population, and community conditions described below are being achieved. The naturally high variability in the dynamics of the Ventura River *O. mykiss* population makes certain quantitative metrics infeasible, and hence this Physical Solution uses qualitative assessment based on the weight of the evidence (evidence which includes both qualitative and quantitative metrics) to make a final assessment of the condition of the Fishery. Nevertheless, the Plan will include, as set forth in section 7.3.8 and elsewhere, consideration of quantitative monitoring of measurable objectives and metrics as well as qualitative indicators of Plan performance. Examples of measurable objectives include metrics such as plunge pool depth and jump height at passage impediments, water depth and velocities at modified low-flow passage impediments, gravel size distribution at gravel enhancement sites, genetic diversity, water depths, dissolved oxygen concentrations, and water temperatures within mainstem and tributary reaches supporting spawning and juvenile rearing habitat. Semi-quantitative metrics will also be used to evaluate Plan performance such as comparisons between design criteria for each physical habitat enhancement project and as-built construction and monitoring, compliance with the Plan implementation schedule, resilience of habitat elements to change under high flow conditions, effectiveness of Arundo removal and revegetation, and monitoring of habitat suitability indicators. Qualitative observations and indicators include evidence of successful reproduction, evidence of multiple age and size classes, trends over time of adult steelhead return abundance, noting the frequency and duration of sand bar breaching, health and condition of individual fish, species diversity, changes in *O. mykiss* densities and abundance between spring and fall and among years, changes in relative abundance of predatory

fish, spawning and rearing habitat usage, and observations of successful upstream passage. The qualitative and quantitative metrics established in the Plan and Plan performance will be assessed based on the weight of the evidence and on the specific functions served by each reach of the Watershed. The general conditions that the Plan must use to assess the condition of the *O. mykiss* population within the Watershed are as follows:

7.3.3.1 *O. Mykiss* Population

The *O. mykiss* population may be considered to be in a Good Condition if, based on snorkel surveys or similar evidence, the population shows presence within suitable habitats (including those areas where habitat enhancement actions have been implemented as part of this Physical Solution) within the geographic distribution of the Ventura River Watershed, or the population shows evidence of rebounding following adverse environmental conditions, such as drought. Natural *O. mykiss* populations, including the Ventura River population, experience dynamic and variable abundance within and between years in response to a number of factors, many of which are outside of the control of the Physical Solution (e.g., ocean conditions, interactions with native and non-native species, baseline hydrologic conditions, and extended droughts, etc.) and therefore population abundance or species densities alone are not an effective measure of the condition of the Fishery. However, when assessed within this dynamic and variable system, the *O. mykiss* population should be present within suitable habitat within the Watershed when the Fishery is in a Good Condition.

7.3.3.2 *O. Mykiss* Population Diversity

The *O. mykiss* population may be considered to be in Good Condition if, based on snorkel surveys or similar evidence, the population shows evidence of life stage diversity as reflected by multiple age classes, including successful reproduction reflected in the presence of young-of-the-year *O. mykiss*.

7.3.3.3 Condition of Individual *O. Mykiss*

The *O. mykiss* population may be considered to be in a Good Condition if, based on snorkel surveys or similar evidence, individual fish in the documented population appear to be healthy and in good shape, free from abnormalities associated with a diseased or unhealthy population.

7.3.3.4 Condition of Overall Watershed *O. Mykiss* Population

The *O. mykiss* population may be considered to be in a Good Condition if, based on snorkel surveys or similar evidence, the *O. mykiss* population is showing increasing trends while the non-native species predators and competitors of *O. mykiss*, e.g. carp and largemouth bass, are showing decreasing trends.

7.3.4 Required Habitat Improvement Elements

The Plan will include specific management measures or elements that when implemented will improve Baseline Conditions and move the Fishery toward Good Condition. These elements and actions shall be subject to ongoing feasibility determinations and applicable permitting requirements, including but not limited to necessary approvals by the Ventura County Watershed Protection District. The elements shall be subject at all times to adaptive assessment and management as set forth in Section 7.3.8. This adaptive assessment and management process will require that if projects prove to be infeasible, they are timely replaced with other projects of equal or greater value, unless a determination is made by the MC that replacement is not required to achieve Good Condition. Measures can be completed by entities that are not a Party to this Physical Solution; however, this Physical Solution imposes a duty to support all management elements in the Plan and ensure their implementation. At a minimum, the Plan shall include the following elements:

7.3.4.1 Fish Passage Improvements 1 – Sub-Surface Interceptor Wall and Improvements Around Concrete Pipe at Foster Park

Fish Passage Improvements 1 consist of the notching of the existing sub-surface dam at Foster Park, within Reach V3, and improvements around a concrete pipe in the Ventura River that currently serve as potential fish passage barriers or impediments under low-flow conditions. The goal of the projects is to extend the flow range for unimpeded passage for *O. mykiss* and allow greater access to existing habitat in the upper Watershed. The City shall cause the construction of Fish Passage Improvements 1, at its sole cost, during the Adoption Phase.

7.3.4.2 Fish Passage Improvements 2 – Improvement of the Fraser Street Road Crossing

Fish Passage Improvements 2 consist of improvements to the Fraser Street Road Crossing. The Fraser Street Road Crossing is located in Reach SA 1. Currently, Fraser Street Road Crossing serves as a potential fish passage barrier or impediment under certain flow conditions. Fish Passage Improvements 2 will ensure unimpeded passage across a wide range of flow conditions, providing spawning access over a range of water year types.

7.3.4.3 Gravel Enhancement in Matilija Creek and North Fork Matilija Creek

This element would augment spawning gravel in Reach NF 1. The element would strategically inject sufficient amounts of suitable size gravels during appropriate years within a period of ten (10) years after entry of the Physical Solution and Judgment. Gravels would then be naturally dispersed downstream during high flow events: (1) to replace gravel recruitment currently blocked by Matilija Dam, (2) to improve gravel substrate for macroinvertebrate production, and (3) to improve the availability of suitable gravel for *O. mykiss* redd construction, spawning, and egg incubation.

7.3.4.4 Boulder and Large Woody Material Augmentation in San Antonio Creek

This element would install boulder cover and large woody material augmentation at multiple locations in San Antonio Creek to enhance juvenile Steelhead rearing habitat, improve protection and cover from predation, increase structural diversity of habitat, and increase holding habitat as a velocity refuge.

7.3.4.5 Large Woody Material Augmentation in the Mainstem Ventura River near the Confluence with San Antonio Creek

This element would increase the availability of large woody material and create and stabilize deeper pool habitat in the mainstem Ventura River near the confluence with San Antonio Creek, improving juvenile over-summering rearing conditions and resulting in greater survival of juvenile rearing steelhead. This reach of the River has public access resulting in the potential for the public to vandalize the enhanced habitat area (e.g., removal of large woody material and boulders, construction of summer rock weirs, destruction or removal of monitoring equipment) as well as illegal angling (poaching) of juvenile and adult *O. mykiss* attracted to the enhanced habitat. As part of the planning process for this Plan element, siting (location within and along the River reach), access (roads, parking, and trails), design features (type, location, anchoring, etc. of structural features, signage), construction methods, and monitoring equipment will be developed collaboratively in consultation with staff (including local wardens) from the Department, the City, National Marine Fisheries Service, Ventura County, and other interested parties. The resulting project design will be reviewed as part of state and federal permitting as well as the public through the California Environmental Quality Act ("**CEQA**") review process.

7.3.4.6 Arundo Removal

This element would consist of the removal of Arundo to allow for improvement to naturally occurring instream flows by reducing evapotranspiration, decreasing adverse geomorphological conditions such as channel braiding, encouraging complex habitat creation,

increasing native plant and wildlife species, and improving fish passage conditions by removing passage barriers or impediments.

7.3.4.7 Predator and Non-Native Fish Management

Invasive non-native fish species impair the viability of the Fishery. Non-native fish species compete with native fish species for food and habitat, degrade habitat quality and water quality (e.g., carp), and are predators (e.g., largemouth bass) on juvenile steelhead. This element would, subject to permitting, implement some or all of the numerous existing and proven non-native fish removal techniques (e.g., electrofishing, netting, hook and line, spearfishing, etc.).

7.3.4.8 Matilija Dam

Long-term plans exist for the removal of Matilija Dam. Matilija Dam blocks the migration of Southern California Steelhead into upstream spawning and rearing areas. Removal of the Dam would open access to major upstream spawning and rearing grounds for the Fishery. It is thus the preferred management action to improve the Fishery but may not be possible to achieve within ten years. Consistent with the continuing provision of water for existing reasonable and beneficial municipal, agricultural, industrial, or other consumptive uses, the Parties shall support efforts to remove Matilija Dam. This support shall include, but not be limited to, consideration of the adoption of resolutions of support for Dam removal or submission of written letters of support. The MC shall prioritize the removal of Matilija Dam if it becomes feasible to do so.

Specifically, the Ventura County Watershed Protection District, along with other private and public partners, is currently pursuing the Matilija Dam Ecosystem Restoration Project. This Project is an initiative to remove Matilija Dam and make other related improvements to the Watershed to facilitate the removal of the Dam. Prior to removal of the Dam, specific downstream facilities must be upgraded to accommodate anticipated changes in sediment transport and flow elevations. Many of these facility upgrades provide benefits to the Fishery by

removing barriers or impediments to steelhead migration or reconnecting the Ventura River to portions of its historical floodplain. These projects include, but are not limited to, reconstruction of the Camino Cielo Bridge, which will improve steelhead migration, and improvements to the Casitas Springs levee, which may help reconnect the Ventura River to its historical floodplain. Because projects such as these examples have both immediate Fishery benefits and help facilitate Dam removal, the MC may prioritize these projects as well as the Dam removal in the Plan. In addition, the MC should consider how Dam removal may impact the projects identified in Section 7.3.4 to make sure that those projects will not be adversely impacted by the temporary changes resulting from Matilija Dam removal.

7.3.4.9 Additional Projects for Further Consideration

The Plan shall describe how the Parties will participate and support other Watershed projects that will help improve on Baseline Conditions and move the Fishery toward Good Condition. The Plan will consider other proposed or ongoing Watershed projects, including, but not limited to, removal of the Wheeler Gorge Campground passage barrier, replacement of the current Grand Avenue fair weather crossing with a free span bridge, addressing various pipeline crossings that could present barriers or impediment such as the Casitas pipeline that crosses San Antonio Creek and the Ojai Valley Sanitary District pipeline that crosses San Antonio Creek, brownfield remediation projects, conservation easements or livestock exclusion projects, and land protection projects.

7.3.4.10 Operations, Maintenance, and Monitoring for Projects

For each specific element proposed by the Plan, the Plan shall also provide conditions for long-term operations, maintenance, and monitoring. Provisions for operations, maintenance, and monitoring shall be included in the design of each element, and the MC shall insure that sufficient funding is provided for such operations, maintenance and monitoring.

7.3.5 Required Historical Flow Protection Elements

Precipitation in the Watershed is highly variable both spatially and temporally. Spatially, the upper portion of the Watershed receives, on average, double the annual volume of rainfall received in the lower portion of the Watershed. Seasonally, the Watershed receives most of its rainfall between November and April, with minimal rainfall between May and September. Based on historical records, the Watershed experiences large differences in annual rainfall volume, with wet and dry years at least partially caused by El Niño and La Niña cycles. Because of the extreme variability in precipitation timing and amount in the Watershed, streamflow in the River and its tributaries is also highly variable year-to-year and within a given year, independent of consumptive uses. The Fishery has adapted to this variability in flow in the Watershed and has been considered to be in Good Condition when flows in the past were in the range of current conditions. Accordingly, maintaining the Historical Flow Conditions, in combination with the implementation of other Plan elements, will be sufficient, barring extraordinary conditions, to improve habitat conditions to support the Fishery in Good Condition. Thus, the Plan will include measures to protect Historical Flow Conditions in addition to other Plan elements.

Because the decline in the Fishery is linked most directly to loss of habitat and access thereto, the main actions required by the Plan will focus on improvements to Fishery habitat and Fishery access to habitat. At the same time, however, the Plan must also include specific steps to maintain and, if feasible and not in conflict with applicable GSPs, enhance Historical Flow Conditions critical to the Fishery. At a minimum, the Plan will address three high priority juvenile steelhead rearing reaches and will protect Historical Flow Conditions in these reaches as follows:

(1) Foster Park Flow Protocols. The Plan will recognize and include the City's existing water management protocols at Foster Park that meet or exceed requirements to protect Historical Flow Conditions in this reach. The City's implementation of these Foster Park Flow Protocols

does not determine or limit its water rights in any way, consistent with this Physical Solution. The City will be responsible for continuing its existing Foster Park Flow Protocols, as described below:

(a) When daily average flows as measured at the VR-1 gage fall below 4.0 cubic feet per second ("**cfs**") for 3 consecutive days, the City will shut down wells Nye 7 and 8 before noon on the following business day;

(b) If daily average flows as measured at the VR-1 gage fall below 3.0 cfs on any day of the time period in Section (a) above, the City will also shut down the subsurface intake at the same time as the shutdown in Section (a) above;

(c) If the daily average flows as measured by the VR-1 gage fall below 4.0 cfs for 3 consecutive days, but stay above 3.0 cfs during that period, the City would shut down wells Nye 7 and 8 but would be permitted to continue to operate the subsurface intake until the daily average flows fall below 3.0 cfs for three consecutive days, at which time the City will cease all water extraction at Foster Park until flows return to levels above these thresholds.

(d) The City shall monitor the impact of pumping on instream flows using the VR1 and VR2 gages. The City shall specifically evaluate the impact of continued pumping at the subsurface intake after the shutdown of wells Nye 7 and 8 pursuant to Sections (a) to (c) above. If monitoring at station VR-2 downstream demonstrates a sustained impact on instream flows after the shutdown of wells Nye 7 and 8, or after the shutdown of the subsurface intake, the City and Channelkeeper shall meet and confer on or before 30 June of the following year to discuss whether continuing to pump groundwater when instream flows fall below 4.0 cfs may occur or whether all Production should stop at 4.0 cfs. If the City and Channelkeeper are unable to agree, either may

pursue any available legal remedy they have related to the sole question of whether production should stop at 4.0 cfs by seeking resolution of the issue via the Court pursuant to this Physical Solution.

(e) The Foster Park Flow Protocols may be temporarily modified or suspended under emergency conditions. For purposes of this section, emergency conditions include Act of God, unforeseen pipe failure, and the inability of the City to obtain sufficient usable replacement water from Casitas or other sources to serve its customers. The City shall promptly notify Channelkeeper in writing whenever such an emergency condition exists. The notification shall include the justification for the modification, and supporting documentation. If necessary, the City and Channelkeeper shall meet and confer about the modification or suspension to limit its impact on Southern California steelhead and other impacted species.

(f) If the City seeks to modify the Foster Park Flow Protocols pursuant to Section (e) above because it is unable to obtain replacement water from Casitas, the City shall provide Channelkeeper with 30 days written notice, if such notice is feasible in light of water management plans or testing trends, or as much advance notice as is feasible when the inability results from an unexpected event. If the modification is based on the inability to obtain replacement water from Casitas, the City shall implement the following specific water conservation measures in the impacted service area during the emergency period of modification or suspension:

(i) City Actions

a. Encourage maximum conservation by all customers and users in the impacted area.

b. No outdoor irrigation using potable water will be allowed.

c. All water use not required for health and safety is prohibited.

d. Suspend the issuance of any new development approvals and new water connections in the impacted area other than those required to be processed by state law. Building permits which do not create new demand for water or which are for emergencies, public safety and water conservation may be exempted by the City Manager.

(ii) Water Customer Actions

a. Comply with mandatory water conservation regulations.

b. Prohibition of all outside water use unless necessary for the preservation of health and safety and the public welfare.

c. Watering with hand-held five gallon maximum bucket, filled at exterior hose bib or interior faucet (not by hose) shall be allowed at any time. This will assist in preserving vegetable gardens or fruit trees.

d. The filling of swimming and wading pools is prohibited;

(2) San Antonio Creek. The Plan shall identify Historical Flow Conditions and measures to prevent degradation of flows in San Antonio Creek, as measured at the gage at San Antonio Creek (U.S. Geological Survey (USGS) gage 11117500; VCWPD Station 605), and implement monitoring measures.

(3) North Fork Matilija Creek. The Plan shall identify Historical Flow Conditions and measures to prevent degradation of Historical Flow Conditions in North Fork Matilija Creek, as measured at the gage at North Fork Matilija Creek (USGS gage 11116000; VCWPD Station 604), and implement monitoring measures to determine whether it is feasible to enhance flows and/or habitat in North Fork Matilija Creek.

Consistent with the continuing provision of water for existing reasonable and beneficial municipal, agricultural, industrial, or other consumptive uses, the Plan shall also contain an element to consider other mandatory Plan elements to be implemented by the Bound Parties, designed to enhance flow by reducing demand for water from the Watershed or to adjust the timing and amount of Production as necessary to maintain and, if feasible, enhance base flows to improve habitat conditions for steelhead. Such efforts, upon a finding of cause and effect between that Production and Fishery condition, may include conservation efforts, scheduling the timing of Production in a manner consistent with the life stage needs of the steelhead, and reducing Production consistent with existing reasonable and beneficial uses and would be equitably tailored to each Bound Party, taking into consideration past and current conservation efforts. The Plan may also consider any other feasible elements to be implemented by the Bound Parties to improve water quality within the Watershed as specifically related to the condition of the Fishery. Subject to the **Uncontrollable Conditions**, the Court retains jurisdiction to order specific water management actions when there are material excursions below Baseline Conditions during the Implementation Phases.

7.3.5.1 Voluntary Water Management Measures

The Plan shall include the Production Forbearance Program ordered and approved by the Court under its continuing jurisdiction and developed and administered by the MC, which will provide water right protection to Producers who voluntarily and demonstrably reduce Production from the Watershed as set forth in Exhibit F. Examples of these efforts include the projects identified as part of the Ventura River Watershed Instream Flow Enhancement and Water Resiliency Framework, which operate in furtherance of the Physical Solution and the optimization of beneficial use. Nothing herein prevents any Bound Party from pursuing a change of water rights under Water Code section 1707.

7.3.6 GSP Processes

The Plan shall describe how the Plan will work in concert with the GSP processes. Consistent with the continuing provision of water for existing reasonable and beneficial municipal, agricultural, industrial, or other consumptive uses, the Parties shall exercise good faith and reasonable efforts to participate in the implementation of GSPs for the Basins within the Watershed that require GSPs. In accordance with Code of Civil Procedure section 830(a)(4), the Parties anticipate that this Physical Solution will help to achieve the Groundwater sustainability goals of SGMA within the Watershed. Specifically, this Physical Solution will improve the Fishery, which may be relevant to the undesirable result of depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water, as defined in Water Code section 10721(x)(6). The Plan shall be consistent with the GSPs adopted in the Watershed. By implementing the Plan to maintain the Fishery in a Good Condition, the Parties are avoiding any significant and unreasonable adverse impacts to instream beneficial uses that may be associated with Production in the Basins. GSAs may choose to use data and information from the Physical Solution for GSP purposes. In addition, participation by the Parties in the implementation of the GSPs, once adopted and enforced by the GSAs, will assist in the implementation of this Physical Solution. This Physical Solution and the GSPs will therefore complement each other and collectively assist in achieving the goals of both the Physical Solution and SGMA.

7.3.7 Monitoring and Reporting

The Plan shall include a specific monitoring and reporting program, including a hydrology monitoring program, a fish monitoring program, performance assessment monitoring for restoration/enhancement features, habitat monitoring program, and annual reporting on each monitoring program. Further details regarding monitoring and reporting are attached hereto as Exhibit G. At a minimum, the general condition of the Fishery and the Watershed shall be

assessed and reported annually as compared to Baseline Conditions. The Plan shall establish a schedule for more detailed monitoring that is based on snorkel surveys or other similar evidence, and could include fish tracking or tagging systems, which shall occur at a minimum every five years. The Plan shall also establish a schedule for more detailed reporting based on these more detailed monitoring efforts. The Plan shall be developed in a manner that prevents duplication of efforts for groundwater and surface water monitoring with the GSAs.

7.3.8 Plan Evaluation – Adaptive Assessment and Management

The Plan shall provide for the continuous evaluation of its performance in achieving the physical habitat and biological goals and objectives of the Plan and this Physical Solution using data developed through the continuous monitoring and annual reporting program set forth in section 7.3.7 and Exhibit G. This adaptive assessment and management process will include a process to make any necessary adjustments in specific Plan elements, a process to replace any Plan elements or projects that are deemed to be infeasible, and a process to replace any Plan elements or projects that are deemed to be ineffective.

7.4 Phasing

The Parties are obligated to implement the Physical Solution to move the conditions in the Watershed from the Baseline Conditions toward Good Condition. Implementation of the Physical Solution will take place in the following three phases:

7.4.1 Adoption Phase

7.4.1.1 Term

The period from entry of this Physical Solution through adoption of the Plan shall be defined as the "**Adoption Phase**," and shall be no longer than eighteen (18) months, unless otherwise extended by the Court upon motion of any Party for good cause shown.

7.4.1.2 Required actions during Adoption Phase

During the Adoption Phase, the Parties must perform all the actions listed below (**Adoption Phase Requirements**). Failure to implement the Adoption Phase Requirements will be a violation of this Physical Solution. Adoption Phase Requirements shall be implemented by individual Parties, or through action of the MC to be funded by the Parties.

7.4.1.2.1 Formation and Funding of the MC

During the Adoption Phase, the Parties will organize the MC and provide sufficient funding for the MC and the **Technical Advisor**.

7.4.1.2.2 Adoption of the Management Plan

During the Adoption Phase, the Parties must finalize and have the MC adopt the Plan, subject to the Court's review and approval.

7.4.1.2.3 Foster Park Flow Management

The City shall implement the Foster Park Flow Protocols described in Section 7.3.4.10.

7.4.1.2.4 Fish Passage Improvements 1

During the Adoption Phase, the City shall complete the construction of Fish Passage Improvements 1.

7.4.1.2.5 Arundo removal

During the Adoption Phase, certain Parties shall commence or fund and cause Arundo, removal programs at strategic locations within the Watershed. The Wood-Claeyssens Foundation will prepare, propose, and fund an Arundo and trash/debris removal program for those portions of the Ventura River contiguous to its riparian land within Reaches V1 and V2 and for implementation forthwith in a form and manner approved by the MC. To obtain credit for the trash/debris removal portion of this work, the MC must find that the Wood-Claeyssens

Foundation's program exceeds existing regulatory requirements (such as the Trash TMDL) and provides a benefit to the Fishery.

7.4.1.2.6 Initiation of Monitoring Program

During the Adoption Phase, the Bound Parties shall commence initial hydrology and biology monitoring within six months of entry of this Physical Solution. The complete monitoring and assessment program shall be fully developed and implemented by the end of the Adoption Phase.

7.4.1.3 Objectives for the Adoption Phase

During the Adoption Phase, the Parties anticipate that implementation of the Adoption Phase Requirements will result in improvements in habitat and water management above the Baseline Conditions, but improvements may be marginal given the limited time involved in the Adoption Phase. Achievement of the Adoption Phase Requirements shall be compliance with the Physical Solution.

7.4.2 Initial Implementation Phase

7.4.2.1 Term

The "**Initial Implementation Phase"** begins upon final adoption of the Plan and runs for a ten (10) year period. Once adopted, the Plan becomes an enforceable part of this Physical Solution, and failure to complete the actions required by the Plan (**Initial Implementation Phase Requirements**) will be a violation of this Physical Solution.

7.4.2.2 Required Actions During the Initial Implementation Phase

During the Initial Implementation Phase, the Bound Parties must complete the Initial Implementation Phase Requirements, including implementation of the Fishery management actions as provided in the Plan, continuation of the Arundo, trash/debris removal programs

proposed and initiated within Reaches V1 and V2 pursuant to Section 7.4.1.2.5 above as may be modified over time to address current conditions, implementation of the monitoring and assessment program and submission of all required annual and other reports.

7.4.2.3 Objectives for the Initial Implementation Phase

During the Initial Implementation Phase, the Parties anticipate that implementation of the Initial Implementation Phase Requirements will result in improvements above the Baseline Conditions and progress toward Good Condition. If, during the Initial Implementation Phase and subject to Uncontrollable Conditions, there are material excursions below Baseline Conditions, as defined in the Plan, as originally adopted, or as modified during the Initial Implementation Phase, the Court may exercise its continuing jurisdiction pursuant to Section 7.5 and for good cause shown, may require additional actions beyond the Initial Implementation Phase Requirements. Otherwise, achievement of the Initial Implementation Phase Requirements shall be compliance with the Physical Solution.

7.4.3 Subsequent Implementation Phase

7.4.3.1 Term

The Initial Implementation Phase ends when the Plan has been implemented for a period of ten (10) years, and the "**Subsequent Implementation Phase**" begins. The Subsequent Implementation Phase shall consist of a series of ten (10) year periods in which the Plan continues to be updated and implemented until Good Condition is achievedEach updated Plan continues as an enforceable part of this Physical Solution, and failure to complete the actions required by the updated Plan **(Subsequent Implementation Phase Requirements**) will be a violation of this Physical Solution.

7.4.3.2 Required Actions During Subsequent Implementation Phase

Continually during each Subsequent Implementation Phase, the MC must update and readopt the Plan as necessary to achieve Good Condition. Once the updated Plan for each Subsequent Implementation Phase is adopted, the Bound Parties must complete the Subsequent Implementation Phase Requirements, including implementation of the Fishery management actions as provided in the updated Plan, continuation of the Arundo, trash/debris program removal in Reaches V1 and V2 initiated pursuant to Section 7.4.1.2.5 above as may be modified over time to address current conditions, implementation of the monitoring and assessment program and submission of all required annual and other reports.

7.4.3.3 Objective for the Subsequent Implementation Phase

During the Subsequent Implementation Phase, the Parties anticipate that implementation of the Subsequent Implementation Phase Requirements will result in improvements above the revised Baseline Conditions, as defined in the updated Plan, and ultimate achievement of Good Condition. If, during each Subsequent Implementation Phase and subject to Uncontrollable Conditions, there are material excursions below the revised Baseline Conditions as defined in the then current updated Plan, the Court may exercise its continuing jurisdiction pursuant to Section 7.5 and, for good cause shown, may require additional actions beyond the Subsequent Implementation Phase Requirements. Otherwise, achievement of the Subsequent Implementation Phase Requirements shall be compliance with the Physical Solution.

7.5 Role of Court to Enforce Physical Solution

Under its continuing jurisdiction, the Court shall have the authority to enforce any failure to implement any mandatory requirement of the Physical Solution and any mandatory requirement of the Plan. If, after completing the dispute resolution process set forth in Section 7.7.7 of this Physical Solution, any Bound Party believes that another Bound Party is not complying with the mandatory requirements of this Physical Solution, that Bound Party may petition the Court for appropriate relief upon good cause shown. In addition, if, after the

Adoption Phase and despite implementation of the Plan, and subject to Uncontrollable Conditions, there are material excursions below Baseline Conditions, as described above, the Court may, on motion and for good cause shown, order such additional actions as required to return to a condition at or above Baseline Conditions.

7.6 Uncontrollable Conditions

The Watershed and the Fishery face significant threats from climate change, natural catastrophes, drought conditions, water shortages, and similar external factors that are beyond the ability of the Bound Parties to control. In addition, implementation of the Physical Solution requires in certain cases approval of other governmental agencies not party to this Physical Solution. Finally, an amount of reasonable and beneficial consumptive use of water from the Watershed is necessary to sustain existing human populations and uses and to implement the human right to water. See Water Code § 106.3. If implementation of any requirement of the Physical Solution becomes impracticable due to an Uncontrollable Condition, the Bound Parties will not be considered to be in violation of this Physical Solution for the period of time in which the Uncontrolled Condition prevents performance. As used in this Physical Solution, an "Uncontrollable Condition" is any circumstance beyond the Bound Parties' control, including without limitation, any act of God, war, fire, earthquake, flood, windstorm, drought or natural catastrophe, including climate change; the need to provide an amount of reasonable and beneficial consumptive use of water from 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 authorizations or approvals from any governmental agency.

7.7 Management Committee (MC)

7.7.1 Appointment

The Court hereby establishes the MC, which shall be a five member board composed of one representative each from the (1) City, (2) Casitas, (3) VRWD, (4) MOWD, and (5) the Agricultural/Agricultural Mutual Water Company Group. There shall be four non-voting ex officio members of the MC composed of (1) one representative from the County of Ventura, (2) one environmental stakeholder representative, (3) one representative of the Upper Ventura River Groundwater Agency, and (4) one representative of the Ojai Basin Groundwater Management Agency. Each representative shall be an employee, board member, group member, or other qualified designated representative of the designated entity and shall have knowledge of the Watershed, the Fishery, and existing water management activities in the Watershed. Appointments to the MC shall be for provisional terms of five (5) years, subject to the discretion of the Bound Party to substitute designees. This means, each member of the MC is subject to re-designation by the Bound Party subject to this provision, a reappointment a minimum of every five (5) years. An Agricultural/Agricultural Mutual Water Company representative must be a designee of a Bound Party that has produced an amount equal to or greater than an average of one-hundred (100) AFY in the five (5) year period immediately preceding the appointment. The MC, subject to Court oversight, shall be primarily responsible for implementing this Physical Solution.

7.7.2 Assessment to Fund Plan Development and Implementation

The MC shall adopt an annual budget each year for the purpose of implementing and administering this Physical Solution. Any portion of the budgeted costs not funded by Party grants, third party grants, parcel taxes, and benefit assessments will be funded by an assessment levied upon those Parties to the Judgment that produce water in quantities greater than *De Minimis*. The MC, no later than one year after the commencement of the Initial Implementation

Phase, shall adopt an annual assessment ("**Annual Assessment**"), and shall continue to assess and collect such Annual Assessment for so long as funds may be required for the implementation of the Physical Solution, including the Plan, subject to adjustment by the MC. Adjustments may be required, necessary, and prudent to account for the availability of funds from sources made available other than by assessment on the Parties. For purpose of funding the Physical Solution only and not as an admission of proportionate, joint, and several responsibility or of the relative quantities of any water rights, the assessment shall be calculated and imposed on each Producer in an amount equal to the Producer's percentage share of total Watershed water production above the *De Minimis* level.

The MC shall base its Annual Assessment on the five-year average Production of all Producers above *De Minimis*. The budgeted costs to implement the Plan and the Physical Solution shall be apportioned pro rata in an amount equal to each Producer's percentage share of the total Watershed water production in five-year increments. This means that the initial Annual Assessment will be based upon the use in the five years immediately preceding the commencement of the Initial Implementation Phase and will continue to be the basis for levying assessments during the first five-year period (the "**Producer's Percentage**"). Thereafter, the Producer's Percentage shall be recalculated every five years and will be an amount equal to the Producer's average annual percentage share of the total Watershed water production as measured over the immediately preceding five-year period.

The Producers are encouraged to propose measures that will reduce the individual and cumulative costs of implementing the Plan and the Physical Solution. The MC shall develop, within six (6) months of its establishment, procedures for Producers to apply for credits as off-sets against the Annual Assessments for verified in-kind contributions that are approved in advance by the MC and implement approved elements of the Plan or actions required by the Physical Solution, including but not limited to Arundo, debris, and trash removal. In addition, the MC shall develop procedures for Producers to apply for credits against the assessment for the

development of projects that are not required by the Plan or Physical Solution, but are determined by the MC to materially advance the achievement of the management objectives of the Plan, including participation in the Production Forbearance Program, if the MC determines that such participating in the Production Forbearance Program materially advances the management objectives of the Plan. The MC and the Bound Parties shall also make best efforts to secure additional grant or third-party funding where available and appropriate, for the purpose of implementing the Plan and Physical Solution, and such additional funding shall be used to offset the assessment or shall result in a credit against the assessment for individual parties who obtain such funding.

In order to ensure that sufficient funding exists to implement the Adoption Phase, and subject to subsequent pro-rata reimbursement derived through Annual Assessments levied upon other unnamed Producers, the following Producer parties shall advance funding in excess of their Producer's Percentage as needed to implement the Adoption Phase based on the following percentages:

Party	Estimated Share of Advanced Adoption Phase Costs[12]
City	18.940%
Casitas	56.500%[13]
VRWD	6.795%
MOWD	3.785%
Rancho Matilija Mutual Water Company	2.935%
Wood-Claeyssens Foundation	7.216%
Other/Agriculture	3.828%

The MC shall develop an equitable process by which the funding advanced by these initial parties during the Adoption Phase shall be reimbursed or credited against future assessments during the Initial Implementation and Subsequent Implementation Phases. As noted above,

[12] Based on best available information regarding water usage for the past five (5) years, subject to final participation of Parties and confirmation.

[13] The percentage share reflected here for Casitas includes all of its surface water diversions and its groundwater production. Portions of the Casitas surface water diversions are ultimately distributed to the City, VRWD, and MOWD for municipal purposes. Casitas, the City, VRWD, and MOWD shall negotiate how to fairly appropriate the portion of this percentage that is subsequently distributed by Casitas to the City, VRWD, and MOWD to avoid double counting and an inequitable distribution of costs.

however, the City shall be solely responsible for the funding of the Foster Park Passage Improvement Project and all future monitoring costs attributable thereto.

In addition, the MC will exercise good faith in considering and supporting reasonable efforts of any one or more public agencies who may, in their discretion, wish to use their individual powers through existing legal processes to seek to finance some or all of the implementation costs through a special parcel tax or a property-based benefit assessment. The Parties acknowledge that under existing law, a special parcel tax is a tax levied against property within the Watershed, as authorized under article XIII A of the California Constitution, article XIII D, section a(2) of the California Constitution, California Government Code section 37100.5, Government Code section 50075 *et seq.*, and any other provision of law authorizing such public agency to impose a parcel tax (including, for example, the Mello-Roos Community Facilities Act of 1982, Government Code section 53311 *et seq.*). Subject to limitations existing in applicable law authorizing such parcel tax, a public agency may determine a methodology for allocating the costs of Plan implementation to parcels within the watershed, provided that the parcel tax may not be based on the assessed value of any parcel. A parcel tax may not be levied by any public agency until that tax is submitted to the electorate and approved by a two-thirds vote.

The Producers further acknowledge that public agencies may also levy a property-based benefit assessment on property within the Watershed. Assessments are subject to the provisions of article XIII D of the California Constitution, and Government Code section 53750 *et seq.* (commonly known as Proposition 218). Assessments may not exceed the proportional specific benefit conferred on any parcel subject to the assessment, and the methodology for allocating such specific benefit in a proportionate manner must be supported by a detailed engineer's report prepared by a registered professional engineer certified by the State of California. Special benefits include benefits to parcels that are distinct and separate from general benefits conferred to the public at large. The public agency may not levy an assessment on property unless the public agency has first held a notified public hearing and balloting proceeding, and received

ballots in favor of the assessment from properties subject to the assessment representing a majority of the total amount of the assessment.

Following the expiration of the eighteen (18) month Adoption Phase, the ten (10) year Initial Implementation Phase, and the first eighteen (18) months of the Subsequent Implementation Phase (being a total period of thirteen (13) years), a Producer may make application to the MC, and thereafter to the Court, to have the amount of their annual per acre foot assessment derived from their Producer's Percentage reduced by an amount equal to their pro rata share of monitoring costs incorporated into their Producer's Percentage on the grounds that the percolating Groundwater they pump is not hydrologically interconnected to the Ventura River or its tributaries, if such a determination on hydrological interconnection has not already been made by the Court. The Producer making this request bears the burden of proof of demonstrating by a preponderance of the evidence that there is no material hydrologic connection between their pumping of Groundwater and flow in the Ventura River or its tributaries. In addition to the time periods set forth above, the MC may establish other dates by which a Producer may make an application pursuant to this section based on the results of the groundwater-surface water modeling effort conducted by the State Board or by one or more of the GSAs. The reduction is applicable to the cost of monitoring only. The ongoing administrative costs, including legal expenses, incurred by the MC are not subject to this provision. The initial demonstration will be made to the MC and reviewable, *de novo*, by the Court.

This cost allocation methodology provided herein is the result of a compromise for purpose of agreed funding and is not an admission, express or implied, that there is a hydraulic interconnection between percolating Groundwater and water flowing within a known and defined channel of the Ventura River. Moreover, by agreeing to this method of cost-allocation for the purpose of funding the Physical Solution and the Plan, the Producers are expressly reserving all rights, whatever they may be, concerning whether there is a hydrologic interconnection between the Ventura River – including subsurface flow in a known and defined channel – and percolating

Groundwater. This reservation includes the Party's right to oppose further measures not expressly authorized by the Physical Solution and Plan on the grounds there is no actual hydrologic interconnection between the production of percolating Groundwater and the Ventura River and to contest regulatory conditions adopted that are in addition to or in conflict with those expressly set forth in the Physical Solution.

Imposition of the cost allocation methodology provided herein is expressly subject to the condition precedent of the Court ordering the imposition of this Physical Solution, inclusive of this methodology being binding on all Producers of water from the Watershed in amount greater than or equal to five (5) AFY (non *De Minimis* Producers).

7.7.3 Powers and Duties

The MC shall carry out its powers, duties, and responsibilities in an impartial manner without favor or prejudice to any Bound Party. Subject to the continuing supervision and control of the Court, the MC shall have and may exercise the following express powers and duties, together with any specific power and duties set forth elsewhere in this Physical Solution or ordered by the Court:

7.7.3.1 Selection of the Technical Advisor

The MC shall select a Technical Advisor with the necessary training, experience, and education to provide technical oversight of the implementation and performance of the Plan and make recommendations to the MC.

7.7.3.2 Adoption of Rules and Regulations

The MC shall prepare and propose for adoption by the Court appropriate rules and regulations, including conflict of interest rules for MC members. The MC shall consider adopting as part of its rules and regulations a consensus decision-making approach as currently utilized by

the Upper Ventura River GSA, with consensus decision-making to be prioritized and with the voting methods described in Section 7.7.3.4 below to be used only when consensus cannot be obtained. All MC rules and regulations, and any amendments to the MC rules and regulations, shall be consistent with this Physical Solution and are subject to approval by the Court, for good cause shown, after notice to and consideration of the objections of any Bound Party. Before proposing rules and regulations, or amendments thereto, for adoption by the Court, the MC shall hold a public hearing. At least thirty (30) days prior to the date of the hearing, the MC shall send to all Bound Parties electronic notice of the hearing and a copy of the proposed rules and regulations or amendments thereto.

7.7.3.3 Consideration and Adoption of the Plan and Amendments to the Plan

The MC shall consider and adopt the Plan, as well as any amendments to the Plan. The Plan will be frequently modified by adaptive management and accumulated changes will result in Plan amendments as approved by the MC.

7.7.3.4 Voting Requirements

In accordance with rules and regulations for voting to be adopted by the MC as described in Section 7.7.3.2, the MC will prioritize consensus decision making. The majority voting requirements described herein shall only apply when consensus cannot be obtained. In such situations, decisions of the MC shall be by majority vote as described herein. For all such decisions made the MC, the City and Casitas representatives shall have two votes each, and the MOWD, VRWD, and the Agricultural/Agricultural Mutual Water Company Group representatives shall have one vote each. All such decisions of the MC shall be by simple majority of its voting members provided that, to be valid and binding, the specific decisions of the MC set forth in Sections 7.7.3.4.1, 7.7.3.4.2, and 7.7.3.4.3 must be ratified by either of the following methods: (i) 75% of the votes cast by the Bound Parties with greater than one hundred (100) AFY annual average water production during the five years immediately preceding the vote

(notwithstanding that a Bound Party may have no designee on the MC) or (ii) a volume vote of 80% of the votes cast by the Bound Parties based upon the cumulative production of water in the Watershed that occurred in the five years immediately preceding the vote. A decision of the MC meeting the requirements of Sections 7.7.3.4.1, 7.7.3.4.2, or 7.7.3.4.3 shall be ratified if it receives support using either of the methods described above, regardless of the support obtained using the other method. The vote will be conducted by written ballot pursuant to rules and regulations promulgated by the MC. For the avoidance of doubt, the presence of the four non-voting ex officio members shall not be counted for purposes of determining whether a quorum exists for MC meetings and actions taken.

7.7.3.4.1 Execution of Agreements

Agreements of more than five (5) years in duration or for which the total value of services provided thereunder will exceed $500,000 unless approved pursuant to Section 7.7.3.4.2 below.

7.7.3.4.2 Approval of Proposed Modifications to the Implementation Measures Set forth in the Physical Solution

Proposed modifications to the Implementation measures set forth in this Physical Solution and the Plan that: (i) are reasonably likely to result in an increased cost that is subject to recovery from the Bound Parties through an Annual Assessment in an amount greater than five hundred thousand dollars ($500,000) over the duration of the respective Phase or one million dollars ($1,000,000) through all Phases or (ii) the abandonment or discontinuance of any mandatory element set forth in the Physical Solution and the Plan.

7.7.3.4.3 Increases in Annual Assessments within a Phase

An increase in the cumulative Annual Assessment within a Phase, not previously approved pursuant to Sections 7.7.3.4.1 or 7.7.3.4.2 above, in an amount greater than twenty percent (20%) over the prior year.

7.7.3.5 Employment of Experts and Agents

In addition to the Technical Advisor, the MC may employ, contract with, or otherwise engage such administrative personnel, engineering, biological (fishery), legal, accounting, or other specialty services, and consulting assistants as appropriate to carry out the terms of this Physical Solution.

7.7.3.6 Notice List

The MC shall maintain a current list of Bound Parties to receive notice. Each Bound Party shall have an affirmative obligation to provide the MC with their current contact information. Any Person may be added to the MC's notice list by electronic written request. Whenever any parcel of property that is subject to this Judgement is transferred, the grantor of the property shall notify the grantee of the existence of this Physical Solution, and the grantee shall provide the MC with its current contact information.

7.7.3.7 Annual Budget

The MC shall prepare a proposed administrative budget for each year covering all of its operations, including, without limitation, costs of the Technical Advisor and other needed consultants and personnel. The MC shall hold a public hearing regarding the proposed administrative budget and adopt an administrative budget. Following the adoption of the budget, the MC may make expenditures within budgeted items in the exercise of power herein granted, as a matter of course.

7.7.3.8 Unauthorized Actions

The MC shall bring such action or motion as is necessary to enjoin any conduct prohibited by this Physical Solution.

7.7.3.9 Meetings and Records

Although the MC is not a separate public agency, the MC shall generally provide notice of and conduct all meetings and hearings in a manner consistent with the standards and timetables set forth in the Ralph M. Brown Act, Government Code sections 54950 *et seq.*, unless otherwise required by the MC's rules and regulations. The MC shall establish its own website and make its files and records available thereon.

7.7.3.10 Coordination with Groundwater Sustainability Agencies

As set forth above, the MC shall coordinate with all active and any potential GSAs governing the Basins. In accordance with Code of Civil Procedure section 830(b)(4), this Physical Solution, and the MC's activities, shall be consistent with the requirements of SGMA.

7.7.3.11 Consultation.

Prior to adopting the Plan, or any amendments to the Plan, and before making material modifications to the implementation of the Plan ("**Change**"), the MC shall consult with the State Board and the Department on the Changes as follows ("Consultation"):

7.7.3.11.1 Process.

To acknowledge the advisory role of the State Board and the Department, the MC shall provide written notice to the State Board and the Department of the proposed Change. The State Board and the Department shall then have thirty (30) days within which to provide written comments on the proposed Change. The MC shall review and consider the comments provided, adjust the content of the Change as appropriate, and make a final determination on the Change thereafter. Should the State Board or the Department disagree with the final content of the Change, the MC shall call a meeting so the MC can consult with the State Board and the Department.

7.7.3.11.2 Emergency.

Should the MC determine that any Change needs to be taken on an emergency basis, it can make a finding of such condition prior to proceeding with the Change, and undertake a Consultation after the Change is adopted.

Should the State Board or the Department determine that it is necessary to take action on the Ventura River in order to prevent or remedy an emergency situation, the State Board or the Department can make a finding that such emergency conditions exist and may petition the Court by ex parte application to take emergency actions to directly deal with the emergency on a temporary basis. The State Board or the Department shall promptly notify the Parties in writing within twenty-four (24) hours of reaching a determination that an emergency condition exists. The notification shall include the justification for the requested emergency action and supporting documentation, including the expected duration of the emergency.

7.7.4 Technical Advisor

The Technical Advisor shall be appointed by the MC and shall report to the MC and the Court. The Technical Advisor shall have the following duties.

7.7.4.1 Monitoring Condition of the *O. mykiss* Population

Monitor the status of the *O. mykiss* population and their habitat using the criteria established in accordance with the Plan.

7.7.4.2 Monitoring Implementation of Required Management Measures

Monitor the implementation of the Plan.

7.7.4.3 Measuring Devices

Propose to the MC the installation of any additional measuring devices to monitor the condition of the *O. mykiss* population, water quality, instream flows and water surface elevations, or to measure water Production in the Watershed.

7.7.4.4 Production Reports; Current Production Baseline

Require each Producer of water from the Watershed, other than *De Minimis* Producers, and every Bound Party that claims a right to Produce water within the Ventura River Watershed, inclusive of surface water, subterranean streams flowing in known and definite channels, and percolating Groundwater from the Basins in a quantity equal to or greater than five (5) AFY to file an annual **Production Report** with the MC, in a form, to be developed and promulgated by the Technical Advisor, in consultation with the GSAs, consistent with Water Code section 4999 *et seq.* disclosing water use over a minimum period of ten (10) years prior to the Production Report. Production Reports will be filed under penalty of perjury and will be conclusive proof of the maximum quantity of water applied for beneficial use by the party under any claim of right in any future evidentiary proceeding. The failure to file a Production Report shall be considered non-use for that Producer/Bound Party for any such year consistent with Water Code section 5004. The timing and form of filing Production Reports shall be coordinated with the GSAs in the Watershed to avoid duplication.

Require *De Minimis* Producers to file an annual report under penalty of perjury pursuant to Section 7.7.4.6 below sufficient to demonstrate that they qualify as *De Minimis* Producers. *De Minimis* Producers may also elect to file annual Production Reports with the MC to document their historical water Production.

Require Non-Producers owning inactive Production wells to file with the MC evidence of their inactive Production well status on a form to be developed and promulgated by the Technical Advisor. Non-Producers claiming an unexercised right to Produce water from the Watershed

may also elect to provide the MC with evidence of such a claim. In evaluating notices of **New Production**, the MC shall consider such prior claims filed with the MC.

The Technical Advisor shall also pursue State Board designation in accordance with Water Code section 5009 such that Producers must only file Production Reports with the MC. In addition, the Technical Advisor shall prepare an annual inventory of all water Production in the Watershed using Production Reports and other reports submitted pursuant to the Physical Solution, and/or previous reports to the State Board, DWR, Ojai GMA, or otherwise pursuant to Water Code section 5009, including an estimate of the quantity of water Produced by *De Minimis* Producers and a summary of reports by Non-Producers. This inventory shall be updated annually and included within the Annual Report. The Technical Advisor shall also analyze this inventory on annual basis and provide notice to the MC if there are any material increases in Production by any Producer.

7.7.4.5 New Production

Any Bound Party or Non-Producer seeking to commence New Production from the Watershed, and before seeking a Production-related (e.g., new well or appropriative water right) permit from any applicable local or state authority, shall give notice to the Technical Advisor of the proposed New Production on a form to be developed and promulgated by the Technical Advisor. Upon recommendation from the Technical Advisor, the MC shall evaluate whether the commencement of proposed New Production unreasonably interferes with the Physical Solution, complies with the reasonable and beneficial use mandates of Article X, section 2 of the California Constitution, and is protective of the public trust. The MC may impose reasonable mitigation or other requirements on the proposed New Production to ensure that it is consistent with the Physical Solution, the reasonable and beneficial use mandates of Article X, section 2 of the California Constitution, and protective of the public trust. Any decision of the MC regarding the New Production is subject to judicial review pursuant to the Court's continuing jurisdiction pursuant to Section 7.7.6 below.

7.7.4.6 *De Minimis* Producer

A *De Minimis* Producer shall be defined as any existing and New Production that is limited to less than five (5) AFY. To qualify as a *De Minimis* Producer, a Producer shall file an annual *De Minimis* production report with the MC, in a form consistent with Water Code section 4999 *et seq.*, under penalty of perjury. The Technical Advisor shall develop and promulgate simple forms and procedures for *De Minimis* production reports, in consultation with the GSAs.

7.7.4.7 Diversion of Flow

No Bound Party shall undertake or cause construction within the Watershed that will materially reduce the amount of storm flows that would otherwise enter the Watershed, or adversely affect the Baseline Conditions identified in the Plan and Section 7.2 of this Physical Solution, without prior notification to and evaluation for consistency with the Physical Solution, with reasonable and beneficial use requirements, and protection of the public trust by the Technical Advisor. The Technical Advisor may predetermine types of infiltration projects that are consistent with the goals of this Physical Solution.

7.7.4.8 Data, Estimates, and Procedures

The Technical Advisor shall rely on and use the best available science, records and data to support the implementation of this Physical Solution. Where actual records or data are not available, the Technical Advisor shall rely on and use sound scientific and engineering estimates. The Technical Advisor may use preliminary records of measurements, and, if revisions are subsequently made, may reflect such revisions in subsequent accounting.

7.7.4.9 Status Reports

7.7.4.9.1 Contents of the Annual Report

The Technical Advisor shall prepare a report annually ("**Annual Report**") that includes information on the activities of the MC and information sufficient to document the status of the *O. mykiss* population, as set forth in this Physical Solution. The Annual Report shall include at

least the following information: (a) summary of the MC's activities; (b) fiscal report of the preceding year's operations, including revenue and expenditures; (c) the general condition of the Fishery and the Watershed as compared to Baseline Conditions; (d) a summary of Plan elements implemented in the preceding year; (e) production reports for the Watershed; (f) evaluation of any notices of New Production; and (g) any other information necessary to assess implementation of the Physical Solution and to comply with the requirements of the Management Plan. The Annual Report shall be prepared, considered by the MC and filed with the Court in accordance with Section 7.7.4.9.3 below.

7.7.4.9.2 Long Term Reporting

The Technical Advisor shall prepare and file at the end of the Initial Implementation Phase, a report with long-term monitoring trends and a comprehensive evaluation of the Watershed. Subsequent state of the Watershed long term reports shall be filed as to be determined by the MC ("**Long Term Report**"). The Long Term Reports shall be prepared, considered by the MC, and filed with the Court in accordance with Section 7.7.4.9.3 below.

7.7.4.9.3 Filing of Reports

The Technical Advisor shall prepare and file the Annual Report or Long Term Report (collectively, "**Status Reports**"), whichever is applicable, with the Court each year, on a date to be determined by the MC, beginning with an Annual Report to be filed on or after July 1 following the first full year after entry of this Physical Solution. Prior to filing a Status Report with the Court, the MC shall provide written notice to all Bound Parties that a draft of the Status Report is available for review and make the Status Report available on a web site available to all Bound Parties. The MC shall provide written notice to all Bound Parties of a public hearing to receive comments and recommendations for changes in the Status Report. The public hearing shall be conducted pursuant to rules and regulations promulgated by the MC. The notice of public hearing may include such summary of the draft Status Report as the MC may deem

appropriate. The Status Reports shall consider annual reports filed under SGMA for that year pursuant to Water Code section 10728.

7.7.5 Removal of the MC

The Court retains and reserves full jurisdiction, power, and authority to remove the MC, or any individual representative serving on the MC, for good cause, and to substitute a new MC or representative in its place, upon its own motion or upon motion of any Bound Party in accordance with the notice and hearing procedures set forth in Section 7.7.6 of this Physical Solution. The Court shall find good cause upon a showing that the MC or representative has: (1) failed to exercise its powers or perform its duties; (2) performed its powers in a biased manner; or (3) otherwise failed to act in a manner consistent with the provisions in this Physical Solution or subsequent order of the Court.

7.7.6 Court Review of MC Actions

Any action, decision, rule, regulation, or procedure of the MC or the Technical Advisor pursuant to this Physical Solution shall be subject to review by the Court on its own motion or on the timely motion by any Bound Party as follows:

7.7.6.1 Effective Date of MC Action

Any order, decision or action of MC or Technical Advisor pursuant to this Physical Solution shall be deemed to have occurred on the date of the order, decision or action.

7.7.6.2 Notice of Motion

Any Bound Party may move the Court for review of an action or decision pursuant to this Physical Solution by way of noticed motion, upon at least 30 days' notice thereof. The motion shall be served on all Bound Parties and the MC and Technical Advisor. Unless ordered by the

Court on its own motion or by request by a Bound Party, any such petition shall not operate to stay the effect of any action or decision which is challenged. To have standing to bring such a motion, a Bound Party must have participated in the proceedings of the MC regarding the order, decision or action in question or make an adequate showing as to why such participating was impractical or futile.

7.7.6.3 Time for Motion

A Bound Party must file a motion to review any action or decision within ninety (90) days after such action or decision, except that motions for review of assessments hereunder shall be filed within thirty (30) days of MC mailing notice of the assessment.

7.7.6.4 Standard of Review

The Court's review of any legal determinations of the MC, including but not limited to interpretations of this Physical Solution, shall be *de novo.* The factual determinations of the MC shall be reviewed under a substantial evidence standard, provided, however, that any factual determinations that involve or affect a Bound Party's vested fundamental rights, directly or otherwise, shall be reviewed *de novo*. For the purpose of this Physical Solution, such vested fundamental rights shall include the rights to produce, divert, receive, or use water.

7.7.6.5 Decision

The decision of the Court in such proceeding shall be an appealable supplemental order in this case. When the Court's decision is final, it shall be binding upon the MC and the Bound Parties.

7.7.7 <u>Notice re MC Actions</u>

Before taking certain actions, to be enumerated in the rules and regulations, including but not limited to adopting the Plan, amending the Plan, adopting assessments, and adopting rules and

regulations, the MC shall provide thirty (30) days advance notice of its proposed action by posting notice on its website and electronically serving notice on the MC's notice list maintained pursuant to section 7.7.3.6. Bound Parties may provide comments on the proposed MC action within fifteen (15) days, and the MC shall consider the comments provided by Bound Parties within that time period before taking the proposed action of which the MC gave notice.

7.8 Dispute Resolution

Except as discussed herein, all disputes arising under this Physical Solution, including those related to the condition of the Fishery, initially shall be submitted to the MC for resolution in accordance with this section. Any Bound Party may file a written request with the MC to hold a hearing on a dispute. Upon receipt of the written request, the MC shall provide notice that generally describes the nature of the dispute by posting it on its website. Thereafter, the MC shall cause an item to be placed on the agenda for a regularly-scheduled meeting of the MC within forty-five (45) days or, or if requested by the moving party, call a special meeting for the purpose of providing a full hearing of the dispute and providing the interested Bound Parties with notice and opportunity to be heard. No later than thirty (30) days following the conclusion of the hearing(s), the MC shall issue a written decision that is dispositive of the dispute and that is supported by written findings. The written decision may include additional adaptive management provisions, including but not limited to, any combination of water management and habitat improvement measures sufficient to establish the Fishery as in Good Condition in accordance with this Physical Solution. Any Bound Party may seek review of an adverse decision of the MC in accordance with the provisions of Section 7.7.6. This section does not apply to any dispute wherein any Party seeks a determination of the relative priority rights to water in the Watershed or to establish a comprehensive adjudication of water rights in the Watershed. Any such disputes shall be resolved solely by the Court pursuant to and accordance with Section 9.2 herein.

7.9 Need for Flexibility

This Physical Solution must provide flexibility and adaptability to allow the MC and the Court to use existing and future technological, social, institutional, and economic options in order to maximize reasonable and beneficial water use in the Watershed.

8. FINDINGS

The Court finds that the surface water bodies and the subterranean streams flowing through known and definite channels of the Ventura River and its tributaries are interconnected with the Ventura River Watershed's four Groundwater Basins: the Lower Ventura River Basin, the Upper Ventura River Basin, the Ojai Valley Basin, and the Upper Ojai Valley Basin. Accordingly, pursuant to Code of Civil Procedure section 833(c) and in accordance with *City of Barstow v. Mojave Water Agency* (2000) 23 Cal.4th 1224; *Central Basin Municipal Water District v. Fossette* (1965) 235 Cal.App.2d 689; *San Bernardino v. Riverside* (1921) 186 Cal. 7; *Orange County Water District v. Riverside* (1959) 173 Cal.App.2d 137; *Los Angeles v. Glendale* (1942) 23 Cal.2d 68, the Court finds that the adjudication of the surface waters and the groundwater of the Ventura River Watershed should be joint and in this single proceeding and is necessary for a fair and effective determination of a physical solution that should be implemented in the Watershed.

The Court finds that the Physical Solution: (a) is compelled by the need to maximize the reasonable and beneficial use of all water in the Watershed, avoid the waste of precious water resources, and address continued uncertainty created by unresolved competing claims to water in furtherance of the mandates of the State Constitution and State water policy; (b) is not expected to result in substantial injury to water right holders or beneficial uses; (c) is a fair and equitable basis for satisfying the reasonable and beneficial water uses within the Watershed, including consumptive and instream uses; (d) provides due consideration of and respects common law and statutory water right priorities and applicable public trust resources; and (e) is sufficient for addressing potential undesirable effects of groundwater pumping on the depletion of

interconnected surface water, as defined by SGMA, regarding the beneficial use of interconnected surface water by the Fishery so that no additional implementation measures are required under SGMA. The Court finds that the Physical Solution is a legal, practical, and implementable means for making the maximum reasonable and beneficial use of the waters within the Watershed and that the Court is empowered with broad, equitable discretion in imposing this Physical Solution, including reasonable expenses associated therewith.

The Court finds that, consistent with the California Constitution and public trust doctrine, the protections afforded to the Southern California Steelhead in this Physical Solution will also benefit and protect the other instream uses within the Watershed in an efficient, non-wasteful manner. The Court finds, in accordance with Code of Civil Procedure section 830(a)(4), that this Physical Solution is consistent with the achievement of Groundwater sustainability within the timeframes of SGMA. Specifically, GSPs are designed to attain sustainability by avoiding "undesirable results." Water Code section 10721 defines "undesirable results" as including "depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of surface water" "caused by groundwater conditions occurring throughout the basin." GSAs in the Watershed may rely on the implementation of the Physical Solution in implementation of their GSPs because the Physical Solution addresses potential undesirable effects of groundwater pumping on the depletion of interconnected surface water, as defined by SGMA, regarding the beneficial use of interconnected surface water by the Fishery.

The Court has considered existing water management plans and programs, and also finds that the Physical Solution is consistent with the water management and conservation goals contained in the following Water Management Plans:

- The March 2015 Ventura River Watershed Management Plan adopted by the Ventura River Watershed Council, available at http://venturawatershed.org/the-watershed-plan

- Groundwater Management Plan – 2018 Update, Ojai Valley Groundwater Basin adopted by the Ojai Basin Groundwater Management Agency, available at http://obgma.com/wp-content/uploads/2018/09/OBGMA-GMP-2018-Update-Final-8-30-18s.pdf.

Pursuant to Water Code section 10737.8, the Court finds that this Physical Solution will not substantially impair the ability of a GSA, the State Board, or DWR to comply with SGMA to achieve sustainable Groundwater management. Pursuant to Water Code section 10737.2, the Court finds that this Action has been managed in a manner that minimizes interference with the timely completion and implementation of GSPs for the Basins, avoids redundancy and unnecessary costs in the development of technical information and a physical solution, and is consistent with the attainment of sustainable Groundwater management within the timeframes established by SGMA.

Pursuant to Code of Civil Procedure section 850(a)(1)-(3), the Court finds that this Physical Solution: (1) is consistent with Article X, section 2 of the California Constitution; (2) is consistent with the water right priorities of all non-stipulating Parties and any Persons who have claims that are exempted by this Physical Solution; and (3) treats all objecting Parties and any Persons who have claim that are exempted equitably as compared to the stipulating Parties. This Physical Solution provides flexibility and adaptability to accommodate existing and future technological, social, institutional, and economic options under the Court's continuing jurisdiction to maximize reasonable and beneficial water use without significant and unreasonable harm to public trust resources. Although this Physical Solution is not a determination of the Bound Parties' relative water rights, the Physical Solution establishes a requirement that all water use must be undertaken consistent with the Physical Solution and the management measures that will ensure the availability of water for consumptive uses, regardless of water right, while simultaneously maintaining the Fishery in Good Condition and for the protection of public trust resources as provided herein consistent with *National Audubon Society v. Superior Court* (1983)

33 Cal.3d 419. However, while the quantification of individual rights and declaration of relative priorities among Bound Parties is not needed at the present time, it 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 the Physical Solution or as may be requested by a Party upon a showing that the Physical Solution is injurious to a Party's water right, the priority of that right, or for other good cause. The Court reserves its discretion within its continuing jurisdiction to issue further orders in furtherance of the Physical Solution including the quantification of use and declaration of relative rights among some or all of the Bound Parties.

Through this Physical Solution, the Bound Parties are obligated to implement the Management Plan that is designed to maintain the Southern California Steelhead population inhabiting the Ventura River Watershed in Good Condition, consistent with Article X, section 2 of the California Constitution and the public trust doctrine. The Bound Parties will implement this obligation through the Physical Solution to manage the steelhead population described herein. The Physical Solution is based on the existing scientific literature addressing steelhead in the Watershed, including information contained in the Department Report, and the following reach-by-reach assessment of the Watershed.

9. ENFORCEMENT

9.1 Compliance with Physical Solution

Each and every Bound Party, its officers, directors, agents, employees, successors, and assigns is enjoined and restrained from (1) Producing water from the Watershed except in accordance with the requirements of this Physical Solution, and (2)otherwise violating the terms of this Physical Solution. The Bound Parties must comply with the terms of Physical Solution, may not act or use their powers in any way that conflicts or interferes with the provisions of the Physical Solution, and are subject to the Court's continuing jurisdiction as set forth in section 9.2 in accordance with *California American Water v. City of Seaside* (2010) 183 Cal.App.4th 471.

9.2 Continuing Jurisdiction

The Court retains and reserves full jurisdiction, power, and authority for the purpose of enabling the Court, upon motion of a Bound Party, to make such further or supplemental order or direction as may be necessary or appropriate to interpret, enforce, administer, or carry out this Physical Solution, and to provide for such other matters as are not contemplated 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 rights and 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 the Physical Solution. Upon a showing to the Court demonstrating that good cause exists, e.g., that the Parties' efforts to bring the Fishery into Good Condition through the Physical Solution have been unsuccessful, the Court reserves continuing jurisdiction to require the quantification of use and declaration of rights among some or all Bound Parties under the City's first, second, third, fourth, fifth, seventh, eighth, and/or ninth claims for relief. The Court further reserves its authority to establish all processes and procedures necessary for the determination of the relative priority rights to water in the Watershed or for an adjudication of water rights in the Watershed among some or all Bound Parties, and the Court further retains jurisdiction to amend the Physical Solution as is necessary.

10. MISCELLANEOUS PROVISIONS

10.1 Actions Not Subject to CEQA

Nothing in this Physical Solution, or in the procedural implementation thereof, or the decisions of any entity acting under the authority of this Physical Solution, including the MC, 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 Board, committee, or entity formed pursuant to this Physical Solution shall be deemed a "public agency" subject to CEQA. (See Public Resources

Code § 21063.) Individual projects called for in this Physical Solution and implemented by one or more Parties must be reviewed for required compliance with CEQA, however.

10.2 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 MC. If no designation is made, a Bound Party's designee shall be deemed to be, in order of priority: i) the Bound Party's attorney of record; ii) if the Bound Party does not have an attorney of record, the Bound Party itself at the address specified on the MC's list.

10.3 Transfer of Real Property

Any Bound Party transferring any real property subject to this Physical Solution shall notify the transferee of the existence of the Physical Solution and its binding effect on the real property; provide grantee with a copy of the Physical Solution; and notify the MC 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, City shall substitute the transferee as Cross-Defendant pursuant to Code of Civil Procedure section 368.5.

10.4 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 pursuant to this Physical Solution shall be deemed made if by electronic service. All notices or service of documents pursuant to this Physical Solution by MC or any Bound Party will be made by electronic mail to the greatest extent feasible.

10.5 No Abandonment of Rights

In the interest of the Watershed, and consistent with the principles of reasonable and beneficial use, and the public trust, 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.

10.6 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 intervenor shall be a Bound Party in this Physical Solution.

10.7 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.

10.8 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.

10.9 Heading and Section References

Captions and headings 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.

10.10 No Third Party Beneficiaries

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

10.11 Severability

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

10.12 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.

10.13 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.

10.14 No Limitation on Statutory Authority.

Except as provided in this Physical Solution, including, but not limited to, Section 9, the Physical Solution does not affect or limit the authority of any Bound Party to fulfill its statutory, regulatory, or contractual responsibilities under applicable law, including, but not limited to, the exercise of statutory authority by the State Board, the Department, the Ventura County Watershed Protection District in implementing Ordinance No. WP-2, and any public agency implementing SGMA, provided that no Bound Party may violate the Physical Solution's terms as implemented and as may be modified by the Court.

Dated: _____

By: _____
The Honorable William F. Highberger
Judge of the Superior Court
County of Los Angeles

Exhibit A – Defined Terms

1. **Action**. The Comprehensive Adjudication of the Ventura River Watershed, Los Angeles Superior Court Case No. 19STCP01176.
2. **Action Plan**. California's Water Action Plan.
3. **Adoption Phase**. The period commencing after the Court enters Physical Solution and concluding when the Plan is adopted, which shall be no later than eighteen (18) months after entry of the Physical Solution unless otherwise extended by the Court upon motion of any Party for good cause shown.
4. **Adoption Phase Requirements**. The actions required to be taken by the Parties during the Adoption Phase as described further in Section 7.4.1 of this Physical Solution.
5. **AFY**. Acre feet per year.
6. **Amended Cross-Complaint**. The City's Third Amended Cross-Complaint as thereafter amended in this Action.
7. **Annual Assessment**. Annual assessment adopted by the MC collected as long as funds are required for the implementation of the Plan and Physical Solution.
8. **Annual Report**. The Annual Report prepared by the Technical Advisor to be filed with the Court, as more particularly described in Section 7.7.4.9 of this Physical Solution.
9. **Arundo**. *Arundo donax*.
10. **Baseline Conditions**. The current condition of each reach of the River at the time the Court enters this Physical Solution or as amended hereafter, as more particularly described in Section 7.2 of this Physical Solution.
11. **Basins**. The Lower Ventura River Groundwater Basin, the Upper Ventura River Groundwater Basin, the Ojai Valley Groundwater Basin, and the Upper Ojai Valley Groundwater Basin, as more particularly described in Section 4.3 of this Physical Solution.

12. **Bound Parties**. The Parties and property bound by this Physical Solution and their successors. This includes persons served a summons or a notice, owners of real property overlying the Basins, the State Board, the Department, Channelkeeper, and any other Person joining this adjudication.

13. **Casitas**. Cross-Defendant Casitas Municipal Water District.

14. **Casitas Biological Opinion**. An opinion issued by the National Marine Fisheries Service for operation of the Robles Diversion and Fish Passage Facility.

15. **Casitas License**. The license issued by the State Board for operation of the Robles Diversion and Fish Passage Facility.

16. **CEQA**. The California Environmental Quality Act, Public Resources Code, section 21000, *et seq.*

17. **Cfs**. Cubic feet per second.

18. **Change**. Adopting the Plan, amending the Plan, making material modifications to the implementation of the Plan.

19. **Channelkeeper**. Plaintiff Santa Barbara Channelkeeper.

20. **City**. Defendant and Cross-Complainant City of San Buenaventura.

21. **City Settlement**. The settlement agreement executed by Channelkeeper and the City on September 30, 2019, as amended on August 20, 2020.

22. **Complaint**. The Complaint and Petition for Declaratory Relief and a Writ of Mandate filed by Channelkeeper in the County of San Francisco Superior Court (Case No. CPF-14-513875), and as thereafter amended in this Action.

23. **Comprehensive Adjudication Statutes**. Code of Civil Procedure sections 830 through 852.

24. **Conditional Waiver**. The Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands in the Los Angeles Region.

25. **Cross-Defendants**. Those Parties named as defendants in the Amended Cross-Complaint and those Persons who filed an answer to the Amended Cross-Complaint.

26. ***De Minimis*** Producer or Production. Any existing or New Production that is limited to less than five (5) AFY.

27. **Department**. The California Department of Fish and Wildlife.

28. **Department Recommendations**. Draft Instream Flow Recommendations for the Lower Ventura River and Coyote Creek issued by the Department.

29. **Department Report**. The Department's Instream Flow Regime Criteria on a Watershed Scale for the Ventura River dated March 2020, Version 2 updated May 2020 (Watershed Criteria Report No. 2020-01).

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

31. **Endangered Species Act**. The Endangered Species Act, 16 U.S.C. section 1531, et seq.

32. **ESU**. The Southern California Steelhead Evolutionarily Significant Unit listed as endangered under the federal Endangered Species Act in 1997. Since 2006, Southern California Steelhead Distinct Population Segment has replaced the Southern California Steelhead.

33. **Fishery**. The anadromous life history form of the Southern California Steelhead Trout within the Ventura River Watershed that has been listed as endangered under the Endangered Species Act. However, for purposes of the Physical Solution's monitoring and assessment, the Fishery includes *O. mykiss* that inhabit waters of the Ventura River and its tributaries downstream of the first impassable barrier or impediment to upstream migration that have volitional access to coastal marine waters.

34. **Good Condition**. The condition of the Fishery in the Watershed when the qualitative individual, population, and community conditions described in the Physical Solution and in the Plan are being achieved.

35. **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.

36. **GSA**. Groundwater Sustainability Agency as that term is defined in Water Code section 10721(j).

37. **GSP**. Groundwater Sustainability Plan as that term is defined in Water Code section 10721(k).

38. **Historical Flow Conditions**. Flows in the Watershed in the pre-development period generally before 1958 as determined from gages at Foster Park (gage 11118500), San Antonio Creek (gage 11117500), and North Fork Matilija Creek (gage 11116000).

39. **Initial Implementation Phase**. The period commencing after adoption of the Plan and concluding ten years thereafter.

40. **Initial Implementation Phase Requirements**. The actions required to be taken by the Parties during the Initial Implementation Phase as described further in Section 7.4.2 of this Physical Solution.

41. **Judgment**. The Judgment entered by the Court in this Action that imposes the Physical Solution.

42. **Long Term Report**. The report prepared by the Technical Advisor to be filed with the Court, as more particularly described in Section 7.7.4.9 of this Physical Solution.

43. **Lower Ventura River Basin**. The Groundwater Basin designated as Number 4-302 by DWR Bulletin 118 and as more particularly described in Section 4.3.1 of this Physical Solution.

44. **Management Plan or Plan**. The Management Plan described in Section 7.3 of this Physical Solution.

45. **MC** . The Management Committee, which is a five member board composed of one representative each from the (1) City, (2) Casitas, (3) VRWD, (4) MOWD, and (5) the Agricultural/Agricultural Mutual Water Company Group. There shall be four non-voting ex officio members of the MC composed of (1) one representative from the County of Ventura, (2) one environmental stakeholder

representative, (3) one representative of the Upper Ventura River Groundwater Agency, and (4) one representative of the Ojai Basin Groundwater Management Agency. Each representative shall be an employee, board member, group member, or other qualified designated representative of the designated entity and shall have knowledge of the Watershed, the Fishery, and existing water management activities in the Watershed. The MC, subject to Court oversight, shall be primarily responsible for causing the Parties to implement this Physical Solution.

46. **MOWD**. The Meiners Oaks Water District.

47. **New Production**. Any Production from the Watershed by a Person who did not Produce water from the Watershed prior to January 2, 2020.

48. **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 January 2, 2020 and who may claim the right to Produce water from the Watershed.

49. **Ojai GMA**. The Ojai Basin Groundwater Management Agency.

50. **Ojai Valley Basin**. The Groundwater Basin designated as Number 4-2 in DWR's Bulleting 119 and as more particularly described in Section 4.3.3 of this Physical Solution.

51. **Party (Parties)**. The parties to this Action and their successors. This may be a subset of Bound Parties depending on context and intent in the Judgment or Physical Solution.

52. **PCEs**. Primary constituent elements.

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

54. **Physical Solution**. Stipulated Physical Solution and Judgment contained herein.

55. **Plan or Management Plan**. The Management Plan described in Section 7.3 of this Physical Solution.

56. **Produce (Production)**. To pump, extract, or divert water.

57. **Production Report**. A Production Report is an annual report required to be submitted by the certain Parties consistent with Water Code section 4999 et seq., and providing the information on historical water use required by Water Code section 5002, as set forth in Section 7.7.4.4.

58. **Producer(s)**. A Person who Produces water.

59. **Producer's Percentage**. A Producer's percentage share of the total Watershed water production in five-year increments based upon the use in the five years immediately preceding the commencement of the Implementation Phase and will continue to be the basis for levying assessments during the first five-year period and shall be recalculated every five years and will be an amount equal to the Producer's average annual percentage share of the total Watershed water production as measured over the immediately preceding five-year period.

60. **SGMA**. The Sustainable Groundwater Management Act, Water Code section 10720, *et seq*.

61. **Southern California Steelhead or Steelhead**. The particular anadromous life history form of *O. mykiss* in the Ventura River Watershed.

62. **State Board**. The California State Water Resources Control Board.

63. **Status Reports**. The Annual Report and Long Term Reports prepared by the Technical Advisor, approved by the MC, and filed with the Court, as more particularly described in Section 7.7.4.9 of this Physical Solution.

64. **Subsequent Implementation Phase**. The period commencing after the expiration of the Initial Implementation Phase.

65. **Technical Advisor**. The advisor selected by the MC with the necessary training, experience, and education to provide technical oversight of the implementation and performance of the Management Plan outlined in this Physical Solution and to make recommendations to the MC.

66. **Uncontrollable Conditions**. Any circumstance beyond the Parties' control, including without limitation, any act of God, war, fire, earthquake, flood,

windstorm, drought or natural catastrophe, including climate change; the need to provide reasonable and beneficial consumptive use of water from the Watershed; criminal acts; civil disturbance, 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 authorizations or approvals from any governmental agency.

67. **Upper Ojai Valley Basin**. The Groundwater Basin designated as Basin Number 4-1 in DWR's Bulletin 118 and as more particularly described in Section 4.3.4 of this Physical Solution.

68. **Upper Ventura River Basin**. The Groundwater Basin designated as Basin Number 4-3.01 in DWR's Bulletin 118 and as more particularly described in Section 4.3.2 of this Physical Solution.

69. **VCAILG**. The Ventura County Agricultural Irrigation Lands Group.

70. **VRWD**. The Ventura River Water District.

71. **Watershed or Ventura River Watershed**. The entire Ventura River and its tributaries, as well as the Basins.

Exhibit B – List of Cross-Defendants

Cross-Defendants

1970 Ranch Road, LLC;
Aaron and Angela Hoekstra, individually;
Abel and Lourdes Carranza, individually;
Abraham Munoz;
Acslayton, LLC;
Adam Distl, Jr. and Barbara B. Distl, individually as Trustees of the Adam Distl, Jr. and Barbara B. Distl 1998 Revocable Trust;
Adrian Ogden;
Aera Energy, LLC;
AGR Breeding, Inc.
Ahde and Ganea Lahti, individually;
Ajr Investment Partnership, LP;
Alan and Carol James, individually;
Alan and Deborah Sharon, individually;
Alan and Leslie Connell, individually;
Alan and Mary Kirby, individually;
Alan and Susan Ecker, individually;
Alan Walbridge and Dorothy Fay Walbridge, individually;
Alberto and Adriana Montano, individually;
Alberto and Hilda Zamora, individually;
Albine Hopcus and Alva Lydia Hopcus, individually as Trustees of the Al and Alva Trust;
Alessandro Lobba and Mary E. Jackson, individually as Trustees of the Looba-Jackson Family Trust;
Alexander and Maria Doran, individually;
Alfonso and Alejandra Limon, individually;
Alfredo and Montelle Bello, individually;
Allan and Janis Parkhurst, individually;
Allan and Katharine Parigian, individually;
Allan and Mary Doane, individually;
Allen Vail;
Alvaro and Elva Ruiz, individually;
Alvin and Claudia Cunningham, individually;
Alvin and Claudia Cunningham, individually;
American Retirement Fund, Inc.;
Amy Mattison, Trustee of the Amy K. Mattison Trust;
Ana Cross, Trustee of the Ana Cross Family Trust;
Andre Keunzli and Fabrienne Keunzli-Monard, individually;
Andrea Leigh Jensen, Trustee of the Jensen Trust;
Andrew and Jane Holguin, individually;
Andrew and Melissa Maccalla, individually;
Andrew and Rebecca Chandler, individually;
Andrew and Sharon Engel, individually;
Andrew D. West and Patricia G. West, individually as Trustees of the West Family Revocable Trust;
Andrew Stasse
Angie Mari Ganasei and Christopher Paul Danch, individually as Trustees of the Genasei-Danch Family Trust;
Anita J. Diaz;
Ann H. Donlon, Trustee of the Ann H. Donlon Revocable Trust;
Anna Kirkwood;
Anne and Daniel Goldstein, individually;
Anne Lombard and Frank Hanson, individually;
Anson B. Thacher and Anne F. Thacher, individually as Trustees of the A. and A. Thacher Living Trust;
Anthony Becchio and Denise Heimo, individually;
Anthony Masiel;
Antonio Espino and Maria Torres, individually;
Armando and Sendi Sanchez, individually;
Arne Anselm and Michelle Velderrain, individually;
Arne Anselm, Trustee of the Velderrain M. Trust;
Arthur Timothy and Maurya Kathleen Foy, individually;
Ashley and Victoria Edwards, individually;
Asquith Family Limited Partnership, Ltd.
Aubrey Balkind;
Baldemar Alcantar and Micaela Ortiz Alcantar, individually;
Barbara A. Fitzgerald, Trustee of the Fitzgerald 1994 Trust;
Barbara Bonsignori;

Barbara Chen Lowentha, Trustee of the 2017 Barbara Kay Chen Lowenthal Revocable Trust;
Barbara Hall, Trustee of the Barbara Hall Living Trust;
Barnard Properties, LLC;
Barry and Angela Ross, individually;
Bart Kennedy;
Barton Kennedy;
Behrooz Jadidollahi;
Bentley Family Limited Partnership
Berkley and Suzanne Baker, individually;
Bernard Martin;
Beth E. Lindley;
Betina La Plante
Bettina Chandler, Trustee of the Bettina Chandler Trust;
Bettyann Sessing;
Big Black Dog, LLC;
Bill Moses
Blanche Chapler;
Blaze Buonpane;
Bradford and Cheryl Boyd, individually;
Bradley and Andrea Roe, individually;
Brand and Tressa Kahler, individually;
Brandon and Kelsie Schneider, individually and as Trustees of the Brandon Schneider and Kelsie Simms-Schneider Family Trust;
Breal Rowe;
Brent and Pamela Lamo, individually;
Brent and Shanna Muth, individually;
Brett and Lynn Wilson, individually;
Brett Cunningham;
Brett Kantrowitz
Brett Nicholson and Nan Davis, individually;
Brian A. Schaffels;
Brian and Cynthia McDaniel, individually;
Brian and Erin Edwards, individually;
Brian McConville;
Brian and Jean Harrison, individually;
Brian and Joan Archer, individually;
Brian and Marie Haase, individually;
Brian and Sharon Smith, individually;
Brian and Siobhan Calvin, individually;
Brian Osborne and Kirsten Hinrichs, individually;
Brian S. Stafford and Janice M. Thomas, individually as Trustees of the Stafford Thomas Family Trust;
Brian Skaggs, Trustee of the Skaggs Trust;
Brigitte Lovell, Trustee of the Lovell Living Trust;
Brittany and Alan Fletcher, individually;
Bruce Abbott and Kathleen Quinlan, individually;
Bruce and Dixie Gladstone, individually;
Bruce and Leslie Bouche, individually;
Bruce and Virginia Hibberd, individually;
Bruce C. Brockman and Bridget Tsao-Brockman, individually as Trustees of the Tsao Brockman Family Trust;
Bryan and Nicole Crawford, individually;
Bryan Whitley;
Bryce and Krista Belgum, individually;
Bulmaro and Alfonsa Pena, individually;
Burgess Ranch
Byron and Jennifer Greene, individually;
Byron Rader and Myra Toth, individually;
Cal B. Land Co., LLC;
Calatlantic Group Inc.;
Calvin Zara
Camp Ramah in California Inc.;
Carl and Barbara Enson, individually;
Carl and Judith Bell, individually;
Carl and Leigh Hyndman, individually;
Carl Gaddis and Anna Hicks, individually;
Carla Dennis, Trustee of the Carla D. Dennis Trust;
Carla Melson and Carla J. Melson, individually as Trustees of the Carla J. Melson Revocable Living Trust;
Carmen and Carolina Murillo, individually;
Carmen Chavez and Guadalupe Patino, individually;
Carol Ann Tennant, Trustee of the Carol McDonnell Family Trust;
Carol Marquez-Olson, Trustee of the Carol Marquez-Olson Trust;
Carol Nicholson;
Carol Vesecky, Trustee of the Carol B. Vesecky Revocable Living Trust;

Caroline Turner, Trustee of the Turner Survivors Trust;
Carolyn Bowman, Trustee of the Carolyn Bowman 2008 Trust;
Carolyn Huish;
Carrie Murphy and Michael E. Templin, individually as Trustees of the Templin-Murphy 2016 Living Trust;
Cartin Family, LLC;
Caryn Molinelli;
Casitas Municipal Water District
Casitas Mutual Water Company
Catherine E. Lee, Trustee of the Catherine E. Lee Trust;
Catherine Sellman;
Catherine Smith, Trustee of the Catherine L. Smith Revocable Trust;
Cesar and Davienne Guerra, individually;
Cesar Jimenez and Aura Minera, individually;
Chaarenne Torris and Raymond Bradley, individually;
Chad Carper;
Chad Ress and Stephanie Washburn, individually;
Chad Vick, Trustee of the Chad C. Vick Trust;
Chad Westcott and Heather Cushnie Wescott, individually;
Charlene Van Deusen;
Charles and Deana Sherry, individually;
Charles and Jo Bennett, individually;
Charles Cho
Charles E. Starbuck, Trustee of the Charles E. Starbuck Trust;
Charles G. Barnett, Successor Trustee of the "Barnett Family Exemption Equivalent Trust";
Charles L. Hoff and Kathleen D. Hoff, Co-Trustees of the Hoff Revocable Trust;
Charles P. Watling, Trustee of the First Charles P. Watling Family Trust;
Charles R. Rudd and Lola L. Rudd, Trustees under the Charles R. Rudd and Lola L. Rudd Trust;
Charles Rudd
Charline L. Rich and Richard Gibson Jr., individually;
Cheryl Jensen
Christine Golden;
Christopher and Anna Rhoda, individually;
Christopher and Shelagh Duke, individually;
Christopher and Tina Abe, individually;
Christopher Corsones, Trustee of the Christopher Corsones Living Trust;
Christopher Hart;
Christopher McGuire;
Christopher Moore and Mary Moore, individually as Trustees of the Christopher Moore and Mary Moore Trust;
Christopher Sewell;
Cindy Burkhart, Trustee of the Cindy Burkhart Living Trust;
City of Ojai;
Clair and Stacey Harding, individually;
Claudia Farr, Trustee of the Sam S. Farr and Claudia S. Farr Trust;
Claudia Wunderlich, Trustee of the Claudia A Wunderlich Trust;
Claudia Zenobia Linarte, Trustee of the Olga Trust;
Claudio and Magdalena Landeros, individually;
Cody Green;
Cody Stevens;
Community Memorial Health System;
Connie Anaise;
Connie and Mark Cline, Trustee of the Mark Terry Cline Family Trust;
Connie S. Morgan, Trustee of the Connie S. Morgan Trust;
Conservation Endowment Fund;
Constance and Justin Campbell, individually;
Constance Eaton;
Corinne Anne Fraund;
Cory and Nicholas Wingate, individually;
County of Ventura;
Craig and Ana Zwirn, individually;
Craig and Stephanie Gardner, individually;
Craig Young;
Culbert Family Partnership;

Christina Tolmie;
Curtis and Ory Names, individually;
Cynthia Lee, Trustee of the Cynthia Lee Family Trust;
D & J Campbell Best, LLC;
Daj Properties, LLC;
Damon and Anne Brink, individually;
Dan Newman;
Dan Wiseman;
Dana and Dawn Ceniceros, individually;
Daniel and Adaya Walsh, individually;
Daniel and Amy Yanez, individually;
Daniel and Deborah Hoyt, individually;
Daniel and Elizabeth George, individually;
Daniel and Elizabeth Mclaughlin, individually;
Daniel and Jane Kelly, individually;
Daniel and Lydia Ruark, individually;
Daniel and Nancy Mclaren, individually;
Daniel and Ralph Fairbanks, individually;
Daniel and Rosalind Grimm, individually;
Daniel and Tomica Mora, individually;
Daniel and Yoko Mcsweeney, individually;
Daniel Chrynko;
Daniel Crane;
Daniel H. I. and William D. Moses Jr., individually as Trustees of the William D. Moses, Jr. Separate Trust No. 1;
Daniel Hultgen, Trustee of the Hultgen Living Trust;
Danny Broadhurst;
Danny Haar and Mariska De Feiter, individually;
Darrell Ralston, Trustee of the Darrell Anthony Ralston 2009 Revocable Trust;
Darren and Lisa Lisle, individually;
Dave and Kathleen Tarrats, individually;
David and Beverly Fulton, individually;
David and Carol Cintron, individually;
David and Deborah Todd, individually;
David and Donna Berger, individually;
David and Elizabeth Silva, individually;
David and Fereschta Sinclair, individually;
David and Karen Brubaker, individually;
David and Kathleen Ostby, individually;
David and Laura Meisch, individually;
David and Laurie Mahan, individually;
David and Linda Smith, individually;
David and Meghan Sandoval, individually;
David and Patti Wicklund, individually;
David and Peggy Stanwood, individually;
David and Sandra Murillo, individually;
David and Shannon Richard, individually;
David and Sharron Sparks, individually;
David and Stephanie Berger, individually;
David and Toni Johnson, individually;
David Chase and Anne Fitzgerald, individually;
David Corey and Jean Scholes, individually;
David E. Pressey and Agnes E. Pressey, individually as Trustees of the David E. and Agnes E. Pressey Family Trust;
David E. Sissum, Jr. and Diana E. Sissum, individually as Trustees of the Sissum Trust;
David Flick and Emma Flick, individually;
David Friend and Angela Marie Friend, individually;
David Kille and Shannon Frew, individually;
David Orbach and Eva Araujo, individually;
David Stanley and Monica Bednar Stanley, individually;
Dawn and Barclay Hope, individually;
Dawn and Mark Golden, individually;
DB Properties, LLC;
De and Jacque Pisciotta, individually;
Dean and Gloria Vadnais, individually;
Dean and Lorinda Strong, individually;
Deanna Gonzales, individually;
Deirdre Lynds, individually;
Del Cielo, LLC;
Delavan C. Garst and Sharon D. Garst, individually as Trustees of the Delavan and Sharon Garst Family Trust;
Dell and Anne Mercer, individually;
Delores Berlin;
Denise Kantrowitz
Denise Wizman, as Trustee of the Denise Wizman Revocable Trust;
Dennis and Cheryl Jacobs, individually;
Dennis and Nadine Corte, individually;
Dennis and Susan Ryder, individually;

Dennis Brown;
Dennis Wood and Margaret Vigil Wood, individually;
Derek Meek;
Devon and Jilliann Collinge, individually;
Dewayne Boccali
Diana Engle, Trustee of the Diana L Engle Revocable Trust;
Diana Peron, Trustee of the Diana C Peron Living Trust;
Diana Syvertson, Trustee of the Diana Syvertson Living Trust;
Diana Trent, Trustee of the Diana Trent Living Trust;
Diane and William Clegg, individually;
Diane Ruth White, Trustee of the Diane Ruth White Living Trust;
Dive Deep, LLC;
Dolores Keith;
Dominic Habibi;
Donald and Clara Tenpenny, individually;
Donald and Wendy Givens, individually;
Donald Brosnac and Twila Carlsen, individually;
Donald Campbell;
Donis Montoya Jr. and Teresita Montoya, individually;
Donna Deitch, Trustee of the Donna E. Deitch Trust;
Donna Epstein, Trustee of the Epstein Survivors' Trust, Trustee of the Epstein Marital Trust, and Trustee of the Epstein Bypass Trust;
Dorothy Lanquist;
Dorthea Keck;
Douglas and Ann Parent, individually;
Douglas and Claudia Webber, individually;
Douglas and Elisabeth Vernand, individually;
Douglas and Kathleen Leighton, individually;
Douglas and Moira Volpi, individually;
Douglas Draper;
Douglas Freeman and Miranda MargettGunild Seadrifts, individually;
Douglas Wasson, Trustee of the Wasson Trust;
Duncan Abbott
Dustin Beilke;
Dwayne Bower
DZ SPE, LLC;
Ed and Linda Colby, individually;
Edson Taft, Trustee of the Edson B. Taft Revocable Trust;
Edward and Deborah Guerra, individually;
Edward and Geraldine Lee, individually;
Edward and Laura Savala, individually;
Edward and Nancy Dennis, individually;
Edward and Nancy Necker, individually;
Edward and Roberta Walsh, individually;
Edward C. Leicht and Jacqueline M. Leicht, individually as Trustees of the Leicht Family 2013 Revocable Trust;
Edward Dunn and Judith Shelby Dunn, individually;
Edward Pressey;
Edwin Norris Procter, Trustee of the "E. Norris Procter Living Trust";
Eilam Byle, Trustee of the Eilam Byle Living Trust;
Eileen Sterling, Trustee of the Eileen M. Sterling Revocable Trust;
El Sereno 1225, LLC;
Elaiene Keeley, Trustee of the Elaiene Keeley Trust;
Elaine Ferguson;
Elena Dhyansky, Trustee of the Elena Dhyansky Trust;
Eli and Jessica Neiderhiser;
Elia Aldapa;
Elizabeth Bauer, Trustee of the Elizabeth A Bauer Trust;
Elizabeth Keenen;
Ellen Leopold;
Elmer and Joan Swift;
Elton Pedersen and Alma Clayton Pedersen, individually;
Emily Benson and Lisa Martel, individually;
Emily Clay and Matthew Goodman, individually;
Erbay and Velda Garcia, individually;
Eric and Arlene Schwerdtfeger,

individually;
Eric and Jodi Perdue, individually;
Eric and Jolene Harrington, individually;
Eric and Ming Jun Nakamura, individually;
Eric and Trisha Johnson, individually;
Craig Young;
Eric Dilks, Trustee of the Eric M. Dilks 2004 Revocable Trust;
Eric Goode;
Eric Lawrence Bernthal, Special Trustee of the Boss and Venice Trust;
Eric Lewis and Bobbi Roderick Lewis, individually;
Eric Moore;
Eric Rosenberg;
Erik and Tirica Eads, individually;
Dorothy Nichols;
Ernest Ford
Ernesto Vega
Esperanza and Sandra Guerrero, individually;
Essick Farm Management Company, LLC
Etchart Ranch;
Eugene and Charlotte Elerding, individually;
Eugenijus Valiulis, Trustee of the Eugenijus Valiulis Revocable Living Trust;
Eusebio and Lori Navarro, individually;
Evangeline Bonsall Smith, a married woman;
Evelyn Baran, Trustee of the Evelyn F Baran Personal Residence Trust;
Evelyn Frament;
Ezequiel and Amber Monarrez, individually;
Felix and Delmy Garcia, individually;
Fernando Porras;
Feroz and Mona Zaidi, individually;
Finch Farms, LLC;
Floyd and Charlene Fitzgerald, individually;
Wiancko and Hiroko Wiancko, Trustee of the Wiancko Family Trust;
Flying H Ranch, Inc.
Forest Home, Inc.;
Fortune Builders, Inc.;
Fortune Real Estate 888, LLC;
Francis and Shauna Longstaff, individually;
Francisco and Angelica Valles, individually;
Frank and Lila Sheltren, individually;
Frank C. Urias and Evangeline S. Urias, individually as Trustees of the Urias Family Trust;
Frank Charolla;
Frank Edward Sheltren, Jr., aka Frank E. Sheltren and Rita Cheryl Sheltrem, individually as Trustees of the Sheltren Family Trust;
Frank Robert Walker Jr. and Carrie Ellen Walker, individually as Co-Trustees of the Walker Jr. Living Trust;
Fred and Carine Fisher, individually;
Fred and Donna Stevens, individually;
Fred Kramer and Michaela Watkins, individually;
Frederic Devault;
Frederick and Laura Fulmer, individually;
Frederick and Lori Ponce, individually;
Fredrick and Roxanne Baker, individually;
Fredrick Menninger
Friend's Ranches, Inc.
Future Mhps, LLC;
Gabriel and Margarita Mendoza, individually;
Gale and Bernabe Gaona Jr., individually;
Galen and Maria David, individually;
Chari Petrowski;
Gary and Colleen Fry, individually;
Gary and Jolene Clarke, individually;
Gary and Judith Stever, individually;
Gary and Patricia Tucker, individually;
Gary and Teresa Downard, individually;
Gary and Terri McCaskill, individually as Trustees of the McCaskill Family Trust;
Gary Hirschkron, Trustee of the Gary Hirschkron Revocable Trust;
Gary L. Wolfe, Successor Trustee of the Carolyn M. Tastad Revocable Trust;
Gary Speeds and Lisa R. Kirby, individually as Trustees of the Gary Speeds and Lisa Kirby Family Trust;
Gelb Enterprises;
Gene and Patty Saito, individually;
Genneva Maschler and Richard Yaciuk, individually;

Geoffrey and Paula Clarke, individually;
Geoffrey Brown and Stephanie Gibson, individually;
George and Linda Boston, individually;
George and Lynn Malone, individually;
George and Margaret Melton, individually;
George and Pamela Zeller, individually;
George and Roxanne Pelt, individually;
George and Sigrid Bressler, individually;
George Hernandez;
George Lawhead, Trustee of the George and Carole Lawhead Revocable Trust;
George S. Stuart
George Stuart;
Gerald and Darlene Carlson, individually;
Gerard Linsmeier;
Gerben and Jill Hoeksma, individually;
Gino Lynch;
Girl Scouts Of California's Central Coast;
Glenn and Lori Ahlberg, individually;
Glenn Myers, Trustee of the Glenn C. Myers Family Trust;
Gordon and Patricia Black, individually;
Gordon and Terry Hanusek, individually;
Gordon Gibbons, Trustee of the Gordon R. Gibbons Living Trust;
Gralar, LLC;
Grant Kemp;
Graydon and Helen Harrah, Individually;
Greg and Julie Tebo, individually;
Gregg and Rosie Dierickx, individually;
Gregg Olson, Trustee of the Gregg W. Olson Revocable Trust;
Gregory and Kaori Golden, individually;
Gregory and Martha Lepine, individually;
Gregory and Michele Hammed, individually;
Gregory and Sarah Delvecchio, individually;
Gregory and Susan Gilbert, individually;
Gregory and Susan Ignacio, individually;
Gregory and Suzanne Combs;
Gregory Cavette;
Gregory Grant and Mary King, individually;
Gregory Heras and Rozanne Bonavito, individually;
Gregory Johnson;
Gregory N. Pimstone and Lauryn B. Harris, individually as Trustees of the Pimstone Family Trust;
Gridley Road Water Group
Griffin and Nicole Williamson, individually;
Gudaz, LLC;
Guy and Sheri Flasch, individually;
Guy Bratton;
H and Beverly Leard, individually;
H. H. Leard and Beverly Leard, individually as Trustees to the Leard Family Trust
Hacienda Ladera, LLC;
Hank and Alana Garcia, individually;
Hans and Annika Gruenn, individually;
Hans and Eileen Van Koppen, individually;
Harald Wagner;
Harlan Kossow;
Harrison Hill and Lauren Wilson, individually;
Harry and Marilyn Lehr, individually;
Harry Joe;
Hayden and Raquel White, individually;
Hector and Rocio Torres, individually;
Heidi C. Kurtz, Trustee of the Gunild Walsh Seadrift Qprt FBO Heidi C. Kurtz;
Heliberta Valencia;
Help of Ojai, Inc.;
Hendrika Maria Von Hecht;
Geneva Oliva;
Henry and Leslie Sohm, individually;
Henry and Moira Tarmy, individually;
Hermann and Gay Thomsen, individually;
Hermitage Mutual Water Company
Hickey Bros Land Co. Inc.;
Holly Bassuk;
Howard Altman, Trustee of the Gerta Maritz Trust;
Ruth Miller;
Hoyt Tarola;
Hugh and Lindsay Thomson, individually;
Ian Atkinson;
Ignacio and Rose Vega, individually;
Imelda Mares, Trustee of the Imelda Mares Trust;
Industrial Ventura;
Integritas Ojai, LLC;

Irma Cruz;
Irma Tracy;
Isidro Sanchez;
J Investments;
Jack and Marie Kenton, individually;
Jack and Simone Patterson, individually;
Jack and Verna Turbyville, individually;
Jackie M. Springer, Trustee to the Jackie M. and Lanie Jo Springer Trust;
Jacob and Anja Zimmerman, individually;
Jacqueline Dorfman, Trustee of the Jacqueline Dorfman Revocable Living Trust;
Jacqueline Urband;
Jakob and Marianne Vos, individually;
James and Alisa Varney, individually;
James and Andrea Pendleton, individually;
James and Daniela Casey, individually;
James and Dori Sandefer, individually;
James and Gayle David, individually;
James and Janet Lecroy, individually;
James and Maryetta Sanders, individually;
James and Randi Catlett, individually;
James and Staci Valencia, individually;
James Mills;
James and Wendy Osher, individually;
James and Zelda Carr, individually;
James Data;
James Finch
James Finch, Trustee of the Finch Family Trust;
James Finley, Trustee of the James and M. Reen Finley Family Trust;
James I. Pio, Trustee of the James I. Pio Trust;
James J. Finch and Lorraine Holve Finch, individually as Trustees of the James J. Finch and Loraine Holve Finch Living Trust;
James Kirk and Jacelyn Hayes, individually;
James Paul Finch;
James Peck;
James Selman, Trustee of the James C. Selman Revocable Inter Vivos Trust;
James W. Coultas and Margaret Coultas, Trustees of the James A. and Margaret H. Coultas Intervivos Trust;
James W. Coultas, Trustee of the Coultas Living Trust;
Jan and Priscilla Granade, individually;
Jan M. Hiester, Trustee of the Jan M. Hiester 2014 Living Trust;
Jane E. Hanchett, Trustee of the Hanchett Family Trust;
Jane Mccord, Trustee of the Jane Ann Mccord Living Trust;
Jane Spiller, Trustee of the Jane Spiller Trust;
Janet Boulton
Janet Lewis, Trustee of the Janet T. Lewis Family Trust;
Janet Mcginnis, Trustee of the Janet Karen Mcginnis Trust;
Janet Peck, Trustee of the Janet Lee Peck Living Trust;
Janice and Jesse Hillestad, individually;
Janice Hall, Trustee of the Hall Trust;
Janis Long Nicholas and Jess E. Long, individually as Co-Trustees of the Long Family Trust;
Jason and Jene Loomis, individually;
Jason and Lana Spear, individually;
Jason Loomis;
Jasper and Jessica Jones, individually;
Jayne Pendergast, Trustee of the 2014 Jayne E Pendergast Trust;
Jeannette Curtis;
Jeff and Cheree Simons, individually;
Jeff and Desiree Wilby, individually;
Jeff Mabry;
Jefferie Skaggs and Timothy Bunce, individually;
Jeffrey and Denise Helm, individually;
Jeffrey and Donna Meyer, individually;
Jeffrey and Holly Lieber, individually;
Jeffrey E. Frank, Trustee of The Frank Trust;
Jeffrey Jenson;
Jeffrey Kenton, Trustee of the Jeffrey T. Kenton 2004 Revocable Living Trust;
Jeffrey Luttrull
Jeffrey S. Bacon, Trustee of the Villa Nero

Trust;
Jeffrey Tubbs and Lynn Dubowy Duran, individually;
Jeffrey Weinstein;
Jennie Scott, Trustee of the Jennie Scott Family Trust;
Jennifer Kistler, Trustee of the Jennifer L Kistler Trust;
Jennifer Ware and Jamie Selby, individually;
Jeremy and Brittania Rennie, individually;
Jeremy August and Icole Marie Ferro, Individually;
Jeri Leonard;
Jerome H. Hittleman and Lynne M. Goldfarb, Trustees of the Jerome H. Hittleman and Lynne M. Goldfarb Revocable 2016 Trust;
Jerry Dean Miner and Geraldine Ann Miner, Trustees of the Miner Trust;
Jerry Kenton
Jess Earl Long;
Jesse Wadsworth and Susan Hynds, individually;
Jessie Stricchiola and Rosemary Garrison, individually as Trustees of the Phoenix Revocable Trust;
Maria Ramos;
Jesus Cornejo and Idania Yudith Cornejo, individually;
Jill Olivares, Trustee of the Jill Ann Olivares Revocable Living Trust;
Jimmy and Theresa Ramirez, individually;
JLB Rancho Vista, LLC;
Joan Geddes and John Saluppo, individually;
Joan Kenton, Trustee of The Joan Kenton Living Trust;
Joan Robles;
Joann Benson, Trustee of the Joann Alva Benson Revocable Living Trust;
Joanna Pope;
Jody Callegari;
Joe Clark
Joel Fox and Jennifer Day, individually;
Joel Hernandez;
Joel Vuylsteke, Trustee of the Country Club Trust;
Johanna Collins;
Johanna Rae Long;
John and A. Elrod, individually;
John and Alitea Maruszewski, individually;
John and Crystal Peakes, individually;
John and Janis Nicholas, individually;
John and Lisa Dillard, individually;
Lucille Elrod;
John and Mari Allen, individually;
John and Monica Hartmann, individually;
Nancy Bevans;
John and Nila Ventress, individually;
John and Norma Curtis, individually;
John and Parris Collins, individually;
John and Patricia Essick, individually;
John and Tonya Peralta, individually;
John Battel, Trustee of the John J Battel Living Trust;
John Broomfield, Trustee of the John Nicholas Broomfield Trust;
John Edward and Evonne Louise Vacca, individually;
John F. Johnston and Katherine M. Johnston, individually as Trustees of the John Fraser Johnston Family Trust;
John Galaska
John Gutierrez;
John Haigh, Jr.;
John Kertis;
John Laft
John Mutlow;
John Pace, Trustee of the John Brice Pace Family Trust;
John Richardson;
John Taft Corporation;
John Town
John Vineyard;
John Warner;
John Willingham;
John Winspear;
John Young;
Jon Hanson;
Jonathan and Jacqueline Parker, individually;

Jonathan and Julie Teichert, individually;
Jonathan Wong and Jan Komura, individually;
Jose and Imelda Hurtado, individually;
Jose and Lisa Mendez, individually;
Jose Arreola Jr. and Paola Carreno, individually;
Jose Juarez and Ana Valencia, individually;
Jose Olvera and Alma Valenciano, individually;
Jose Valadez and Norma Hernandez, individually;
Joseph and Drenda Pledger, individually;
Joseph and Kathleen Lasalle, individually;
Joseph and Michelle Harwell, individually;
Joseph and Nina Neulight, individually;
Joseph and Shirley Gholson, individually;
Joseph Lynn and Elvira Lilly Barthelemy, individually and Trustees of the Joseph Lynn Barthelemy and Elvira Lilly Barthelemy 2002 Family Trust;
Joseph Palmoutsos as Trustee of the Joseph Constantinos Palmoutsos Living Trust;
Joseph Polito, Trustee of the Joseph R Polito 1989 Trust;
Joseph Randall, Trustee of the Joseph Darden Randall Revocable Trust;
Joseph Reseigh;
Joseph Tooker;
Joshua Antelman;
Joshua Moreau;
Joyce and Frank Patota, individually;
Joyce Frenette;
Juan and Gloria Estrada, individually;
Juan and Maria Martinez, individually;
Juan Espinoza and Travis Coker, individually;
Juana and Henry Murillo; individually;
Julianne Bloomer and Philip Rabe, individually;
Julie Centeno;
Julio Luna and Debbie Lun, individually;
June Sears, Trustee of the June Katherine Sears Living Trust;
Jupeto Properties, LLC;
Jurgen Gramckow and Geraldine Gramckow, individually as Trustees of the J&G Trust
Justin and Rachael Jayne, individually;
Kac LLC;
Karen L. Hanson and Lawrence S. Hanson, Trustees of the Hanson L.S. Revocable Living Trust;
Karen Mendoza, Trustee of the Vork Family Trust;
Karen Phipps, Trustee of the Phipps Family Trust;
Karin Dron, Trustee of the Boyd S. Dron and Karin K. Dron Joint Living Trust;
Karin L. James, Trustee of the James Family Trust;
Katharine and John Broesamle, individually;
Katherine Patton and Virginia Mcconnell, individually;
Kathleen and Adam Morrison, individually;
Kathleen and Thomas German, individually;
Kathleen Bachelor;
Kathleen Nolan, Trustee of the Kathleen Ann Nolan Revocable 2006 Family Trust;
Kathleen Turner and Elizabeth Renn, individually;
Kathryn Bartholomew, Trustee of the Kathryn Oconnor Bartholomew Living Trust;
Kathy Alderman;
Katz Pincetl Orchard, LLC;
Kay Burns;
Kay Dornbusch, Trustee of the The Dornbusch Family Living Trust;
Keith and Anahid Jewett, individually;
Keith and Robin Lawson, individually;
Keith and Victoria Nightingale, individually;
Kelley and John Dyer IV, individually;
Kelvin Dodd and Deborah Gomez, individually;
Ken Collin;
Kenett Niessen;
Kenneth and Anne Boydston, individually;
Kenneth and Brenda Whitteker, individually;
Kenneth and Carol Fergeson, individually;

Kenneth and Elizabeth Gruber, individually;
Kenneth and Laura Brown, individually;
Kenneth and Maria Baker, individually;
Sarah Van Dyke;
Kenneth Morgan;
Kenneth S. Collins, Trustee of the Frank R. Walker, Jr. Trust;
Kenneth Vadnais;
Kent and Patricia Hardley, individually;
Kern County;
Kevin and Asli Ruf, individually;
Kevin and Jennifer White, individually;
Kevin and Joanne Olsland, individually;
Jodi Dunn;
Kevin Clark
Kevin K. Cox and Mary C. Cox, individually as Trustees of the Cox Family Trust;
Khaled A. Al-Awar and Sheryl L. Al-Awar, individually as Trustees of the K. and S. Al-Awar Family Trust;
Kiki Lyon, Trustee of the Kiki Lyon Living Trust;
Kim Hanna, Trustee of the Hanna Family Trust;
Kim Jirka, Trustee of the Kim Jirka Trust;
Konstantin Demidov;
Krishnamurti Foundation of America;
Kristan Altimus;
Krotona Institute of Theosophy
Kurt and Dayna Roggenstroh, individually;
Kurt and Luisa Neher, individually;
Kurt Patrick Zierhut and Stephanie Lee Zierhut, Co-Trustees of the Living Trust of Kurt Patrick Zierhut and Stephanie Lee Zierhut;
Kyle Brown;
Lance and Donelle Woleslagle, individually;
Lanspring, LP;
Joyce Heath;
Larry Davis;
Larry Hubenthal, individually and as Trustee of the Larry Hubenthal Living Trust;
Larry Hubenthal, Trustee of the Larry Hubenthal Living Trust;
Larry Neff, Trustee of the Larry Neff Trust;
Las Encinas Mobile Home Park;
Laszlo and Sharon Bihari, individually;
Laughing Dog Ranch, LLC;
Laura B. Peck and Andrew D. Viles, individually as Trustees of the William L. and Laura B. Peck Trust - Marital Trust;
Laura Green, Trustee of the Green Survivors Trust;
Laurie Johnson, Trustee of the Laurie A. Johnson Living Trust;
Laurie Smith;
;
Lawrence and Rachel Clevenson, individually;
Lawrence and Sharon McMillan, individually;
Lawrence Hartmann
Lawrence I. and Patricia A. Hartmann, individually as Trustees of the Larry and Pat Hartmann Family Trust;
Lee and Janet Cassel, individually;
Lee Fitzgerald, Trustee of the Lee I Fitzgerald 2007 Revocable Living Trust;
Lee Lebeck;
Lee Rosenbaum, Trustee of the Chief Cornerstone Trust;
Leon and Caroline Pahle, individually;
Leon and Cecelia Carter, individually;
Leonard Fischer;
Kay Rolfe;
Leslee and Terry Gustafson, individually;
Leslie McCleary;
Lester L. and Linda L. Barbee, individually as Trustees of the Lester L. Barbee and Linda L. Barbee Joint Revocable Living Trust;
Liana Harp and Nathan Jones, individually;
Lilian Ruvalcaba;
Linda Chapman, Trustee Linda of the Jean Chapman Living Trust;
Linda Epstein
Linda Griffin;
Linda McLaughlin, Trustee of the Linda Landrieu McLaughlin Living Trust;
Linda Oliver, Trustee of the Linda A Oliver 2005 Revocable Living Trust;

Lipka Richard, Trustee of the Lorraine Trust;
Lisa Clark
Lisa Lopez and Brian Merrill, individually;
Lisa Smith;
Lloyd Smith;
Logan and Misty Hagege, individually;
Logan and Tiffany Gould, individually;
Lois Stone Erburu, as Trustee of the Surviving Spouse's Trust created in the Robert and Lois Erburu Living Trust;
Lon and Margareta Kirkgaard, individually;
Longhorn Lane, LLC;
Lorene Cleary;
Lorenzo Gama and Ylda Cisnero, individually;
Loretta May Williams, aka Loretta May Blackburn, Trustee of the Loretta May Williams Revocable Living Trust;
Lori Schloredt;
Lou and Barton Matthews, individually;
Lou Tomesetta
Louis Gutierrez, Jr. and Irene Gutierrez, individually;
Louis Price;
Louise and Gary Culver, individually;
Louise Konstanzer, Trustee of the Ron and Louise Konstanzer Family Trust;
Louise Tindle, Sole Trustee of the "Bypass Trust" created under the Tindle Trust;
Randall Norman Kirk, individually as Co-Trustee of the "Lucille Jane Conforti Trust";
Luis Herrera and Kimberly Oyama, individually;
Lutheran Church of the Holy Cross of Ojai
Lydia Jimenez;
Lyle and Cecilia Hallblom, individually;
Lyndon Hebenstreit;
Lynn Henne;
Lynn Coleman;
Lynn Gotch and Linda Oliver, individually;
Lynn Pike, Trustee of the Lynn 2016 Trust;
Lysiane Wallis;
M. Snyder;
Malcolm and Brenda Knight, individually;
Malcolm and Kelley McDowell, individually;
Mandy Macaluso, Trustee of the Living Trust of Mandy Macaluso;
Manuel and Sandy Garcia, individually;
Marcus and Amy Hueppe, individually;
Marcus and Eva Kettles, individually;
Margaret M. Aldrich, Trustee of the Russell F. Aldrich and Margaret M. Aldrich "Decedent's Trust," and Trustee of the Russell F. Aldrich and Margaret M. Aldrich Living Trust;
Margaret Menninger
Margo Kelly, Trustee of the Kelly Trust;
Maria Blasco;
Maria Collins;
Marie W. Wallace, Trustee of the Marie Weismiller Wallace Separate Property Trust;
Marika Zoll;
Marilyn Sweeney, Trustee of the Marilyn Sweeney Revocable Living Trust;
Marilyn Wallace, Trustee of the Marilyn Wallace Separate Property Trust;
Mario Aguirre and Patrice Vernand, individually;
Mario and Shawn Reyes, individually;
Marion and Betty Earnest, individually;
Mark and Colleen Rusin, individually;
Mark and Connie Cline, individually;
Mark and Helen Moskovitz, individually;
Mark and Marcia Albertsen, individually;
Mark and Megan Steffy, individually;
Mark Anthony and Kim Marie Crane, individually;
Mark Bellini;
Mark Saleh
Mark Thompson;
Mark W. Etchart, Trustee of the Mark W. Etchart Separate Property Trust, and Trustee of the Michel A. Etchart Separate Property Trust;
Marsha MacDonald;
Marshall and Dina Murphy, individually;
Martha Fast, Trustee of the Martha L Fast Living Trust;
Martha Laliberte;
Martha Moran;

Martin and Barbara Pops, individually;
Martin and Darian O'brien, individually;
Martin and Linda Gramckow, individually;
Martin and Natalie Ehrlich, individually;
Martin and Patricia Henderson, individually;
Martin Gramckow, Trustee of the Monika G. Huss Irrevocable Trust, Trustee of the Karin W. Gramckow Irrevocable Trust, Trustee of the Kurt J. Gramckow Irrevocable Trust;
Marvel Pierce;
Mary and Thomas Snow, individually;
Mary Bergen, Trustee of the Rosemary Hall Bergen Trust;
Mary Downer, Trustee of the Arthur and Mary Downer Family Trust;
Mary L. Vomund, Trustee of the Mary L. Vomund 1987 Trust;
Mary Morrison;
Mary Thomas, Trustee of The Thomas Survivors Trust;
Mary Walkart and William Hastings, individually;
Mary Wingate, Trustee of the Mary Louise Wingate Trust;
Matilija Canyon Alliance;
Mattawa and Rond Larue Clements, individually;
Matthew and Claudia Wilson, individually;
Matthew and Judy Farmer, individually;
Matthew and Kimberly Hultgen, individually;
Matthew Bowe;
Matthew Dwyer and Colleen Walker, individually;
Matthew Larrew and Jordana Kaban, individually;
Matthew Simon and Amanda Vino, individually;
Max Reed;
Maximiano and Norma Ortiz, individually;
McNell Creek Ranch, a general partnership;
McNell Properties, LLC;
Meiners Oaks Water District
Melesio Ramirez;
Melissa Van Siclen;
Merewether Judson, LLC;
Merl and Kim Melstrand, individually;
Michael and Allison Sedlak, individually;
Michael and Annell La Barge, individually;
Michael and Barbara McCarthy, individually;
Michael Clark;
Michael and Carol Davis, individually;
Michael and Carol Jackson, individually;
Michael and Cindy Boehm, individually;
Michael and Dianna Farrar, individually;
Michael and Hannalore Gresser, individually;
Michael and Heidi Bradbury, individually;
Michael and Kathy Ogden, individually;
Michael and Kim Regan, individually;
Michael and Kimberly Robertson, individually;
Michael and Marie Mctavish, individually;
Michael and Nancy Krumpschmidt, individually;
Michael and Patricia Mcweeney, individually;
Michael Barrett;
Michael and Terri Imwalle, individually;
Michael Boulton
Michael Caldwell
Michael Chambliss;
Michael Coggins Jr. and Cynthia Coggins, individually;
Michael Cromer
Michael Greynald, Trustee of the Greynald Family Trust;
Michael Hoover, Trustee of the Michael Hoover Living Trust;
Michael Kelley;
Michael L. Delamore and Deborah Finley-Delamore, individually as Trustees of the Delamore Finley Family Trust;
Michael L. Rockhold, Trustee of the Michael Rockhold Trust;
Michael Lombardo, Trustee of the Michael Lombardo Living Trust;
Michael Marietta, individually and as Trustee of the Marietta Separate Property Trust;

Michael Purdy, Trustee of the Purdy Family Revocable Trust;
Michael Saleh, Trustee of the Saleh and Lea Saleh 1984 Family Trust;
Michael T. Marshall and Lisa Skyheart Marshall, individually as Trustees of the Marshall Living Trust;
Michael Tello;
Michele Willis and Johanna Collins, individually;
Micky Froelich;
Miguel and Elvia Ramirez, individually;
Miguel Estrada;
Mitchael and Rubeena Breese, individually;
Mitchell and Ana Yount, individually;
Mitchell and Joy Dalbey, individually;
Mitchell and Lisa Myers, individually;
Murelle Stevens, Trustee of the Stevens Family Trust;
Nancy Ferrell, Trustee of the Nancy A. Ferrell Family Trust;
Nancy Graham;
Nancy Jackson, Trustee of the Nancy J. Jackson Living Trust;
Nancy Moore, Trustee of the Nancy Anne Moore Separate Property Trust;
Natalia Moore, Trustee of the Moore Family Trust;
Nathan Allen;
Nathaniel and Suzette O'Grady, individually;
Karen Traudt, individually and as Trustee of the Traudt Family Trust;
Neil and Patricia Friedrichsen, individually;
Neil Kreitman, Trustee of the Neil Kreitman Living Trust;
Nick and Morna Taminich, individually;
Nick Daily;
Nikolas and Julia Krankl, individually;
Nina Menconi;
North Fork Springs Mutual Water Company
Oak Haven, LLC;
Oak View Sanitary District;
Oilfield Service and Truck Co.;
Oilfield Service and Truck, Inc.;
Ojai Assembly of God, Inc., dba Ojai's Church of the Living Christ, Inc.
Ojai Home, LLC;
Ojai Unified School District;
Ojai Valley Athletic Club;
Ojai Valley Conservancy;
Ojai Valley Land Conservancy;
Ojai Water Conservation District
Ojai-Jackman, LLC;
Old Creek Road Mutual Water Company
Ole Behrendtsen;
Ole Konig
Olga and Trent Jones, individually;
Orin Jr. and Karen Chappell, individually;
Orville Hernvall;
Orville and Pamela Hibdon, individually;
Orville Hernvall, Trustee of Hervnall Orville and Marion Orville Trust;
Oscar Acosta, Trustee of the Acosta Trust;
Oscar and Mary Kaas, individually;
OST Trucks and Cranes;
Oswaldo and Norma Ruiz, individually;
Ovis, LLC;
Pacific Telephone and Telegraph Company;
Pamela Grau, Trustee of the Pamela Grau Living Trust;
Pamela Melone, Trustee of the Pamela M. Melone Living Trust;
Pamela Wood;
Margaret Peake;
Patricia and Edward Lansberg, individually;
Patricia Boan and Alina Hoffman, individually;
Patricia Boan and John Hoffman, individually;
Patricia Cuenot;
Patricia Marshall, Trustee of the Patricia Ann Marshall Trust;
Patricia McGann;
Patricia McPherson;
Patricia Unruhe and Andrew Jarvis, individually;
Patrick and Cathy Pagnusat, individually;
Patrick Henderson and Jessica Maharry, Trustees of the Maharry Henderson Family Trust;
Patrick Tumamait;

Paul and Aldine Hennigan, individually;
Paul and Angela Booth, individually;
Paul and Ashley Ramsey, individually;
Paul and Janet Bailey, individually;
Paul and June Clem, individually;
Paul and Kim Robie, individually;
Paul and Maelyn Ebert, individually;
Paul and Maria Lozano, individually;
Paul and Martha Medlar, individually;
Paul and Opal Skaggs, individually;
Paul and Sally Centeno, individually;
Paul Fonteyn, individually;
Paul Holahan and Julie Grist, individually;
Paul Lepiane and Bo Bengtson, individually;
Paula Brown, Trustee of the Paula Jean Brown Trust;
Paula Lasiter;
Paula McCullough, Trustee of the Paula J. McCullough Living Trust;
Pauline Mercado, Trustee of the Pauline Mercado Revocable Trust;
Pedro Cisneros;
Pedro Tepesano;
Per and Inge Christiansen, individually;
Perry Family, LLC;
Peter and Kelli Freiberg, individually;
Peter and Linda Daprix, individually;
Peter and Norma Dworkis, individually;
Peter and Robin Shedlosky, individually;
Peter Cambier, Trustee of the Peter and Marilyn Cambier Trust;
Peter Dufau;
Peter Passell;
Peter Schey, LLC;
Peter Strauss and Rachel Ticotin, individually;
Peuvlin Vong;
Philip and Darylyn Long, individually;
Philip and Delia Smith, individually;
Philip Ferrante Jr. and Nicole Aversa-Ferrante, individually;
Philippe Rousseau and Kimberly Shobe, individually;
Phyllis Courtney;
Preparatory Villanova;
Quint Morris;
Rachel Kondor and Brian Segee, individually;
Rafael and Magdalena Villalpando, individually;
Rafael Hernandez;
Raffi J. Mesrobian and Myrna R. Mesrobian, individually as Trustees of the Mesrobian Family Trust;
Rainer Buschmann and John Johnston, individually;
Ralph and Lynne Lundy, individually;
Ramaa Mosley;
Ramona L. Andrew, Trustee of the Ramona L. Andrews Trust;
Rancho Arnaz, LLC;
Rancho Casitas, LLC;
Rancho De Cielo Mutual Water Company
Rancho Matilija Mutual Water Company
Rancho Sueno, LLC;
Randal R. O'Connor, Successor Trustee of the Red Clay Trust, and Successor Trustee of the Le Cedre Trust;
Ranjit Sevaprakasam;
Ray Hall, Trustee-in-Trust of the 30 Acre Trust;
Raymond and Annette West, individually;
Raymond and Esther Kardly, individually;
Raymond and Eva Lyons, individually;
Raymond Magee and Linda Taylor, individually;
RDK Land, LLC;
Rebecca Adams;
Rebecca Collins
Red Mountain Land and Farming, LLC;
Reeves Orchard, LLC;
Refugio Gomez;
Rex and Heidi Lanning, individually;
Reynolds Fleming;
Ricardo Gonzalez;
Richard and Alexandra Dubeau, individually;
Richard and Billie Sumner, individually;
Richard and Cynthia Robinett, individually;
Richard and Emily Cargill, individually;
Richard and Emma Kline, individually;
Richard and Katherine Godfrey,

individually;
Richard and Laura Mancilla, individually;
Richard and Lee Harper, individually;
Richard and Marilyn Kallas;, individually
Richard and Nancy Francis, individually;
Teresa Turner;
Richard Bolton;
Richard Dodson, Trustee of the Richard E. Dodson 2010 Revocable Trust;
Richard Francis;
Richard Frey and Wendy Appleby, individually;
Richard Gilleland
Richard Lowen;
Richard Magana;
Richard Mathieu and Claudia Herrera Mathieu, individually;
Richard Mcgrath, Trustee of the Richard K McGrath Living Trust;
Richard Michael and Margaret Kenny, individually;
Richard Sojka;
Richard Wiles and Peggy Carey, individually;
Rincon Water and Road Works
Robert Alan and Stacey Jean Boyd, individually;
Robert and Anamaria Schmid, individually;
Anna J. Auric, individually as Trustee of the Auric Anna J. Family Trust;
Anna J. Auric, individually as Trustee of the Auric Revocable Trust of 1999;
Robert and Antoinette Tivy, individually;
Robert and Carolyn Jarboe, individually;
Robert and Diana Petropulos, individually;
Robert and Dianne Stone, individually;
Robert and Dominque Daniels, individually;
Robert and Dora Balitzer, individually;
Robert and Emily Martin, individually;
Robert and Gaea Cannaday, individually;
Robert and Geraldine Hunsaker, individually;
Robert and Jacqueline McDaniel, individually;
Robert and Janice Hastie, individually;
Robert and Judith Clark, individually;
Robert and Marilyn Salas, individually;
Robert and Maureen Young, individually;
Robert and Nickey Gregory, individually;
Robert and Patricia Mcfall, individually;
Robert and Sheila Ghen, individually;
Robert and Sonia Rodarte, individually;
Robert and Susan Bennitt, individually;
Robert and Taundra Roddick, individually;
Robert C. Davis, Jr.
Robert Calder Davis, Jr., Trustee of the Robert Davis Surviving Spouse's Trust, Trustee of the Davis Family Bypass Trust and Trustee of the Davis Family Trust;
Robert Dekkers;
Robert Erickson and Ronald Wilson, individually;
Robert Grasmere;
Robert Levin and Lisa Solinas, individually;
Robert Mark and Lorraine Melisa Lovato, individually;
Robert OConnor;
Robert Petrin and Beate Schickerling, individually;
Robert Polidori and Brittany Sanders, individually;
Robert S. Young, Trustee of the Young Trust;
Roberto and Maria Alonso, individually;
Robin Bernhoft
Rocky Mann;
Roderick and Joyce Greene, individually;
Roger and Susan Dickens, individually;
Roger Haley; Trustee of the Roger and Christina Haley Survivors Trust;
Roger Walker;
Rogers-Cooper Memorial Foundation;
Bette Bluhm;
Ronald and Janis Calkins, individually;
Ronald and Julia Bruns, individually;
Ronald Blood and Linda Jordan, individually;
Ronald Kaplan and Cynthia Daniels, individually;
Ronald L.R. Hill and Debi R. Hill, Trustees of the R&D Hill Family Trust;
Ronald Vogt;

Rosemarie Singer;
Rosemary Payne, Trustee of the Rosemary Payne Trust;
Ross Anderson;
Rowland A. Hill II and Brenda M. Hill, individually as Trustees of the Trust dated November 1, 2002;
Ruben and Marisa Martinez, individually;
Ruben Chavez;
Ruben Magana and Janette Lupercio, individually;
Rudolph and Carol Saldamando, individually;
Rudy Baez;
Laura Alford;
Golden Wiley;
Russell James Hall, Trustee of the Russell James Hall Family Trust;
Russell Waldrop, Trustee of the Russell B. Waldrop Living Trust;
Sabino and Nicki Perez, individually;
Sabrina Venskus, Trustee of the Sabrina Venskus Living Trust;
Sally Crain;
Salvatore Scarpato;
Sam and Debbie Tucker, individually;
Samuel and Joanna Schindel, individually;
Samuel Eaton;
Santa Ana Ranch, Inc.;
Sarah Young;
Saunie Krewson;
Scott Alan and Eva Prince Weiss, individually;
Scott and Aki Freshman, individually;
Scott and Bernadette King, individually;
Scott and Brittany Denton, individually;
Scott and Carol Rasmussen, individually;
Scott and Keela Allison, individually;
Scott and Michele Supan;
Scott Chasse, Trustee of the Scott Chasse Revocable Living Trust;
Scott Forsyth and Joy Fedele, individually;
Scott Gregory Erockson and Hannah Beth Guzik, individually;
Scott Lundy, Trustee of the Scott Lundy Trust;
Scott Luttenberg
Scott Luttenberger and Natasha Wilcox, individually;
Scott R. Johnson and Margaret Bates, individually;
Scottie Monical;
Sean and Leslie Bennett, individually;
Senior Canyon Mutual Water Company
Serafin and Martha Flores, individually;
Serafin Calderon and Blanca Ortiz; individually;
Sevan Gerard;
Shahram Shahrokhfar and Dina Nava, individually;
Shane and Amy Watkins, individually;
Shane Nash;
Shanks Investment Group, LLC;
Sharon and Bruce Spencer, individually;
Sharon Brown, Trustee of the Sharon Brown Living Trust;
Shaun and Daisy Garman, individually;
Shawn Fulbright, Trustee of the Shawn Fulbright 2014 Revocable Trust;
Shawn Reed;
Shell Oil Co.;
Sherrice and John Weeces, individually;
Sherrie Daily;
Sheryl Shushan;
Shippee, LLC;
Shirley M. Palmer, Trustee of the Shirley Palmer Revocable Trust;
Shlomo Raz
Shull Bonsall, Jr., Trustee of the Shull Bonsall Family Trust;
Sidney and Jayne Rice, individually;
Siete Robles Mutual Water Company
Sisar Mutual Water Company
Skynest, LLC;
Societe d'Investissement Immobiliers et Financiers Franco-Allemand, a French corporation;
Soule Park Golf Course, Ldt.
Southern California Associated Investors, Ltd.;
Southern California Association of Seventh Day Adventists;

Southern California Edison Co.;
Spencer and Bailey Hill, individually;
SRPS, LP;
St. Joseph's Associates Of Ojai, California, Inc.
Stacy Cadenasso;
Stanley and Theresa Wyatt, individually;
Stanley and W Hubbell, individually;
Linda Roslansky, individually as Trustee of the Roslansky Family Trust;
State of California, Department of Transportation;
Stefan Kozak and Ana Lopes, individually;
Stephanie and Cheryl Beas, individually;
Stephanie Gustafson
Stephen and Carin Kally, individually;
Stephen and Cindy Barrack, individually;
Stephen Carr and Debra Gill, individually;
Stephen Huyler
Stephen M. Johnson, Trustee of the Stephen M. Johnson Living Trust;
Stephen Matzkin, Trustee of the Stephen Matzkin Trust;
Stephen Mitchell
Stephen Sanford;
Stephen Turner, Trustee of the Stephen R. Turner Living Trust;
Stephen Zane Fraser;
Steven and Brent Kanaly, individually;
Steven and Christine Vaughan, individually;
Steven and Ka Rapholz, individually;
Steven and Karen Erickson, individually;
Steven and Krissell Dutter, individually;
Steven Elliot Edelson, Trustee of the Los Angeles Entertainment Trust;
Steven P. Smith and Lynn Davis-Smith, individually as Trustees of the Smith Revocable Living Trust;
Stuart Rupp;
Sudarshan Gautam;
Sumeet Bhatia and Michael Mcdonald, individually;
Sumpuran Khalsa, Trustee of the Sumpuran S. Khalsa Living Trust;
Suria and John Gottesman, individually;
Susan Bee, Trustee of the John and Susan Bee Family Trust;
Susan Conley, Trustee of the William and Susan Conley Family Trust;
Susan Diller, Trustee of the Susan J Diller Trust;
Susan Garand;
Susan Gary;
Susan Gruber, individually and as Trustee of the Susan Gruber Living Trust;
Susan M. Ralph, Trustee of the Ralph Trust;
Susan Moll;
Susan Webster;
Susan Yarnell;
Sushma Gujral;
Suzanne Harvey, individually and as Trustee of the Suzanne G. Harvey Revocable Trust;
Suzanne Rhodes, Trustee of the Bateman-Rhodes Family Trust;
Sylvia Raz
T Bone Holdings, LLC;
T. Snyder
Tamarra Barbey;
Tane Charles Arnold, individually and as Trustee of the Tane C. Arnold 2006 Living Trust
Tanya Smith and Michael Montano, individually;
Ted Robinson, Trustee of the Robinson Family Trust;
Teen Challenge of Southern California, Inc.;
Telos Development Ojai, LLC;
Telos, LLC
Terra Crowley;
Terrance O'Connor and Kathy Franklin, individually;
Terrie Longo;
Terry Coultas Wilson;
Terry Wilson, Trustee of the Terry Coultas Wilson Living Trust;
Thacher Creek Citrus, LLC, a California Corporation
The Baptiste Foundation;
The Ojai Rental, LLC;
The Ojai Valley Land Conservancy;
The Roman Catholic Archbishop of Los Angeles, a sole corporation;

The Thacher School
Theodor and Lore Exner, individually;
Theodore and Judy Lucas, individually;
Theodore and Norma Schneider, individually;
Theodore and Tracy Mandryk, individually;
Theodore Willis Malos, Jr. and Pearl B. Malos, individually and as Trustees of the Malos Family Trust,;
Thomas and Christine Reed, individually;
Thomas and Cynthia Carver, individually;
Thomas and Jadona Coller Harper, individually;
Thomas and Nanette Benbrook, individually;
Thomas and Nikki Young, individually;
Thomas Collins
Thomas Jackson;
Thomas Tamplin and Michelle Wells, individually;
Three Oaks, LLC;
Three Sisters Orchard, LP;
Tico Mutual Water Company
Tim Krout
Timothy and Cheryl Austin, individually;
Timothy and Kathleen McHugh, individually;
Timothy and Kathryn Moran, individually;
Timothy and Linda Turner, individually;
Timothy and Mary Williamson, individually;
Timothy and Nicole Beckett, individually;
Timothy Jones;
Tobias and Tania Parker, individually;
Todd and Christina McGinley, individually;
Todd Henard and Kibhi Marie Henard, individually;
Todd Tullett, Trustee of the Todd Tullett Revocable Living Trust;
Tom and Nancy Roland, individually;
Tony and Heather Carlos, individually;
Topa Topa Ranch Company, LLC
Tracey and Melanie Boulton, individually;
Trent and Kris Greco, individually;
Troy Becker
Trudie Town
Tyler and Maria Barrell, individually;
Tyler Labine and Carrie Ruscheinsky, individually;
Uldine and Fabien Castel, individually;
Uriel and Chieko Lopez, individually;
US Natural Resources, Inc.;
Vanlaw Investment Corp.;
Ventura County Watershed Protection District
Ventura Land Trust;
Ventura River Water District
Ventura Unified School District;
Vicente Guzman;
Vicki Daw;
Vicki L. Hollingsworth, Trustee of the Hollingsworth Trust;
Victor and Sheryl Sanchez, individually;
Victor Timar
Victoria and John Junkin, individually;
Vida Vida, Trustee of the Vida Family Trust;
Vijay and Neeta Patel, individually;
Virginia I. Williamson, individually and as Trustee of Trust of Virginia I. Williamson;
Virginia M. McCarthy, Trustee of the Virginia M. McCarthy Living Trust;
Virginia Siegfried, Trustee of the Virginia A. Siegfried Revocable Trust;
Virginia Trevino;
Vivian Arber;
Vivienne Moody;
Walid A. Alawar, Trustee of the Walid A. Alawar Living Trust;
Walter and Evelyn Golis, individually;
Walter and Linda Boysiewick, individually;
Walter McGowan, Individually and as Trustee of the Walter Robert McGowan 1995 Trust;
Wanda and Meniford Canterberry, individually;
Warren Heath;
Watermark Carp II LLC;
Wayne Francis
Wayne Tate and Janice Priebe-Tate, individually as Trustees of the Tate Trust, as community property;

Weiss Investment Properties;
Wendy and David Churchill, individually;
Wesley Scott and Kasey Perins, individually;
West Crag Glen Smith, Successor Trustee of the Melissa Irene Elizabeth Smith Irrevocable Special Needs Trust - 1993;
Willi and Stefanie U. Coeler, individually and as Trustees of the W. and S. Coeler Living Trust;
William and Cheryl Meade, individually;
William and Helen Peck, individually;
William and Irene Snively, individually;
William and Jacqueline Boch, individually;
William and Kimbra Carnaghe, individually;
William and Lorraine Walsh, individually;
William and Melinda Welch, individually;
William and Paula Stevens, individually;
William and Susan Luther, individually;
William B. Hart, Jr., Trustee of the Constance Eaton Personal Residence Trust;
William Bailey, Trustee of the William F. Bailey Living Trust;
William Brothers, Trustee of the William C. Brothers Living Trust;
William Erickson;
William F. Newton and Charlotte R. Newton, individually as Trustees of the Newton Family Trust;
William Gilbreth, Trustee of the William J. Gilbreth Trust;
William Hawksworth;
William L. Reynolds;
William Loughboro;
William Lowes;
William Rusin
William Starr;
William White, Trustee of the William C. White Trust;
William Whorf;
Wilmetta Davis;
Winfried and Carol Boersch, individually;
Wood-Claeyssens Foundation
Wynn Johnson and Lisa Ayala Johnson, individually;
Yan and Alili Comment, individually;
Yarrow and Caroline Cheney, individually;
Yitzhak and Smadar Orlans, individually;
Yong Yi;
Yvette Marie and Daniel Joseph Sinohui, individually;
Yvon and Malinda Chouinard, individually;
Zachary and Diane Totten, individually
Zobeida Olson
Palm Road, LLC, a Delaware limited liability company, Roe 1;
10740 Chismahoo LLC, a California limited liability company, Roe 2;
11480 Sulphur Mountain Road, LLC, a California limited liability company, Roe 3;
Aisholz LLC, a California limited liability company, Roe 4;
Joellen Alflen, Trustee of The Joellen Alflen Separate Property Revocable Trust, Roe 5;
Hien Dao Andren, Trustee of The Andren Family Trust, Roe 6;
Linh T. Andren, individually, Roe 7;
Robert Kinglsey Andren, Trustee of The Andren Family Trust, Roe 8;
Son T. Andren, individually, Roe 9;
Charles H. Andrews III, Trustee of The Andrews Trust, Roe 10;
Susan M. Andrews, Trustee of The Andrews Trust, Roe 11;
Christine J. Bailey, Trustee of The William F. Bailey Living Trust, Roe 12;
Rocky J. Baio, individually , Roe 13;
Debra Bandy, Trustee of The Bandy Living Trust, Roe 14;
Timothy Bandy, Trustee of The Bandy Living Trust, Roe 15;
Nicholas F. Barham, individually, Roe 16;
Alicia S Beaty, individually, Roe 17;
J. Terry Beckett, Trustee of The Beckett Family Trust , Roe 18;
Joy Annette Edwards-Beckett, Trustee of The Beckett Family Trust , Roe 19;
Kelly Beckett, individually, Roe 20;
June Laurie Behar, Trustee of The Behar Living Trust, Roe 21;
Sheldon Behar, Trustee of The Behar Living Trust, Roe 22;
Carolyn D. Bennett, Trustee of The Bennett Family Trust, Roe 23;
James S. Bennett, Trustee of The Bennett Family Trust, Roe 24;
Big Bagga Acorns LLC, a California limited liability company, Roe 25;

Black Equine Investments, LLC, a California limited liability company, Roe 26;
Loa E. Bliss, Trustee of The Loa E. Bliss 2006 Revocable Trust, Roe 27;
Boulevard Haussmann LLC, a California limited liability company, Roe 28;
Ventura County Council of the Boy Scouts of America, a California nonprofit public benefit corporation, Roe 29;
Claire S. Brian, Trustee of The Brad & Claire Brian Living Trust, Roe 30;
Brad D. Brian, Trustee of The Brad & Claire Brian Living Trust, Roe 31;
Robert Brindis, individually , Roe 32;
Keith R. Brooks, Trustee of The Keith R. Brooks and Ruth E. Brooks Revocable Trust, Roe 33;
Ruth E. Brooks, Trustee of The Keith R. Brooks and Ruth E. Brooks Revocable Trust, Roe 34;
Tanny B. Brooks, individually, Roe 35;
Bonnie J. Delperdang-Brown, Trustee of The Bonnie J. Delperdang-Brown Trust, Roe 36;
Emily V. Brown, Trustee of The Restated Emily V. Brown Intervivos Trust, Roe 37;
BT Ranch Ojai, LLC, a California limited liability company, Roe 38;
California Department of Parks and Recreation, a division of the State of California , Roe 39;
Charles Gene Cantello, Trustee of The Charles Gene and Marilyn J. Cantello Living Trust, Roe 40;
Marilyn J. Cantello, Trustee of The Charles Gene and Marilyn J. Cantello Living Trust, Roe 41;
Susan K. Capper, Trustee of The Capper Trust Dated August 28, 2003, Roe 42;
Gordon R Carolin, individually, Roe 43;
Ileana Cataldo, Trustee of The Cataldo Family Living Trust, Roe 44;
John George Cataldo, Trustee of The Cataldo Family Living Trust, Roe 45;
CFC Land Inc., a California corporation, Roe 46;
Marsha Kee Strong-Chandler, individually, Roe 47;
Bruce Allen Chernof, Trustee of The Chernof/Garcia Living Trust, Roe 48;
Chevron U.S.A. Inc., a Pennsylvania corporation, Roe 49;
James E. Clark II, Trustee of The James E. Clark II Family Trust, Roe 50;
Leslie L. Clark, Trustee of The Leslie L. Clark Trust, Roe 51;
Mary Claire Clark, Trustee of The James E. Clark II Family Trust, Roe 52;
Catherine A. Collins, individually, Roe 53;
Sean D. Collins, individually, Roe 54;
Pamela Cooke, Successor Trustee of The Cooke Family Trust, Roe 55;
Edward J. Conner, Trustee of The Edward J. Conner Trust, Roe 56;
Angela Courtin, individually , Roe 57;
Joseph Davy, individually , Roe 58;
Patricia A. Davy, individually , Roe 59;
Tracey Davy, individually , Roe 60;
Lauren Deneen, individually, Roe 61;
Paul Deneen, individually, Roe 62;
Valerie Anne Giscard D'Estaing, Trustee of The Fixot-Giscard D'Estaing Family Trust, Roe 63;
Patricia Clark Doerner, Trustee of The Richard E. Doerner and Patricia Clark Doerner 2003 Family Trust, Roe 64;
Richard Doerner, Trustee of The Richard E. Doerner and Patricia Clark Doerner 2003 Family Trust, Roe 65;
Joaquin Dominguez, individually, Roe 66;
Tray R Droop, individually, Roe 67;
Niall Donnelly, individually, Roe 68;
Donald Dufau, Trustee of The Donald D. Dufau Family Trust, Roe 69;
Roberta Dufau, Trustee of The Donald D. Dufau Family Trust, Roe 70;
Jennifer Eckersley, Trustee of The John Scott and Jennifer Jane Eckersley 2004 Family Trust, Roe 71;
John Eckersley, Trustee of The John Scott and Jennifer Jane Eckersley 2004 Family Trust, Roe 72;
Kathy Entzel, Trustee of The Entzel Trust, Roe 73;
Nathan Entzel, Trustee of The Entzel Trust, Roe 74;
Mary A Ertl, individually, Roe 75;
Maria Olimpia Feig, Trustee of The Steve and Maria Feig Living Trust, Roe 76;
Steven Norman Feig, Trustee of The Steve and Maria Feig Living Trust, Roe 77;
Bernard Fixot, Trustee of The Fixot-Giscard D'Estaing Family Trust, Roe 78;
Janet K. Fredrick, Trustee of The Fredrick Family Marital Trust and Fredrick Family Exemption Trust, Roe 79;
Carl Fout, Trustee of The Carl Fout 2018

Trust, Roe 80;
Richard Franklin, Trustee of The Richard E. Franklin and Yvette M. Franklin Revocable Trust, Roe 81;
Yvette Franklin, Trustee of The Richard E. Franklin and Yvette M. Franklin Revocable Trust, Roe 82;
W. Eric Fulton, Trustee of The Elizabeth Mazell Trust, Roe 83;
Mandy K. Gaddie, individually, Roe 84;
William E. Gaddie II, individually, Roe 85;
Joseph Gamm, Trustee of The Joseph Gamm and Victoria J. Gamm Revocable Trust, Roe 86;
Victoria J. Gamm, Trustee of The Joseph Gamm and Victoria J. Gamm Revocable Trust, Roe 87;
Norman B. Garber, individually, Roe 88;
Daniel Garcia, Trustee of The Chernof/Garcia Living Trust, Roe 89;
Manuel A. Garcia, Trustee of The Sulphur Mountain Ranch Trust, Roe 90;
Stephen J. Garcia, Trustee of The Sulphur Mountain Ranch Trust, Roe 91;
Gloria Gerace, individually, Roe 92;
Benjamin Gilbert, individually, Roe 93;
David A. Gilbert, Trustee of The Loa E. Bliss 2006 Revocable Trust, Roe 94;
Aletheia Gooden, Trustee of The Quick/Gooden Family Trust, Roe 95;
Robert L. Goddard, individually , Roe 96;
Moshe Graber, Trustee of The Rain Trust, Roe 97;
Gail Graham, individually, Roe 98;
Zachary W. Griffin, III, Trustee of The Zachary W. Griffin, III Living Trust, Roe 99;
Gerrold Grigsby, individually, Roe 100;
Karen Grigsby, individually, Roe 101;
Guadalupe Guzman, individually, Roe 102;
Ofelia E. Guzman, individually, Roe 103;
James Hall, individually , Roe 104;
Marcia Hall, individually, Roe 105;
Hammond Canyon I, LLC, a California corporation , Roe 106;
Ralph Hansen, individually, Roe 107;
Sandra Hansen, individually, Roe 108;
Happy Valley Foundation, a California corporation, Roe 109;
Jana C. Hedman, Trustee of The Hedman Trust, Roe 110;
Ira Paul Heilveil, Trustee of The Heilveil Family Trust, Roe 111;
Marsha Jeanne McKeon Heilveil, Trustee of The Heilveil Family Trust, Roe 112;
C.B. Heller, Trustee of The Heller Family Trust, Roe 113;
Miranda Heller, Trustee of The Heller Family Trust, Roe 114;
Jennie Hilliger, Trustee of The Jorgenson Estate Trust, Roe 115;
Holguin Family Ventures, LLC, a California limited liability company, Roe 116;
Brian E. Holly, individually, Roe 117;
Camille Carlson-Holly, individually, Roe 118;
Douglas J. Homze, individually, Roe 119;
Sharon M. Homze, individually, Roe 120;
Helen Huyler, individually, Roe 121;
Amira J. Ingram, individually , Roe 122;
Arthur T. Jarvis III, Trustee of The Arthur T. Jarvis III Separate Property Trust , Roe 123;
Jessica Jeffrey, individually , Roe 124;
JLA, LLC, a Delaware limited liability company , Roe 125;
Jonesy-B Limited Partnership, a California limited partnership, Roe 126;
Domlin A. Juul, Trustee of The Domlin A. Juul Trust, Roe 127;
Paula Kaiser, individually , Roe 128;
Thomas Kaiser, individually , Roe 129;
Soheila Kolahi, individually, Roe 130;
David Laag, Successor Trustee of The Arthur E. Laag Family 1978 Trust, Roe 131;
Elizabeth Anne Lane, Trustee of The Moody/Lane Family Trust, Roe 132;
Beverly L. Lanning, Trustee of The Lanning Family Survivor's Trust, Roe 133;
Eugene Larson, Trustee of The Larson Living Trust , Roe 134;
Jacqueline Larson, Trustee of The Larson Living Trust , Roe 135;
Steven A Lasiter, individually, Roe 136;
John Lee, individually, Roe 137;
Gail M. Light, individually, Roe 138;
Michael T. Lindsay, individually, Roe 139;
Susan L. Lindsay, individually, Roe 140;
Catherine M. Logan, Successor Trustee of The Feeney Family Trust, Roe 141;
Gunnar Lovelace, Trustee of The Gunnar Lovelace Revocable Trust , Roe 142;
John Lee, individually, Roe 143;
Richard C. Loy, Trustee of The Loy Family Trust, Roe 144;
Virginia N. Loy, Trustee of The Loy Family Trust, Roe 145;
Robin Luttenberger, individually , Roe 146;

Linda J.G. MacDougall, Trustee of The Linda J.G. MacDougall Living Trust, Roe 147;
Elizabeth Mallinson, Trustee of The Mallinson-Temmel Living Trust, Roe 148;
Mike Marietta, Trustee of The Marietta Living Trust, Roe 149;
Michelle Mason, individually, Roe 150;
Matilija Canyon Properties, a California limited partnership, Roe 151;
Matilija Center, LLC, a California limited liability company, Roe 152;
Matilija Investment Property, LLC, Roe 153;
Dominick McCormick, Trustee of The Dominick and Stefanie McCormick Trust, Roe 154;
Stefanie McCormick, Trustee of The Dominick and Stefanie McCormick Trust, Roe 155;
Meditation Groups, Inc., a California non-profit public benefit corporation , Roe 156;
Meher Mount Corporation, a California corporation, Roe 157;
Baulio Mejia, individually, Roe 158;
Rosamaria Mejia, individually, Roe 159;
Curtis Menefee, individually, Roe 160;
Viollette Menefee, individually, Roe 161;
Lisane S. Menezes, Trustee of The Menezes Community Property Trust, Roe 162;
Voltaire Gustavo K. Menezes, Trustee of The Menezes Community Property Trust, Roe 163;
Justin M Mesker, individually , Roe 164;
John Minkel, individually, Roe 165;
Theresa Minkel, individually, Roe 166;
Thomas Molyneux, individually, Roe 167;
Thomas Mone, individually, Roe 168;
Joel Alan Moody, Trustee of The Moody/Lane Family Trust, Roe 169;
Bethany A. Moore, individually , Roe 170;
Juan J. Morales, individually, Roe 171;
Bradley A. Morrice, individually, Roe 172;
Walter W. Mosher, Jr, Trustee of The Walter W. Mosher, Jr. Living Trust, Roe 173;
Walter W. Mosher, Jr., individually, Roe 174;
Rebecca Mosher, individually, Roe 175;
Suzanne Naegle, Trustee of The Sue Naegle 2018 Trust, Roe 176;
New Civilization, a California corporation, Roe 177;
Ojai Valley School, a California corporation , Roe 178;
Linda F. Olive, Trustee of The Linda F. Olive 2017 Trust, Roe 179;
Joanne P. Oslund, individually , Roe 180;
Kevin G. Oslund, individually , Roe 181;
G. Oviatt, individually, Roe 182;
Phyllis J. Oviatt, individually, Roe 183;
Jodie Suzanne Ozatalar, Trustee of The California Ozatalar Family Trust, Roe 184;
Michael Ray Ozatalar, Trustee of The California Ozatalar Family Trust, Roe 185;
Johnny Park, individually , Roe 186;
Iiona M. Pecel, Trustee of The Pecel Trust, Roe 187;
John L. Pecel, Trustee of The Pecel Trust, Roe 188;
Deborah B. Perry, individually, Roe 189;
Justin Peters, individually, Roe 190;
Stacey Peters, individually, Roe 191;
Ngoc T. Petrarca, individually, Roe 192;
Emily Wilson Prather, Trustee of The Frank Lee Prather and Emily Wilson Prather Family Trust, Roe 193;
Frank Lee Prather, Trustee of The Frank Lee Prather and Emily Wilson Prather Family Trust, Roe 194;
Jan Preiczer, individually, Roe 195;
Louis Preiczer, individually, Roe 196;
Michael W. Price, Trustee of The Michael W. Price Trust, Roe 197;
Emmanuelle Pytka, individually, Roe 198;
Trevor Quirk, Trustee of The Quick/Gooden Family Trust, Roe 199;
Ellen Rakieten, individually , Roe 200;
Rancho Dos Rios, LLC, a California limited liability company, Roe 201;
Paul J. Reep, Trustee of The Reep Family Trust, Roe 202;
Sheila Reep, Trustee of The Reep Family Trust, Roe 203;
Andra Rich, Trustee of The Andrea Rich Living Trust, Roe 204;
Jason Robinson, individually, Roe 205;
Richard Holt Robinson, individually, Roe 206;
Shane Robinson, individually , Roe 207;
Christel Rogero, individually, Roe 208;
Larry Rogero, individually, Roe 209;
Richard Wayne Roll, Trustee of The Richard Wayne Roll and Susan Geisel Roll Revocable 2004 Trust, Roe 210;
Susan Geisel Roll, Trustee of The Richard Wayne Roll and Susan Geisel Roll Revocable 2004 Trust, Roe 211;

Robin K. Roy, Trustee of The RZF Trust, Roe 212;
Rush Family Limited Partnership, a California limited partnership, Roe 213;
James Jay Seltenreich, Trustee of The Seltenreich Family Trust, Roe 214;
Janice Seltenreich, Trustee of The Seltenreich Family Trust, Roe 215;
Nancy Seltzer, Trustee of The Nancy Seltzer Living Trust, Roe 216;
Seneca Gardens Limited, a California limited partnership, Roe 217;
Sandra Shinall, individually, Roe 218;
Frederick M. Silvers, individually, Roe 219;
Alireza Sizdahkhani, individually , Roe 220;
Tabandeh Sizdahkhani, individually, Roe 221;
Amir Mansour Shahparaki, Trustee of The 2009 Amir Mansour Shahparaki and Jean Alice Hamilton Welsh Revocable Trust, Roe 222;
Larry J. Shellnut, Trustee of The Shellnut Trust, Roe 223;
Margaret R. Shellnut, Trustee of The Shellnut Trust, Roe 224;
Sheron LLC, a California limited liability company, Roe 225;
Eitan Sloustcher, individually, Roe 226;
Sara Sloustcher, individually, Roe 227;
Bradley W. Smith, individually, Roe 228;
Robert Smith, individually, Roe 229;
Stacy Smith, individually, Roe 230;
Stephen Temmel, Trustee of The Mallinson-Temmel Living Trust, Roe 231;
Marjorie Tezak, individually, Roe 232;
Elisabeth K. Treadwell, individually, Roe 233;
Alexander Treadwell, individually, Roe 234;
Tropico (2004), LLC, a Delaware limited liability company , Roe 235;
John T. Vangel, Trustee of The Vangel Trust, Roe 236;
Ysabel Vega, individually, Roe 237;
Ventura Industrial Properties II, LLC, a California limited liability company, Roe 238;
Karon O. Vereen, individually , Roe 239;
VMHP L.P., a California limited partnership, Roe 240;
Charles L. Ward III, Co-Trustee of The Ward-Lombardo Living Trust, Roe 241;
Jean Marie Webster, Trustee of The Roger E. and Jean-Marie Webster Trust, Roe 242;
Roger E. Webster, Trustee of The Roger E. and Jean-Marie Webster Trust, Roe 243;
Jean Alice Hamilton Welsh, Trustee of The 2009 Amir Mansour Shahparaki and Jean Alice Hamilton Welsh Revocable Trust, Roe 244;
Dura Milton Williams, Trustee of The Dura Milton Williams and Honor Elizabeth Bliss-Williams Living Trust, Roe 245;
Honor Elizabeth Bliss-Williams, Trustee of The Dura Milton Williams and Honor Elizabeth Bliss-Williams Living Trust, Roe 246;
Robert L. Yanez, Trustee of The Robert L. Yanez Trust, Roe 247;
Susan Young, individually , Roe 248;
Catherine R. Zoi, Trustee of The RZF Trust, Roe 249;
2705 Maricopa LLC, a California limited liability company, Roe 250;
4205 Thacher Road LLC, a Delaware limited liability company, Roe 251;
Richard Adams, Trustee of The Richard N. Adams and Verna Joy Adams Revocable Trust, Roe 252;
Verna Adams, Trustee of The Richard N. Adams and Verna Joy Adams Revocable Trust, Roe 253;
Lori M. Ahlberg, Trustee of The Chris V. Browning and M. Laverne Browning Trust dated September 13, 1990, Roe 254;
Felipe Varela Arredondo, individually, Roe 255;
Arroyo Mobile Home Park LLC, a California limited liability company, Roe 256;
Holly Bakarich, individually, Roe 257;
Baldwin Ranch LLC, a Nevada limited liability company, Roe 258;
Edgar S. Benson, individually, Roe 259;
Nicolas G. Berbari, individually, Roe 260;
Berryessa 1564, LLC, a California limited liability company , Roe 261;
Boulevard Haussmann, LLC, a California limited liability company, Roe 262;
Jennifer Kirsten Brewer, Trustee of The Nathan Ray Brewer and Jennifer Kirsten Brewer Trust of 2014, Roe 263;
Nathan Ray Brewer, Trustee of The Nathan Ray Brewer and Jennifer Kirsten Brewer Trust of 2014, Roe 264;
Lorne M. Buchman, Trustee of The Lorne Buchman Revocable Trust, 2004, Roe 265;
Hinderikus Busz, Trustee of The Hinderikus Busz Revocable Trust, Roe 266;

Samantha Casey, individually, Roe 267;
Channel Island Holdings, LLC, a Delaware limited liability company, Roe 268;
Herbert D. Chisum, individually , Roe 269;
Virgil Clary, individually , Roe 270;
James Congdon, Trustee of The Congdon Family Revocable Trust, Roe 271;
Sandra Congdon, Trustee of The Congdon Family Revocable Trust, Roe 272;
Culbert Family Partnership, Roe 273;
Joshua L. Currier, individually , Roe 274;
Kristen D. Currier, individually , Roe 275;
Leland George Davis, Trustee of The Davis Lee Trust and The First Amended Lee Davis Trust, Roe 276;
Mario Del Nagro, individually , Roe 277;
Maria Depaola, individually , Roe 278;
James Desurra, individually , Roe 279;
John Desurra, individually , Roe 280;
Karen L. Edwards, individually , Roe 281;
Cynthia A. Ellestad, Trustee of The Cynthia Ellestad Trust dated August 22, 2007, Roe 282;
Christopher P. Fabian, individually , Roe 283;
Adam C. Fenn, individually , Roe 284;
Kimberly Fernandez, individually , Roe 285;
Michael Flett, individually , Roe 286;
Gary R. Gallion, Trustee of The Gary and Nancy Gallion Trust, Roe 287;
Nancy L. Gallion, Trustee of The Gary and Nancy Gallion Trust, Roe 288;
Robert Gavula, individually , Roe 289;
Chris W. Gedwed, individually , Roe 290;
Kalli N. Gedwed, individually , Roe 291;
Steven J. Gluck, individually , Roe 292;
Thayer A. Gowdy, individually , Roe 293;
Kristine Griswold, individually , Roe 294;
Ronda Grow, Trustee of The Grow Family Trust, Roe 295;
Michael P. Halsell, individually , Roe 296;
Linda Anne Shufeldt Gidden Haque, Trustee of The Haque Family Trust "A", Roe 297;
Brandon Hansen, individually , Roe 298;
Jamie Hansen, individually , Roe 299;
Meghann L. Haven, individually , Roe 300;
Juan L.R. Hernandez, individually , Roe 301;
Brett Hitchman, Trustee of The George Replogle Statutory Minor's Trust;
, Roe 302;
Lee Ann Hitchman, Trustee of The George Replogle Statutory Minor's Trust, Roe 303;
Bethalyn Jonker, individually , Roe 304;
Willem Jonker, individually , Roe 305;
Janice Kanellis, individually , Roe 306;
Kerstin C. Kuhn, individually , Roe 307;
Lakeside Housing Partners, LP, a California limited partnership, Roe 308;
Leap of Faith Partners, LLC, a California limited liability company, Roe 309;
Left Coast Property Investments, LLC, a California limited liability company, Roe 310;
Donald A. Lesch, individually , Roe 311;
Sheryl A. Lesch, individually , Roe 312;
Kelsey M. Lindsey, individually , Roe 313;
Matthew D. Lindsey, individually , Roe 314;
Honey Sharp Lippman, Trustee of The Nadia Szold Irrevocable Trust, Roe 315;
Justin T. Lucia, individually , Roe 316;
Patrick N. McCracken, individually , Roe 317;
Jeffrey McManus, individually, Roe 318;
Julie McManus, individually, Roe 319;
Deborah S. Meyer, individually , Roe 320;
Megan Meyer, individually, Roe 321;
Robert Meyer, individually , Roe 322;
Byron Kathleen Mitchell, Trustee of The Stephen Mitchell and Byron Katie Trust Dated June 4, 2002, as amended, Roe 323;
Stephen Mitchell, Trustee of The Stephen Mitchell And Byron Katie Trust Dated June 4, 2002, as amended, Roe 324;
Brent Monsour, individually , Roe 325;
Everest Mueller , Roe 326;
Megan J. Rider-Mueller, individually , Roe 327;
Niji Productions, Inc., a California corporation, Roe 328;
Christopher Noxon, Trustee of The Christopher Noxon Living Trust, Roe 329;
Cheryl Mae Olivere, Trustee of The Cheryl Mae Olivere and James Victor Olivere Trust, Roe 330;
Michele Ouellet, individually , Roe 331;
Pearl Street Associates, LLC, a California limited liability company, Roe 332;
David Pickles, Trustee of The Pickles Family Trust dated December 13, 2016, Roe 333;
Sasha Pickles, Trustee of The Pickles Family Trust dated December 13, 2016, Roe 334;
Jillian Pinto, individually , Roe 335;
Hillary D. Plichter, individually , Roe 336;
Joseph M. Plichter, individually , Roe 337;
Jaime H. Redin, Trustee of The Jaime H.

Redin and Maria De Lourdes Living Trust dated December 17, 2007, Roe 338;
Maria De Lourdes Redin, Trustee of The Jaime H. Redin and Maria De Lourdes Living Trust dated December 17, 2007, Roe 339;
Edward R. Richter, Trustee of The Nadia Szold Irrevocable Trust, Roe 340;
Austin Ringelstein, individually , Roe 341;
Kathleen P. Robertson, individually , Roe 342;
Fatima Robinson, Trustee of The Fatima Robinson Living Trust dated June 2, 2015, Roe 343;
Carmel A Rodriguez, individually , Roe 344;
Haley K. Ryan, individually , Roe 345;
Brian Smith, individually, Roe 346;
Sharon Smith, individually , Roe 347;
Justin Stiegemeyer, Trustee of The 4569 Grand Avenue Trust, Roe 348;
Jason T. Stowell, Trustee of The Stowell Family Trust Dated June 6, 2007, Roe 349;
Nanette Stowell, Trustee of The Stowell Family Trust Dated June 6, 2007, Roe 350;
Dana Stuart, Trustee of The Dana Stuart Trust, Roe 351;
Ann M. Supan, individually , Roe 352;
Scott T. Supan, individually , Roe 353;
Zvi Azriel Swiatycki, Trustee of The Gary Barnett Trust, Roe 354;
Charles J. Swift, individually , Roe 355;
Nicole L. Swift, individually , Roe 356;
Nadia Szold, Trustee of The Nadia Szold Irrevocable Trust, Roe 357;
Pamela N. Tellez, individually , Roe 358;
Brandon S. Titus, individually , Roe 359;
Jessica M. Traviglia, individually , Roe 360;
Alexandro Xavier Varela, individually , Roe 361;
Angelina Manzo Varela, individually , Roe 362;
Scott Warner, individually , Roe 363;
Matthew Waterson, Trustee of The Green Door Trust, Roe 364;
Rachel Waterson, Trustee of The Green Door Trust, Roe 365;
Camren D. Whitledge, individually , Roe 366;
Kelly L. Whitledge, individually , Roe 367;
Daniel Wilber, individually , Roe 368;
Jenna Wilber, individually , Roe 369;
Thomas W. Wilber, individually , Roe 370;
Yvonne Wilber, individually , Roe 371;
Andrew T. Williams, individually , Roe 372;
Iliana V. Dehoyos-Williams, individually, Roe 373;
Rebecca Williams, individually , Roe 374;
Scott Williams, individually , Roe 375;
Alison Wilson, individually , Roe 376;
Kenny Wilson, individually , Roe 377;
Erica B. Winston, individually , Roe 378;
Ramon A. Winston, individually , Roe 379;
Lucas A. Wittig, individually , Roe 380;
Karen M. Avinelis, individually, Roe 381;
Andy Bogetti, Trustee of the Lynne & Andy Bogetti Family Trust dated December 5, 2011, Roe 382;
Lynne Bogetti, Trustee of the Lynne & Andy Bogetti Family Trust dated December 5, 2011, , Roe 383;
Matthew Bogetti, individually, Roe 384;
Nathan A. Bogetti, individually , Roe 385;
Robert P. Bogetti, Sr., Trustee of the Bogetti Family Trust, Roe 386;
Vincent Bogetti, individually, Roe 387;
Canada Larga Ranch, LP, a California limited partnership, as successor to Canada Larga Land & Live Company, Roe 388;
Cedarfield Capital, LLC, a Delaware limited liability company, Roe 389;
Darlene R. Corter, individually, Roe 390;
Billie Diaz, Trustee of the Hawk's View Trust dated January 7, 2016 (formerly known as Billie Early), Roe 391;
Benjamin Efram, Trustee of The Benjamin Efram Living Trust, Roe 392;
Edward W. Fredrick, individually, Roe 393;
Janet Fredrick, individually, Roe 394;
Paul F. Hofmeister, individually, Roe 395;
Orthopaedic Institute for Children Foundation, as successor to Los Angeles Orthopaedic Foundation, Roe 396;
Nut Farm LLC, a California limited liability company , Roe 397;
Arlene K. Lemos, individually, Roe 398;
Jeanne F. MacDonald, individually, Roe 399;
Diane Pacheco, Trustee of the Bypass and Survivor's Trust under the Pacheco Family Trust dated March 14, 2012, Roe 400;
Peter A. Reece, Trustee of the Pete and Charlene Reece Family Trust dated June 11, 1999 as amended and restated, Roe 401;
John E. Reece, individually, Roe 402;
Georgette Seefeldt, individually, Roe 403;
Blair Sellers, Trustee of the Blair E. Sellers and Marjorie B. Sellers Revocable Living

Trust, Roe 404;
Marjorie Sellers, Trustee of the Blair E. Sellers and Marjorie B. Sellers Revocable Living Trust, Roe 405;
R.H. Smith Family Properties, LLC, as successor to R H Smith Family Partnership, Roe 406;
Sulphur Mountain Land and Livestock Co., LLC, a California limited liability company, Roe 407;
Anthony H. Taylor, individually, Roe 408;
Mark S. Taylor, individually, Roe 409;
F. Michael Shore, successor to Timber Canyon Ranches, Roe 410;
Union Pacific Railroad, as successor to Southern Pacific Transportation Company, Roe 411;
Volnav II LLC, a California limited liability company , Roe 412;
Leslie A. Wheelock, individually, Roe 413;
Amanda Colbeck, Roe 414;
Daniel Colbeck, Roe 415;
Lisa M. Crawford, Roe 416;
Todd C. Crawford, Roe 417

Exhibit C – List of Parcels

Parcels

008-0-090-115	009-0-121-035	010-0-080-100	010-0-110-035
008-0-090-175	009-0-122-010	010-0-080-130	010-0-110-070
008-0-090-195	009-0-122-075	010-0-080-180	010-0-110-080
008-0-090-295	009-0-122-085	010-0-080-210	010-0-110-090
008-0-120-075	009-0-130-155	010-0-080-220	010-0-110-100
008-0-120-100	009-0-130-315	010-0-080-240	010-0-110-120
008-0-120-140	009-0-130-395	010-0-080-250	010-0-110-130
008-0-120-175	009-0-130-405	010-0-080-275	010-0-120-020
009-0-050-050	009-0-130-415	010-0-080-305	010-0-120-155
009-0-060-065	010-0-010-010	010-0-080-315	010-0-120-180
009-0-060-070	010-0-010-050	010-0-080-320	010-0-120-200
009-0-060-080	010-0-010-060	010-0-080-330	010-0-120-210
009-0-070-020	010-0-050-010	010-0-080-340	010-0-120-220
009-0-070-040	010-0-050-050	010-0-080-350	010-0-120-230
009-0-070-050	010-0-050-071	010-0-080-380	010-0-120-240
009-0-070-090	010-0-050-072	010-0-090-010	010-0-130-040
009-0-070-100	010-0-050-150	010-0-090-030	010-0-130-090
009-0-070-110	010-0-050-220	010-0-090-040	010-0-130-100
009-0-070-150	010-0-050-230	010-0-090-060	010-0-130-130
009-0-070-160	010-0-050-240	010-0-090-070	010-0-130-150
009-0-070-185	010-0-050-260	010-0-090-080	010-0-130-170
009-0-070-190	010-0-050-280	010-0-090-110	010-0-130-190
009-0-070-200	010-0-050-290	010-0-101-020	010-0-130-210
009-0-080-010	010-0-050-310	010-0-101-030	010-0-130-220
009-0-080-020	010-0-050-320	010-0-101-040	010-0-130-230
009-0-090-020	010-0-060-030	010-0-101-050	010-0-130-240
009-0-090-070	010-0-060-060	010-0-101-060	010-0-130-250
009-0-090-090	010-0-060-070	010-0-101-070	010-0-130-265
009-0-090-110	010-0-060-080	010-0-101-080	010-0-130-275
009-0-090-120	010-0-060-090	010-0-101-090	010-0-130-285
009-0-090-130	010-0-060-110	010-0-101-100	010-0-130-320
009-0-090-140	010-0-060-120	010-0-101-130	010-0-130-350
009-0-090-150	010-0-060-140	010-0-101-140	010-0-140-035
009-0-090-165	010-0-060-150	010-0-101-150	010-0-140-055
009-0-090-175	010-0-070-010	010-0-102-080	010-0-140-065
009-0-090-180	010-0-070-050	010-0-102-090	010-0-140-075
009-0-090-190	010-0-070-070	010-0-102-170	010-0-140-080
009-0-110-295	010-0-070-110	010-0-102-190	010-0-140-115
009-0-110-345	010-0-070-120	010-0-102-200	010-0-140-125
009-0-110-355	010-0-070-130	010-0-102-210	010-0-140-130
009-0-110-385	010-0-070-140	010-0-102-270	010-0-140-150
009-0-110-395	010-0-070-160	010-0-102-280	010-0-140-165
009-0-110-405	010-0-070-210	010-0-102-290	010-0-140-170
009-0-120-015	010-0-070-255	010-0-102-320	010-0-140-180
009-0-121-010	010-0-070-260	010-0-102-330	010-0-140-235
009-0-121-025	010-0-080-040	010-0-102-340	010-0-140-245

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010-0-150-050	010-0-180-510	010-0-194-070	011-0-010-315
010-0-150-060	010-0-191-045	010-0-201-045	011-0-010-325
010-0-150-090	010-0-191-065	010-0-201-080	011-0-010-335
010-0-150-110	010-0-191-085	010-0-201-090	011-0-010-345
010-0-150-120	010-0-191-095	010-0-201-100	011-0-010-355
010-0-150-150	010-0-191-105	010-0-201-110	011-0-010-365
010-0-150-170	010-0-191-110	010-0-201-120	011-0-010-375
010-0-150-180	010-0-192-035	010-0-201-130	011-0-010-385
010-0-150-190	010-0-192-045	010-0-201-140	011-0-010-445
010-0-150-200	010-0-192-055	010-0-201-150	011-0-010-455
010-0-150-220	010-0-192-065	010-0-201-160	011-0-020-040
010-0-150-230	010-0-192-075	010-0-201-170	011-0-020-060
010-0-150-240	010-0-192-085	010-0-201-180	011-0-020-075
010-0-150-250	010-0-192-095	010-0-201-190	011-0-020-095
010-0-150-260	010-0-192-105	010-0-201-200	011-0-020-100
010-0-160-100	010-0-192-125	010-0-201-210	011-0-020-110
010-0-160-130	010-0-192-135	010-0-201-220	011-0-030-030
010-0-160-160	010-0-192-155	010-0-201-230	011-0-030-040
010-0-160-180	010-0-192-165	010-0-210-040	011-0-030-050
010-0-170-025	010-0-192-175	010-0-210-070	011-0-030-060
010-0-170-050	010-0-192-185	010-0-210-090	011-0-040-135
010-0-170-060	010-0-193-025	010-0-210-115	011-0-052-015
010-0-170-070	010-0-193-035	010-0-210-120	011-0-052-025
010-0-170-090	010-0-193-045	010-0-210-150	011-0-052-035
010-0-170-160	010-0-193-065	010-0-210-170	011-0-052-210
010-0-170-170	010-0-193-100	010-0-210-200	011-0-052-230
010-0-170-200	010-0-193-125	010-0-220-020	011-0-052-240
010-0-170-210	010-0-193-145	010-0-220-030	011-0-052-260
010-0-170-220	010-0-193-160	010-0-220-040	011-0-052-280
010-0-170-230	010-0-193-175	010-0-220-050	011-0-052-290
010-0-170-240	010-0-193-185	010-0-220-060	011-0-052-300
010-0-180-080	010-0-193-225	010-0-220-070	011-0-052-310
010-0-180-120	010-0-193-230	010-0-220-080	011-0-091-230
010-0-180-150	010-0-193-240	010-0-220-090	011-0-091-345
010-0-180-160	010-0-193-255	010-0-220-120	011-0-190-305
010-0-180-180	010-0-193-265	010-0-220-130	011-0-190-315
010-0-180-190	010-0-193-275	010-0-220-140	011-0-220-015
010-0-180-360	010-0-193-285	010-0-231-050	011-0-220-025
010-0-180-370	010-0-193-295	010-0-231-060	011-0-220-035
010-0-180-420	010-0-193-305	010-0-231-070	011-0-220-045
010-0-180-430	010-0-193-315	010-0-231-080	011-0-220-055
010-0-180-440	010-0-193-325	010-0-232-030	011-0-220-065
010-0-180-450	010-0-194-015	010-0-232-040	011-0-220-075
010-0-180-470	010-0-194-040	010-0-232-050	011-0-220-085
010-0-180-490	010-0-194-050	010-0-232-060	011-0-220-095
010-0-180-500	010-0-194-060	011-0-010-245	011-0-220-105

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011-0-220-115	011-0-240-105	011-0-250-355	014-0-040-070
011-0-220-125	011-0-240-115	011-0-250-365	014-0-040-140
011-0-220-135	011-0-240-125	011-0-250-375	014-0-040-170
011-0-220-145	011-0-240-135	011-0-250-385	014-0-040-200
011-0-220-155	011-0-240-145	011-0-260-055	014-0-040-210
011-0-220-165	011-0-240-155	011-0-260-065	014-0-040-220
011-0-220-175	011-0-240-165	011-0-260-075	014-0-040-230
011-0-220-185	011-0-240-175	011-0-260-085	014-0-040-240
011-0-220-195	011-0-240-185	011-0-270-010	014-0-040-270
011-0-220-205	011-0-240-205	011-0-270-030	014-0-040-280
011-0-220-215	011-0-240-215	011-0-270-040	014-0-050-010
011-0-220-225	011-0-240-225	011-0-270-055	014-0-050-025
011-0-220-235	011-0-240-235	011-0-270-065	014-0-050-060
011-0-220-245	011-0-240-245	011-0-270-075	014-0-050-080
011-0-220-255	011-0-240-255	011-0-270-085	014-0-050-100
011-0-220-265	011-0-240-265	011-0-270-095	014-0-050-130
011-0-220-275	011-0-240-275	011-0-270-105	014-0-050-145
011-0-220-285	011-0-240-285	011-0-270-115	014-0-050-150
011-0-220-295	011-0-250-015	011-0-270-130	014-0-050-160
011-0-230-015	011-0-250-025	011-0-270-140	014-0-050-175
011-0-230-025	011-0-250-035	011-0-270-150	014-0-060-055
011-0-230-035	011-0-250-045	011-0-270-160	014-0-060-100
011-0-230-045	011-0-250-055	011-0-270-170	014-0-060-160
011-0-230-055	011-0-250-065	011-0-270-180	014-0-060-175
011-0-230-065	011-0-250-075	014-0-010-020	014-0-060-185
011-0-230-075	011-0-250-085	014-0-010-080	014-0-060-245
011-0-230-105	011-0-250-095	014-0-010-090	014-0-060-255
011-0-230-115	011-0-250-105	014-0-100-025	014-0-060-365
011-0-230-155	011-0-250-115	014-0-100-035	014-0-060-415
011-0-230-165	011-0-250-125	014-0-120-060	014-0-060-425
011-0-230-175	011-0-250-135	014-0-130-050	014-0-060-435
011-0-230-195	011-0-250-145	014-0-030-050	014-0-060-440
011-0-230-205	011-0-250-155	014-0-030-060	014-0-060-455
011-0-230-215	011-0-250-165	014-0-030-100	014-0-060-465
011-0-230-225	011-0-250-175	014-0-030-140	014-0-060-480
011-0-230-235	011-0-250-185	014-0-030-160	014-0-060-490
011-0-230-255	011-0-250-195	014-0-030-185	014-0-060-500
011-0-240-015	011-0-250-205	014-0-030-205	014-0-070-020
011-0-240-025	011-0-250-215	014-0-030-220	014-0-070-030
011-0-240-035	011-0-250-225	014-0-030-250	014-0-070-040
011-0-240-045	011-0-250-235	014-0-030-275	014-0-070-090
011-0-240-055	011-0-250-245	014-0-030-285	014-0-070-160
011-0-240-065	011-0-250-255	014-0-030-290	014-0-070-170
011-0-240-075	011-0-250-260	014-0-030-300	014-0-070-180
011-0-240-085	011-0-250-295	014-0-040-045	014-0-070-190
011-0-240-095	011-0-250-305	014-0-040-055	014-0-070-200

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014-0-070-210	014-0-090-490	014-0-100-340	017-0-010-380
014-0-070-220	014-0-090-525	014-0-100-390	017-0-010-400
014-0-070-290	014-0-090-555	014-0-100-400	017-0-010-410
014-0-070-300	014-0-090-565	014-0-100-415	017-0-010-430
014-0-070-350	014-0-090-595	014-0-110-030	017-0-010-440
014-0-070-360	014-0-090-605	014-0-110-040	017-0-010-450
014-0-080-020	014-0-090-615	014-0-110-050	017-0-010-480
014-0-080-030	014-0-090-625	014-0-110-060	017-0-010-490
014-0-080-065	014-0-090-635	014-0-110-070	017-0-020-010
014-0-080-070	014-0-090-645	014-0-110-080	017-0-020-030
014-0-080-090	014-0-090-665	014-0-110-100	017-0-020-080
014-0-080-115	014-0-090-705	014-0-110-120	017-0-020-090
014-0-080-125	014-0-090-715	014-0-110-130	017-0-020-100
014-0-080-135	014-0-090-725	014-0-110-140	017-0-020-110
014-0-080-140	014-0-090-735	014-0-110-160	017-0-020-170
014-0-080-150	014-0-090-745	014-0-110-200	017-0-020-190
014-0-080-190	014-0-090-755	014-0-110-220	017-0-020-200
014-0-080-225	014-0-090-765	014-0-110-240	017-0-020-210
014-0-080-235	014-0-090-785	014-0-110-250	017-0-020-220
014-0-080-240	014-0-090-790	014-0-120-030	017-0-020-230
014-0-090-035	014-0-090-800	014-0-120-070	017-0-020-260
014-0-090-045	014-0-090-815	014-0-120-080	017-0-020-300
014-0-090-055	014-0-090-825	014-0-120-090	017-0-020-310
014-0-090-130	014-0-090-835	017-0-010-030	017-0-020-320
014-0-090-140	014-0-090-845	017-0-010-040	017-0-020-340
014-0-090-150	014-0-090-855	017-0-010-060	017-0-020-350
014-0-090-160	014-0-100-010	017-0-010-080	017-0-031-010
014-0-090-180	014-0-100-040	017-0-010-090	017-0-031-020
014-0-090-190	014-0-100-050	017-0-010-100	017-0-031-040
014-0-090-210	014-0-100-065	017-0-010-110	017-0-031-050
014-0-090-240	014-0-100-080	017-0-010-120	017-0-031-080
014-0-090-250	014-0-100-090	017-0-010-130	017-0-032-080
014-0-090-260	014-0-100-100	017-0-010-140	017-0-032-110
014-0-090-270	014-0-100-120	017-0-010-160	017-0-032-120
014-0-090-295	014-0-100-130	017-0-010-170	017-0-032-130
014-0-090-330	014-0-100-140	017-0-010-180	017-0-032-150
014-0-090-340	014-0-100-195	017-0-010-210	017-0-032-160
014-0-090-350	014-0-100-200	017-0-010-220	017-0-032-170
014-0-090-375	014-0-100-220	017-0-010-230	017-0-033-020
014-0-090-390	014-0-100-230	017-0-010-240	017-0-033-030
014-0-090-430	014-0-100-240	017-0-010-260	017-0-033-080
014-0-090-440	014-0-100-260	017-0-010-280	017-0-033-090
014-0-090-450	014-0-100-280	017-0-010-290	017-0-033-100
014-0-090-460	014-0-100-290	017-0-010-340	017-0-033-120
014-0-090-470	014-0-100-310	017-0-010-350	017-0-033-130
014-0-090-480	014-0-100-330	017-0-010-360	017-0-033-140

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017-0-033-150	017-0-051-520	017-0-061-400	017-0-062-380
017-0-033-160	017-0-051-530	017-0-061-410	017-0-062-390
017-0-033-170	017-0-051-540	017-0-061-420	017-0-062-400
017-0-033-180	017-0-052-020	017-0-061-430	017-0-062-410
017-0-040-010	017-0-052-050	017-0-061-440	017-0-062-420
017-0-040-030	017-0-052-060	017-0-061-450	017-0-062-430
017-0-040-060	017-0-052-070	017-0-061-460	017-0-062-440
017-0-040-070	017-0-052-080	017-0-061-470	017-0-062-450
017-0-040-110	017-0-052-090	017-0-061-480	017-0-071-020
017-0-040-120	017-0-052-100	017-0-061-490	017-0-071-070
017-0-040-130	017-0-052-130	017-0-061-500	017-0-071-080
017-0-040-150	017-0-052-140	017-0-061-510	017-0-071-090
017-0-040-160	017-0-052-150	017-0-061-520	017-0-071-100
017-0-051-010	017-0-052-170	017-0-061-530	017-0-071-120
017-0-051-020	017-0-052-190	017-0-061-540	017-0-071-130
017-0-051-030	017-0-052-220	017-0-061-550	017-0-071-140
017-0-051-040	017-0-052-230	017-0-061-560	017-0-071-150
017-0-051-075	017-0-052-240	017-0-062-010	017-0-071-180
017-0-051-085	017-0-052-250	017-0-062-020	017-0-071-190
017-0-051-100	017-0-052-260	017-0-062-030	017-0-071-200
017-0-051-110	017-0-052-270	017-0-062-040	017-0-071-220
017-0-051-120	017-0-052-280	017-0-062-050	017-0-071-240
017-0-051-130	017-0-052-290	017-0-062-060	017-0-071-250
017-0-051-140	017-0-061-010	017-0-062-070	017-0-071-260
017-0-051-150	017-0-061-030	017-0-062-100	017-0-071-270
017-0-051-160	017-0-061-040	017-0-062-110	017-0-071-280
017-0-051-170	017-0-061-070	017-0-062-120	017-0-071-290
017-0-051-210	017-0-061-080	017-0-062-150	017-0-071-310
017-0-051-230	017-0-061-140	017-0-062-160	017-0-071-320
017-0-051-240	017-0-061-170	017-0-062-190	017-0-071-330
017-0-051-250	017-0-061-180	017-0-062-200	017-0-071-340
017-0-051-265	017-0-061-190	017-0-062-210	017-0-071-350
017-0-051-270	017-0-061-210	017-0-062-220	017-0-071-360
017-0-051-290	017-0-061-220	017-0-062-230	017-0-071-370
017-0-051-300	017-0-061-230	017-0-062-240	017-0-071-380
017-0-051-340	017-0-061-240	017-0-062-250	017-0-071-400
017-0-051-350	017-0-061-270	017-0-062-260	017-0-071-410
017-0-051-360	017-0-061-290	017-0-062-280	017-0-071-420
017-0-051-380	017-0-061-300	017-0-062-290	017-0-072-020
017-0-051-450	017-0-061-310	017-0-062-300	017-0-072-030
017-0-051-460	017-0-061-330	017-0-062-310	017-0-072-040
017-0-051-470	017-0-061-340	017-0-062-330	017-0-072-060
017-0-051-480	017-0-061-350	017-0-062-340	017-0-072-070
017-0-051-490	017-0-061-360	017-0-062-350	017-0-072-080
017-0-051-500	017-0-061-380	017-0-062-360	017-0-072-090
017-0-051-510	017-0-061-390	017-0-062-370	017-0-072-100

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017-0-072-110	017-0-083-210	017-0-090-650	017-0-121-230
017-0-072-125	017-0-083-220	017-0-090-660	017-0-121-240
017-0-072-135	017-0-084-010	017-0-090-670	017-0-121-250
017-0-081-020	017-0-084-020	017-0-090-685	017-0-121-260
017-0-081-030	017-0-084-030	017-0-101-010	017-0-121-270
017-0-081-040	017-0-084-040	017-0-101-020	017-0-121-300
017-0-081-050	017-0-084-080	017-0-101-030	017-0-121-330
017-0-081-060	017-0-084-100	017-0-101-040	017-0-121-340
017-0-081-070	017-0-084-110	017-0-101-050	017-0-121-360
017-0-081-080	017-0-084-140	017-0-101-060	017-0-121-390
017-0-081-090	017-0-084-150	017-0-101-070	017-0-121-400
017-0-081-100	017-0-084-160	017-0-101-090	017-0-121-410
017-0-081-110	017-0-084-170	017-0-101-100	017-0-121-420
017-0-081-120	017-0-084-180	017-0-101-110	017-0-121-435
017-0-081-130	017-0-084-190	017-0-101-120	017-0-122-010
017-0-081-140	017-0-084-200	017-0-101-130	017-0-122-020
017-0-081-150	017-0-084-210	017-0-102-010	017-0-122-030
017-0-081-160	017-0-084-220	017-0-102-020	017-0-122-040
017-0-081-180	017-0-090-025	017-0-102-030	017-0-122-050
017-0-081-190	017-0-090-070	017-0-102-040	017-0-122-070
017-0-081-200	017-0-090-095	017-0-102-050	017-0-122-090
017-0-081-220	017-0-090-110	017-0-102-060	017-0-122-120
017-0-081-230	017-0-090-120	017-0-102-070	017-0-122-130
017-0-081-240	017-0-090-130	017-0-102-080	017-0-122-140
017-0-081-250	017-0-090-140	017-0-102-090	017-0-122-150
017-0-081-260	017-0-090-150	017-0-102-100	017-0-122-160
017-0-081-270	017-0-090-190	017-0-102-110	017-0-122-170
017-0-082-020	017-0-090-225	017-0-102-120	017-0-122-180
017-0-082-040	017-0-090-240	017-0-102-130	017-0-122-190
017-0-083-020	017-0-090-280	017-0-110-015	017-0-122-210
017-0-083-030	017-0-090-305	017-0-110-025	017-0-122-220
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017-0-083-060	017-0-090-335	017-0-110-045	017-0-122-260
017-0-083-070	017-0-090-370	017-0-110-055	017-0-122-270
017-0-083-080	017-0-090-405	017-0-110-065	017-0-122-280
017-0-083-090	017-0-090-430	017-0-110-075	017-0-122-290
017-0-083-100	017-0-090-445	017-0-121-010	017-0-122-300
017-0-083-110	017-0-090-450	017-0-121-020	017-0-122-310
017-0-083-120	017-0-090-470	017-0-121-030	017-0-122-320
017-0-083-130	017-0-090-525	017-0-121-080	017-0-122-330
017-0-083-140	017-0-090-545	017-0-121-100	017-0-122-340
017-0-083-160	017-0-090-565	017-0-121-120	017-0-122-350
017-0-083-170	017-0-090-595	017-0-121-130	017-0-122-360
017-0-083-180	017-0-090-605	017-0-121-150	017-0-122-370
017-0-083-190	017-0-090-630	017-0-121-190	017-0-131-090
017-0-083-200	017-0-090-645	017-0-121-200	017-0-131-240

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017-0-131-270	017-0-133-190	017-0-141-230	017-0-144-060
017-0-131-290	017-0-133-200	017-0-141-240	017-0-144-070
017-0-131-300	017-0-133-210	017-0-141-250	017-0-144-080
017-0-131-310	017-0-133-220	017-0-142-010	017-0-144-090
017-0-131-320	017-0-133-230	017-0-142-025	017-0-144-110
017-0-131-330	017-0-133-240	017-0-142-080	017-0-144-120
017-0-131-340	017-0-134-010	017-0-142-090	017-0-144-140
017-0-131-350	017-0-134-030	017-0-142-110	017-0-144-150
017-0-131-360	017-0-134-040	017-0-142-120	017-0-144-160
017-0-131-370	017-0-134-060	017-0-142-130	017-0-144-180
017-0-131-380	017-0-134-080	017-0-142-140	017-0-144-210
017-0-131-390	017-0-134-090	017-0-142-150	017-0-144-220
017-0-131-420	017-0-134-110	017-0-142-160	017-0-144-230
017-0-131-430	017-0-134-120	017-0-142-170	017-0-144-240
017-0-131-450	017-0-134-130	017-0-142-190	017-0-144-250
017-0-131-460	017-0-134-140	017-0-142-220	017-0-151-010
017-0-131-470	017-0-134-150	017-0-142-230	017-0-151-020
017-0-132-010	017-0-134-160	017-0-142-240	017-0-151-030
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017-0-132-090	017-0-134-240	017-0-142-300	017-0-151-090
017-0-132-100	017-0-134-250	017-0-143-010	017-0-151-100
017-0-132-120	017-0-134-260	017-0-143-020	017-0-151-110
017-0-132-130	017-0-134-270	017-0-143-030	017-0-151-120
017-0-132-140	017-0-134-280	017-0-143-040	017-0-151-130
017-0-132-150	017-0-141-010	017-0-143-050	017-0-151-140
017-0-132-160	017-0-141-020	017-0-143-060	017-0-151-150
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017-0-133-060	017-0-141-090	017-0-143-140	017-0-152-020
017-0-133-075	017-0-141-100	017-0-143-150	017-0-152-030
017-0-133-080	017-0-141-120	017-0-143-160	017-0-152-040
017-0-133-095	017-0-141-150	017-0-143-190	017-0-152-060
017-0-133-120	017-0-141-160	017-0-143-200	017-0-152-070
017-0-133-130	017-0-141-180	017-0-144-010	017-0-152-080
017-0-133-140	017-0-141-190	017-0-144-020	017-0-152-090
017-0-133-150	017-0-141-200	017-0-144-030	017-0-152-100

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017-0-152-130	017-0-154-230	017-0-180-610	017-0-195-010
017-0-152-140	017-0-154-250	017-0-180-620	017-0-195-020
017-0-152-160	017-0-160-060	017-0-191-010	017-0-195-030
017-0-152-180	017-0-160-125	017-0-191-040	017-0-195-040
017-0-152-190	017-0-160-150	017-0-191-060	017-0-195-055
017-0-152-200	017-0-160-165	017-0-191-070	017-0-195-070
017-0-152-210	017-0-160-175	017-0-191-100	017-0-195-080
017-0-152-220	017-0-170-030	017-0-191-110	017-0-195-100
017-0-152-260	017-0-170-070	017-0-191-120	017-0-195-120
017-0-153-240	017-0-170-100	017-0-191-130	017-0-195-130
017-0-153-250	017-0-170-110	017-0-192-010	017-0-195-140
017-0-153-260	017-0-170-135	017-0-192-020	017-0-195-150
017-0-153-270	017-0-170-140	017-0-192-030	017-0-195-160
017-0-153-290	017-0-170-165	017-0-192-040	017-0-195-170
017-0-153-320	017-0-170-175	017-0-192-050	017-0-196-010
017-0-153-330	017-0-180-010	017-0-192-060	017-0-196-020
017-0-153-355	017-0-180-020	017-0-192-080	017-0-196-050
017-0-153-380	017-0-180-050	017-0-192-090	017-0-196-060
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017-0-153-420	017-0-180-205	017-0-192-140	017-0-196-110
017-0-153-430	017-0-180-210	017-0-192-150	017-0-196-120
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017-0-153-470	017-0-180-305	017-0-193-020	017-0-201-030
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017-0-154-130	017-0-180-510	017-0-193-130	017-0-202-090
017-0-154-140	017-0-180-520	017-0-193-140	017-0-202-100
017-0-154-150	017-0-180-530	017-0-194-020	017-0-202-110
017-0-154-160	017-0-180-540	017-0-194-030	017-0-202-120
017-0-154-170	017-0-180-560	017-0-194-050	017-0-202-130
017-0-154-190	017-0-180-575	017-0-194-060	017-0-203-010
017-0-154-200	017-0-180-585	017-0-194-070	017-0-203-020

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017-0-203-060	017-0-222-070	017-0-241-250	017-0-290-020
017-0-203-070	017-0-222-080	017-0-241-260	017-0-301-035
017-0-203-080	017-0-222-090	017-0-241-270	017-0-301-045
017-0-203-090	017-0-222-105	017-0-241-280	017-0-301-055
017-0-210-190	017-0-222-110	017-0-241-290	017-0-301-065
017-0-210-290	017-0-222-120	017-0-241-300	017-0-301-075
017-0-210-330	017-0-222-130	017-0-241-310	017-0-301-085
017-0-210-435	017-0-222-140	017-0-242-010	017-0-301-095
017-0-210-445	017-0-222-150	017-0-242-020	017-0-301-115
017-0-210-455	017-0-222-160	017-0-242-030	017-0-302-025
017-0-210-465	017-0-222-170	017-0-242-040	017-0-302-035
017-0-210-470	017-0-222-180	017-0-242-050	017-0-302-045
017-0-210-480	017-0-230-020	017-0-242-065	017-0-302-055
017-0-210-490	017-0-230-090	017-0-242-070	017-0-302-065
017-0-210-500	017-0-230-100	017-0-242-080	017-0-302-075
017-0-210-510	017-0-230-110	017-0-250-020	017-0-302-105
017-0-210-520	017-0-230-150	017-0-250-060	017-0-303-015
017-0-210-530	017-0-230-175	017-0-250-110	017-0-303-025
017-0-210-540	017-0-230-180	017-0-250-130	017-0-303-035
017-0-221-010	017-0-230-235	017-0-250-140	017-0-303-045
017-0-221-020	017-0-230-245	017-0-250-160	017-0-303-055
017-0-221-030	017-0-230-250	017-0-250-170	017-0-303-065
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017-0-221-050	017-0-230-330	017-0-250-200	017-0-303-085
017-0-221-060	017-0-230-350	017-0-250-210	017-0-304-085
017-0-221-070	017-0-230-360	017-0-250-220	017-0-304-095
017-0-221-080	017-0-230-410	017-0-250-260	017-0-304-105
017-0-221-090	017-0-230-440	017-0-250-270	017-0-304-115
017-0-221-100	017-0-230-470	017-0-250-280	017-0-304-125
017-0-221-110	017-0-230-480	017-0-250-290	017-0-304-135
017-0-221-120	017-0-230-490	017-0-250-300	017-0-304-145
017-0-221-130	017-0-230-505	017-0-250-310	017-0-305-015
017-0-221-140	017-0-230-535	017-0-250-320	017-0-305-085
017-0-221-150	017-0-230-540	017-0-250-330	017-0-305-095
017-0-221-160	017-0-230-550	017-0-250-350	017-0-305-105
017-0-221-170	017-0-230-565	017-0-250-360	017-0-305-115
017-0-221-180	017-0-241-050	017-0-250-370	017-0-305-125
017-0-221-190	017-0-241-060	017-0-260-030	017-0-305-135
017-0-221-200	017-0-241-080	017-0-260-060	017-0-305-145
017-0-221-210	017-0-241-100	017-0-260-105	017-0-305-155
017-0-222-010	017-0-241-140	017-0-260-120	017-0-311-015
017-0-222-020	017-0-241-150	017-0-260-130	017-0-311-025
017-0-222-030	017-0-241-180	017-0-270-080	017-0-311-035
017-0-222-040	017-0-241-190	017-0-270-130	017-0-311-045

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017-0-311-065	017-0-315-175	017-0-323-095	017-0-342-055
017-0-311-075	017-0-315-185	017-0-323-105	017-0-342-065
017-0-311-085	017-0-315-195	017-0-323-115	017-0-342-075
017-0-312-015	017-0-315-205	017-0-323-125	017-0-342-085
017-0-312-025	017-0-315-215	017-0-324-075	017-0-342-095
017-0-312-035	017-0-315-225	017-0-324-085	017-0-342-105
017-0-313-015	017-0-315-235	017-0-324-095	017-0-342-115
017-0-313-025	017-0-315-245	017-0-324-105	017-0-342-125
017-0-313-035	017-0-315-255	017-0-324-115	017-0-342-135
017-0-313-045	017-0-316-015	017-0-324-125	017-0-342-145
017-0-313-055	017-0-316-025	017-0-324-175	017-0-342-155
017-0-313-065	017-0-316-035	017-0-324-185	017-0-342-165
017-0-313-075	017-0-316-045	017-0-325-015	017-0-342-175
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017-0-313-125	017-0-316-095	017-0-330-025	017-0-342-245
017-0-313-135	017-0-316-105	017-0-330-055	017-0-342-255
017-0-313-145	017-0-316-115	017-0-330-085	017-0-342-265
017-0-313-155	017-0-316-125	017-0-330-205	017-0-342-275
017-0-313-165	017-0-320-015	017-0-330-235	017-0-342-285
017-0-313-175	017-0-321-015	017-0-330-255	017-0-342-295
017-0-313-185	017-0-321-025	017-0-330-295	017-0-342-305
017-0-314-015	017-0-321-035	017-0-330-305	017-0-342-315
017-0-314-025	017-0-321-045	017-0-330-315	017-0-342-325
017-0-314-035	017-0-321-055	017-0-330-335	017-0-342-335
017-0-314-045	017-0-321-065	017-0-330-345	017-0-342-345
017-0-314-055	017-0-321-075	017-0-330-355	017-0-342-355
017-0-314-065	017-0-322-015	017-0-330-365	017-0-342-365
017-0-315-015	017-0-322-025	017-0-330-375	017-0-342-375
017-0-315-025	017-0-322-035	017-0-341-015	017-0-342-395
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017-0-315-085	017-0-322-095	017-0-341-075	017-0-343-075
017-0-315-095	017-0-323-015	017-0-341-085	017-0-343-085
017-0-315-105	017-0-323-025	017-0-341-095	017-0-343-095
017-0-315-115	017-0-323-035	017-0-341-105	017-0-343-105
017-0-315-125	017-0-323-045	017-0-341-115	017-0-343-115
017-0-315-135	017-0-323-055	017-0-342-015	017-0-343-125
017-0-315-145	017-0-323-065	017-0-342-025	017-0-343-135
017-0-315-155	017-0-323-075	017-0-342-035	017-0-343-145

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017-0-343-205	017-0-361-025	017-0-380-125	018-0-022-195
017-0-343-215	017-0-361-035	017-0-380-135	018-0-022-205
017-0-343-225	017-0-361-045	018-0-010-255	018-0-030-010
017-0-343-235	017-0-361-055	018-0-010-265	018-0-030-020
017-0-343-245	017-0-361-065	018-0-010-280	018-0-030-050
017-0-343-255	017-0-361-075	018-0-010-290	018-0-030-060
017-0-343-275	017-0-361-085	018-0-010-300	018-0-030-070
017-0-343-285	017-0-361-095	018-0-010-310	018-0-030-080
017-0-343-305	017-0-361-105	018-0-021-015	018-0-030-090
017-0-343-315	017-0-361-115	018-0-021-045	018-0-030-100
017-0-343-325	017-0-361-125	018-0-021-055	018-0-030-110
017-0-343-335	017-0-361-135	018-0-021-085	018-0-030-120
017-0-343-345	017-0-362-025	018-0-021-135	018-0-030-150
017-0-343-355	017-0-362-035	018-0-021-145	018-0-030-160
017-0-343-365	017-0-362-045	018-0-021-155	018-0-030-170
017-0-343-375	017-0-362-055	018-0-021-165	018-0-040-085
017-0-343-385	017-0-362-065	018-0-021-175	018-0-040-095
017-0-350-025	017-0-362-075	018-0-021-185	018-0-040-115
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017-0-350-105	017-0-362-145	018-0-021-255	018-0-040-205
017-0-350-115	017-0-362-155	018-0-021-265	018-0-040-215
017-0-350-125	017-0-362-165	018-0-021-285	018-0-040-225
017-0-350-135	017-0-362-175	018-0-021-315	018-0-040-235
017-0-350-145	017-0-362-185	018-0-021-325	018-0-040-245
017-0-350-155	017-0-362-195	018-0-021-355	018-0-050-030
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017-0-350-175	017-0-362-220	018-0-021-395	018-0-050-100
017-0-350-185	017-0-362-230	018-0-021-405	018-0-050-115
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017-0-350-300	017-0-380-055	018-0-022-145	018-0-061-075

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018-0-061-085	018-0-071-250	018-0-090-240	018-0-102-135
018-0-061-105	018-0-071-260	018-0-090-250	018-0-102-145
018-0-061-115	018-0-071-270	018-0-090-270	018-0-102-155
018-0-061-135	018-0-071-280	018-0-090-300	018-0-102-165
018-0-061-145	018-0-071-290	018-0-090-310	018-0-102-195
018-0-061-155	018-0-072-010	018-0-090-330	018-0-102-215
018-0-061-165	018-0-072-020	018-0-090-340	018-0-102-235
018-0-061-175	018-0-072-070	018-0-090-350	018-0-102-245
018-0-061-195	018-0-072-090	018-0-090-360	018-0-102-255
018-0-061-205	018-0-072-130	018-0-090-390	018-0-102-315
018-0-061-215	018-0-072-140	018-0-090-400	018-0-102-325
018-0-061-225	018-0-072-180	018-0-090-410	018-0-102-335
018-0-061-235	018-0-072-190	018-0-090-420	018-0-102-345
018-0-061-255	018-0-072-200	018-0-090-430	018-0-102-355
018-0-061-265	018-0-072-210	018-0-101-015	018-0-102-365
018-0-061-285	018-0-072-220	018-0-101-025	018-0-102-375
018-0-061-295	018-0-072-240	018-0-101-035	018-0-102-385
018-0-061-305	018-0-072-250	018-0-101-045	018-0-102-395
018-0-061-315	018-0-080-015	018-0-101-055	018-0-102-405
018-0-061-325	018-0-080-020	018-0-101-085	018-0-111-030
018-0-061-335	018-0-080-030	018-0-101-095	018-0-111-040
018-0-061-405	018-0-080-040	018-0-101-105	018-0-111-050
018-0-061-425	018-0-080-050	018-0-101-115	018-0-111-070
018-0-062-035	018-0-080-060	018-0-101-125	018-0-111-080
018-0-062-045	018-0-080-070	018-0-101-155	018-0-111-105
018-0-062-065	018-0-080-080	018-0-101-165	018-0-111-110
018-0-062-085	018-0-080-090	018-0-101-175	018-0-111-130
018-0-062-105	018-0-080-100	018-0-101-185	018-0-111-140
018-0-062-115	018-0-080-110	018-0-101-195	018-0-111-160
018-0-062-145	018-0-080-130	018-0-101-205	018-0-111-170
018-0-062-155	018-0-080-150	018-0-101-215	018-0-111-195
018-0-062-205	018-0-080-170	018-0-101-225	018-0-111-210
018-0-062-215	018-0-080-200	018-0-101-235	018-0-111-220
018-0-062-225	018-0-080-220	018-0-101-245	018-0-111-235
018-0-062-235	018-0-080-230	018-0-101-255	018-0-111-245
018-0-062-245	018-0-090-010	018-0-101-265	018-0-111-255
018-0-062-255	018-0-090-020	018-0-101-275	018-0-111-275
018-0-062-265	018-0-090-075	018-0-101-285	018-0-112-040
018-0-071-040	018-0-090-090	018-0-101-295	018-0-112-080
018-0-071-120	018-0-090-100	018-0-101-305	018-0-112-090
018-0-071-130	018-0-090-140	018-0-101-315	018-0-112-100
018-0-071-160	018-0-090-150	018-0-101-325	018-0-112-120
018-0-071-200	018-0-090-160	018-0-101-335	018-0-112-160
018-0-071-210	018-0-090-170	018-0-101-345	018-0-112-170
018-0-071-230	018-0-090-200	018-0-101-355	018-0-112-185
018-0-071-240	018-0-090-220	018-0-102-125	018-0-112-200

Parcels

018-0-112-220	018-0-130-240	018-0-160-120	018-0-182-055
018-0-112-230	018-0-130-250	018-0-160-130	018-0-182-065
018-0-112-240	018-0-130-260	018-0-160-140	018-0-182-075
018-0-121-020	018-0-130-270	018-0-160-155	018-0-182-085
018-0-121-050	018-0-140-040	018-0-160-165	018-0-182-095
018-0-121-060	018-0-140-160	018-0-160-175	018-0-182-105
018-0-121-070	018-0-140-215	018-0-160-180	018-0-182-115
018-0-121-085	018-0-140-230	018-0-170-010	018-0-182-125
018-0-121-150	018-0-140-245	018-0-170-020	018-0-182-135
018-0-121-180	018-0-140-265	018-0-170-030	018-0-182-145
018-0-121-190	018-0-140-275	018-0-170-040	018-0-182-155
018-0-121-200	018-0-140-280	018-0-170-060	018-0-182-165
018-0-121-220	018-0-140-290	018-0-170-070	018-0-182-175
018-0-121-230	018-0-140-300	018-0-170-090	018-0-182-185
018-0-121-240	018-0-140-310	018-0-170-100	018-0-182-195
018-0-121-250	018-0-140-320	018-0-170-160	018-0-182-205
018-0-121-270	018-0-140-330	018-0-170-170	018-0-182-215
018-0-121-280	018-0-140-355	018-0-170-180	018-0-182-225
018-0-121-290	018-0-140-365	018-0-170-210	018-0-182-235
018-0-121-300	018-0-140-375	018-0-170-225	018-0-182-245
018-0-121-310	018-0-150-035	018-0-170-235	018-0-182-255
018-0-122-015	018-0-150-045	018-0-170-250	018-0-182-265
018-0-122-060	018-0-150-055	018-0-170-260	018-0-183-015
018-0-122-100	018-0-150-075	018-0-170-270	018-0-183-025
018-0-122-110	018-0-150-085	018-0-170-280	018-0-183-035
018-0-122-120	018-0-150-095	018-0-170-290	018-0-183-045
018-0-122-130	018-0-150-125	018-0-170-300	018-0-183-055
018-0-122-140	018-0-150-135	018-0-170-320	018-0-183-065
018-0-122-150	018-0-150-145	018-0-170-330	018-0-183-075
018-0-122-160	018-0-150-215	018-0-170-340	018-0-183-085
018-0-122-190	018-0-150-235	018-0-170-350	018-0-183-095
018-0-122-270	018-0-150-255	018-0-170-370	018-0-183-105
018-0-122-280	018-0-150-265	018-0-170-380	018-0-183-115
018-0-122-290	018-0-150-275	018-0-170-390	018-0-184-015
018-0-122-300	018-0-150-295	018-0-170-400	018-0-184-025
018-0-130-015	018-0-150-305	018-0-181-015	018-0-184-035
018-0-130-075	018-0-150-315	018-0-181-025	018-0-184-045
018-0-130-085	018-0-150-325	018-0-181-035	018-0-184-055
018-0-130-090	018-0-160-010	018-0-181-045	018-0-184-065
018-0-130-115	018-0-160-020	018-0-181-055	018-0-184-075
018-0-130-120	018-0-160-040	018-0-181-085	018-0-184-085
018-0-130-130	018-0-160-050	018-0-181-095	018-0-184-095
018-0-130-165	018-0-160-060	018-0-182-015	018-0-184-105
018-0-130-185	018-0-160-070	018-0-182-025	018-0-184-115
018-0-130-205	018-0-160-085	018-0-182-035	018-0-184-125
018-0-130-235	018-0-160-110	018-0-182-045	018-0-184-135

Parcels

018-0-184-145	018-0-191-245	018-0-200-065	018-0-212-125
018-0-184-155	018-0-191-255	018-0-200-105	018-0-213-015
018-0-184-165	018-0-192-015	018-0-200-135	018-0-213-025
018-0-184-175	018-0-192-025	018-0-200-155	018-0-213-035
018-0-184-185	018-0-192-035	018-0-200-165	018-0-213-045
018-0-184-195	018-0-192-045	018-0-200-185	018-0-213-055
018-0-184-205	018-0-192-055	018-0-200-205	018-0-213-065
018-0-184-215	018-0-192-065	018-0-200-215	018-0-213-075
018-0-184-225	018-0-192-075	018-0-200-225	018-0-213-085
018-0-184-235	018-0-192-085	018-0-200-235	018-0-213-095
018-0-184-245	018-0-192-095	018-0-200-245	018-0-213-105
018-0-184-255	018-0-192-105	018-0-200-255	018-0-213-115
018-0-184-265	018-0-192-115	018-0-200-290	018-0-214-015
018-0-184-275	018-0-192-125	018-0-200-340	018-0-214-025
018-0-184-285	018-0-192-135	018-0-200-355	018-0-214-035
018-0-185-015	018-0-192-145	018-0-200-365	018-0-214-045
018-0-185-025	018-0-192-155	018-0-211-015	018-0-214-055
018-0-185-035	018-0-192-165	018-0-211-025	018-0-214-065
018-0-185-045	018-0-192-175	018-0-211-035	018-0-221-015
018-0-185-055	018-0-192-185	018-0-211-045	018-0-221-025
018-0-185-065	018-0-192-195	018-0-211-055	018-0-221-035
018-0-185-075	018-0-193-015	018-0-211-065	018-0-221-045
018-0-185-085	018-0-193-025	018-0-211-075	018-0-221-055
018-0-191-015	018-0-193-035	018-0-211-085	018-0-221-065
018-0-191-025	018-0-193-045	018-0-211-095	018-0-221-075
018-0-191-035	018-0-193-055	018-0-211-105	018-0-221-085
018-0-191-045	018-0-193-065	018-0-211-115	018-0-221-095
018-0-191-055	018-0-193-075	018-0-211-125	018-0-221-105
018-0-191-065	018-0-193-085	018-0-211-135	018-0-221-115
018-0-191-075	018-0-193-095	018-0-211-145	018-0-221-125
018-0-191-085	018-0-193-105	018-0-211-155	018-0-221-135
018-0-191-095	018-0-193-115	018-0-211-165	018-0-221-145
018-0-191-105	018-0-193-125	018-0-211-175	018-0-221-155
018-0-191-115	018-0-193-135	018-0-211-185	018-0-221-185
018-0-191-125	018-0-194-015	018-0-211-195	018-0-221-195
018-0-191-135	018-0-194-025	018-0-212-015	018-0-221-205
018-0-191-145	018-0-194-035	018-0-212-025	018-0-221-215
018-0-191-155	018-0-194-045	018-0-212-035	018-0-221-225
018-0-191-165	018-0-194-055	018-0-212-045	018-0-221-235
018-0-191-175	018-0-194-065	018-0-212-055	018-0-221-245
018-0-191-185	018-0-194-075	018-0-212-065	018-0-221-255
018-0-191-195	018-0-194-085	018-0-212-075	018-0-221-265
018-0-191-205	018-0-194-095	018-0-212-085	018-0-221-275
018-0-191-215	018-0-200-015	018-0-212-095	018-0-221-285
018-0-191-225	018-0-200-045	018-0-212-105	018-0-221-295
018-0-191-235	018-0-200-055	018-0-212-115	018-0-221-305

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018-0-221-315	019-0-010-185	019-0-051-010	019-0-062-160
018-0-221-325	019-0-010-195	019-0-051-020	019-0-062-180
018-0-221-335	019-0-010-255	019-0-051-030	019-0-062-190
018-0-221-345	019-0-010-265	019-0-051-040	019-0-070-010
018-0-221-355	019-0-010-315	019-0-051-050	019-0-070-020
018-0-221-365	019-0-010-325	019-0-051-060	019-0-070-030
018-0-221-375	019-0-010-355	019-0-051-070	019-0-070-050
018-0-222-015	019-0-010-365	019-0-051-080	019-0-070-060
018-0-222-025	019-0-010-385	019-0-051-090	019-0-070-070
018-0-222-035	019-0-010-415	019-0-051-100	019-0-070-080
018-0-222-045	019-0-010-425	019-0-051-110	019-0-070-110
018-0-222-055	019-0-010-435	019-0-051-120	019-0-070-120
018-0-222-065	019-0-010-455	019-0-051-130	019-0-070-130
018-0-222-075	019-0-010-465	019-0-051-140	019-0-070-170
018-0-222-085	019-0-010-485	019-0-051-150	019-0-070-180
018-0-222-095	019-0-010-495	019-0-052-010	019-0-070-190
018-0-222-105	019-0-010-505	019-0-052-020	019-0-070-200
018-0-222-115	019-0-010-515	019-0-052-030	019-0-070-210
018-0-222-125	019-0-010-535	019-0-052-040	019-0-070-220
018-0-222-135	019-0-010-565	019-0-052-050	019-0-070-230
018-0-222-145	019-0-010-575	019-0-052-060	019-0-081-010
018-0-222-155	019-0-020-050	019-0-053-015	019-0-081-020
018-0-222-165	019-0-020-140	019-0-053-045	019-0-081-030
018-0-222-175	019-0-020-150	019-0-053-075	019-0-081-040
018-0-222-185	019-0-020-190	019-0-053-095	019-0-081-050
018-0-222-195	019-0-020-210	019-0-053-105	019-0-082-010
018-0-222-205	019-0-020-300	019-0-061-010	019-0-082-020
018-0-222-215	019-0-020-310	019-0-061-030	019-0-082-030
018-0-222-225	019-0-020-320	019-0-061-040	019-0-082-040
018-0-230-015	019-0-020-350	019-0-061-070	019-0-082-080
018-0-230-025	019-0-020-370	019-0-061-080	019-0-082-090
018-0-230-035	019-0-020-380	019-0-061-090	019-0-082-100
018-0-230-045	019-0-020-390	019-0-061-100	019-0-082-110
018-0-230-055	019-0-020-410	019-0-061-110	019-0-082-120
018-0-230-065	019-0-030-130	019-0-061-120	019-0-082-130
018-0-230-075	019-0-030-220	019-0-062-010	019-0-082-140
018-0-230-085	019-0-030-300	019-0-062-030	019-0-082-150
018-0-230-095	019-0-030-310	019-0-062-040	019-0-082-160
018-0-230-105	019-0-030-320	019-0-062-050	019-0-082-170
018-0-230-115	019-0-030-330	019-0-062-070	019-0-082-180
018-0-230-125	019-0-041-020	019-0-062-080	019-0-082-200
018-0-230-135	019-0-041-030	019-0-062-110	019-0-082-210
018-0-230-145	019-0-042-020	019-0-062-120	019-0-082-220
018-0-230-155	019-0-042-031	019-0-062-130	019-0-082-230
018-0-230-165	019-0-042-032	019-0-062-140	019-0-082-240
019-0-010-105	019-0-042-050	019-0-062-150	019-0-082-250

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019-0-082-270	019-0-100-210	019-0-160-105	019-0-190-150
019-0-082-280	019-0-100-225	019-0-160-115	019-0-190-160
019-0-091-010	019-0-100-240	019-0-160-125	019-0-190-170
019-0-091-020	019-0-100-260	019-0-160-135	019-0-190-180
019-0-091-030	019-0-100-270	019-0-160-145	019-0-190-190
019-0-092-010	019-0-100-280	019-0-160-155	019-0-190-200
019-0-092-030	019-0-110-260	019-0-160-165	019-0-190-210
019-0-092-040	019-0-110-335	019-0-170-015	019-0-200-010
019-0-092-050	019-0-110-360	019-0-170-025	019-0-200-020
019-0-092-060	019-0-110-380	019-0-170-035	019-0-200-030
019-0-092-070	019-0-110-410	019-0-170-045	019-0-200-040
019-0-092-080	019-0-110-420	019-0-170-055	019-0-200-050
019-0-092-090	019-0-110-470	019-0-170-065	019-0-200-060
019-0-092-110	019-0-110-485	019-0-170-075	019-0-200-070
019-0-092-120	019-0-140-015	019-0-170-085	019-0-200-080
019-0-092-140	019-0-140-025	019-0-170-095	019-0-200-090
019-0-092-150	019-0-140-035	019-0-170-105	019-0-200-100
019-0-092-160	019-0-140-045	019-0-170-115	019-0-200-110
019-0-092-170	019-0-140-055	019-0-170-125	019-0-200-120
019-0-092-180	019-0-140-065	019-0-170-135	019-0-200-130
019-0-092-190	019-0-140-075	019-0-170-145	019-0-200-140
019-0-092-200	019-0-140-085	019-0-170-155	019-0-200-150
019-0-092-210	019-0-140-095	019-0-170-165	019-0-200-160
019-0-092-220	019-0-140-105	019-0-170-175	019-0-200-170
019-0-092-230	019-0-140-115	019-0-180-010	019-0-200-180
019-0-092-240	019-0-140-125	019-0-180-020	019-0-200-190
019-0-093-010	019-0-150-015	019-0-180-030	019-0-200-200
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019-0-094-010	019-0-150-065	019-0-180-080	019-0-200-250
019-0-094-020	019-0-150-075	019-0-190-010	019-0-200-260
019-0-094-030	019-0-150-085	019-0-190-020	019-0-210-010
019-0-094-040	019-0-150-095	019-0-190-030	019-0-210-020
019-0-094-050	019-0-150-105	019-0-190-040	019-0-210-030
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019-0-094-070	019-0-160-015	019-0-190-060	019-0-210-050
019-0-094-080	019-0-160-025	019-0-190-070	019-0-210-060
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019-0-094-120	019-0-160-065	019-0-190-110	019-0-210-100
019-0-100-160	019-0-160-075	019-0-190-120	019-0-210-110
019-0-100-190	019-0-160-085	019-0-190-130	019-0-210-120
019-0-100-200	019-0-160-095	019-0-190-140	019-0-210-130

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019-0-210-140	020-0-010-440	020-0-052-080	020-0-072-065
019-0-210-150	020-0-010-450	020-0-052-090	020-0-072-075
019-0-210-160	020-0-010-460	020-0-053-010	020-0-072-085
019-0-210-170	020-0-010-470	020-0-053-020	020-0-072-095
019-0-210-180	020-0-010-480	020-0-053-030	020-0-072-105
019-0-210-190	020-0-021-010	020-0-053-060	020-0-072-115
019-0-210-200	020-0-021-020	020-0-061-030	020-0-072-125
019-0-210-210	020-0-021-030	020-0-061-040	020-0-072-135
019-0-210-220	020-0-021-050	020-0-061-050	020-0-073-010
019-0-220-015	020-0-021-060	020-0-061-140	020-0-073-020
019-0-220-025	020-0-021-070	020-0-061-150	020-0-073-030
019-0-220-035	020-0-021-080	020-0-061-160	020-0-073-040
019-0-220-045	020-0-021-110	020-0-061-170	020-0-073-050
019-0-220-055	020-0-021-120	020-0-061-180	020-0-073-060
019-0-220-065	020-0-021-130	020-0-062-010	020-0-073-070
019-0-220-075	020-0-021-140	020-0-062-020	020-0-073-080
019-0-220-085	020-0-021-150	020-0-062-030	020-0-073-090
019-0-220-095	020-0-021-205	020-0-062-040	020-0-073-100
019-0-220-105	020-0-021-210	020-0-062-060	020-0-073-110
019-0-220-115	020-0-022-010	020-0-062-070	020-0-073-120
019-0-220-125	020-0-022-020	020-0-071-120	020-0-073-135
019-0-220-135	020-0-022-030	020-0-071-130	020-0-073-145
019-0-220-145	020-0-022-040	020-0-071-160	020-0-073-155
019-0-220-155	020-0-022-050	020-0-071-200	020-0-080-180
019-0-220-165	020-0-030-010	020-0-071-210	020-0-080-190
019-0-220-175	020-0-030-030	020-0-071-220	020-0-080-200
019-0-220-185	020-0-030-050	020-0-071-230	020-0-080-210
019-0-220-195	020-0-030-060	020-0-071-240	020-0-080-225
019-0-220-205	020-0-030-070	020-0-071-250	020-0-080-235
020-0-010-010	020-0-030-080	020-0-071-260	020-0-080-245
020-0-010-035	020-0-040-030	020-0-071-270	020-0-080-255
020-0-010-100	020-0-040-040	020-0-071-280	020-0-080-265
020-0-010-110	020-0-040-050	020-0-071-290	020-0-080-275
020-0-010-140	020-0-040-080	020-0-071-300	020-0-080-285
020-0-010-310	020-0-040-090	020-0-071-310	020-0-080-310
020-0-010-320	020-0-040-110	020-0-071-370	020-0-080-330
020-0-010-330	020-0-040-130	020-0-071-390	020-0-090-050
020-0-010-340	020-0-040-140	020-0-071-400	020-0-090-060
020-0-010-350	020-0-040-150	020-0-071-450	020-0-090-070
020-0-010-360	020-0-040-160	020-0-071-460	020-0-090-080
020-0-010-370	020-0-052-010	020-0-071-470	020-0-090-110
020-0-010-380	020-0-052-020	020-0-071-530	020-0-090-120
020-0-010-390	020-0-052-040	020-0-071-540	020-0-090-150
020-0-010-400	020-0-052-050	020-0-072-010	020-0-090-160
020-0-010-420	020-0-052-060	020-0-072-030	020-0-090-170
020-0-010-430	020-0-052-070	020-0-072-050	020-0-090-180

Parcels

020-0-090-190	020-0-142-090	020-0-201-130	020-0-213-100
020-0-090-200	020-0-142-100	020-0-201-140	020-0-214-010
020-0-100-030	020-0-142-110	020-0-201-150	020-0-214-020
020-0-100-050	020-0-160-010	020-0-201-160	020-0-214-030
020-0-100-060	020-0-170-010	020-0-201-170	020-0-221-010
020-0-100-070	020-0-170-020	020-0-201-190	020-0-221-030
020-0-100-080	020-0-170-050	020-0-201-200	020-0-221-040
020-0-100-090	020-0-181-010	020-0-202-010	020-0-221-050
020-0-110-030	020-0-181-020	020-0-202-030	020-0-221-060
020-0-110-040	020-0-181-030	020-0-202-040	020-0-221-070
020-0-110-050	020-0-181-040	020-0-202-050	020-0-221-080
020-0-110-070	020-0-181-050	020-0-202-060	020-0-222-020
020-0-110-080	020-0-181-070	020-0-202-070	020-0-230-015
020-0-110-090	020-0-181-080	020-0-202-080	020-0-230-025
020-0-110-100	020-0-181-090	020-0-202-090	020-0-230-035
020-0-110-110	020-0-181-110	020-0-202-100	020-0-230-045
020-0-110-120	020-0-181-120	020-0-202-110	020-0-230-055
020-0-130-010	020-0-181-160	020-0-202-120	020-0-230-065
020-0-130-020	020-0-182-040	020-0-202-130	020-0-230-075
020-0-130-050	020-0-191-010	020-0-202-140	020-0-230-085
020-0-130-060	020-0-191-020	020-0-202-150	020-0-230-095
020-0-130-070	020-0-191-030	020-0-202-160	020-0-240-015
020-0-130-080	020-0-191-040	020-0-203-010	020-0-240-025
020-0-130-090	020-0-192-010	020-0-203-020	020-0-240-035
020-0-130-100	020-0-192-020	020-0-203-030	020-0-240-045
020-0-130-110	020-0-192-030	020-0-203-040	020-0-240-055
020-0-130-140	020-0-192-040	020-0-203-050	020-0-240-065
020-0-130-150	020-0-192-060	020-0-203-060	020-0-250-015
020-0-130-160	020-0-192-070	020-0-203-070	020-0-250-025
020-0-141-010	020-0-192-080	020-0-203-080	020-0-250-035
020-0-141-020	020-0-192-090	020-0-203-090	020-0-250-045
020-0-141-030	020-0-192-100	020-0-203-100	020-0-250-055
020-0-141-040	020-0-192-120	020-0-211-010	020-0-250-065
020-0-141-050	020-0-192-130	020-0-211-025	020-0-250-075
020-0-141-060	020-0-192-140	020-0-212-010	020-0-250-085
020-0-141-070	020-0-192-150	020-0-212-020	020-0-250-095
020-0-141-080	020-0-192-160	020-0-212-030	020-0-250-105
020-0-141-090	020-0-201-010	020-0-213-010	021-0-011-020
020-0-141-100	020-0-201-030	020-0-213-020	021-0-011-090
020-0-142-010	020-0-201-040	020-0-213-030	021-0-011-100
020-0-142-020	020-0-201-050	020-0-213-040	021-0-011-110
020-0-142-040	020-0-201-060	020-0-213-050	021-0-011-120
020-0-142-050	020-0-201-070	020-0-213-060	021-0-011-130
020-0-142-060	020-0-201-090	020-0-213-070	021-0-011-140
020-0-142-070	020-0-201-100	020-0-213-080	021-0-011-150
020-0-142-080	020-0-201-120	020-0-213-090	021-0-011-160

Parcels

021-0-011-170	021-0-042-050	021-0-052-010	021-0-072-030
021-0-011-180	021-0-042-060	021-0-052-020	021-0-072-040
021-0-011-215	021-0-042-070	021-0-052-030	021-0-072-060
021-0-031-030	021-0-042-080	021-0-052-040	021-0-072-070
021-0-031-040	021-0-042-100	021-0-052-050	021-0-072-080
021-0-031-050	021-0-042-110	021-0-052-060	021-0-072-090
021-0-031-070	021-0-042-120	021-0-061-010	021-0-072-100
021-0-031-080	021-0-042-130	021-0-061-020	021-0-072-110
021-0-031-090	021-0-043-010	021-0-061-030	021-0-073-020
021-0-031-100	021-0-043-020	021-0-061-040	021-0-073-030
021-0-031-110	021-0-043-040	021-0-061-050	021-0-073-060
021-0-031-120	021-0-043-050	021-0-062-010	021-0-073-070
021-0-031-130	021-0-043-120	021-0-062-020	021-0-073-100
021-0-031-150	021-0-043-140	021-0-062-030	021-0-073-110
021-0-031-160	021-0-043-150	021-0-062-040	021-0-073-120
021-0-031-180	021-0-043-160	021-0-062-050	021-0-073-130
021-0-031-190	021-0-043-170	021-0-062-060	021-0-073-140
021-0-031-200	021-0-043-180	021-0-062-070	021-0-073-150
021-0-031-210	021-0-044-020	021-0-063-010	021-0-073-160
021-0-032-010	021-0-044-060	021-0-063-020	021-0-073-170
021-0-032-020	021-0-044-070	021-0-063-030	021-0-073-180
021-0-032-030	021-0-044-080	021-0-063-040	021-0-073-200
021-0-032-040	021-0-044-090	021-0-063-050	021-0-073-210
021-0-032-050	021-0-044-100	021-0-063-080	021-0-073-220
021-0-032-080	021-0-044-110	021-0-063-090	021-0-073-230
021-0-032-090	021-0-044-130	021-0-063-100	021-0-073-240
021-0-032-100	021-0-044-180	021-0-063-110	021-0-073-250
021-0-033-010	021-0-044-190	021-0-063-120	021-0-074-020
021-0-033-020	021-0-044-200	021-0-064-010	021-0-074-030
021-0-033-030	021-0-044-215	021-0-064-020	021-0-074-040
021-0-033-050	021-0-044-225	021-0-064-030	021-0-074-050
021-0-034-080	021-0-044-235	021-0-064-060	021-0-074-060
021-0-034-090	021-0-051-040	021-0-064-070	021-0-074-070
021-0-034-100	021-0-051-050	021-0-064-080	021-0-074-090
021-0-034-110	021-0-051-080	021-0-071-010	021-0-074-100
021-0-034-170	021-0-051-090	021-0-071-020	021-0-074-110
021-0-034-190	021-0-051-100	021-0-071-030	021-0-074-120
021-0-034-210	021-0-051-170	021-0-071-040	021-0-074-130
021-0-034-220	021-0-051-190	021-0-071-060	021-0-074-140
021-0-034-230	021-0-051-200	021-0-071-070	021-0-074-150
021-0-041-020	021-0-051-235	021-0-071-090	021-0-074-160
021-0-041-030	021-0-051-240	021-0-071-100	021-0-074-170
021-0-041-040	021-0-051-250	021-0-071-110	021-0-074-180
021-0-041-055	021-0-051-270	021-0-071-120	021-0-074-190
021-0-042-010	021-0-051-280	021-0-072-010	021-0-081-040
021-0-042-030	021-0-051-290	021-0-072-020	021-0-081-050

Parcels

021-0-081-070	021-0-092-040	021-0-105-120	021-0-131-040
021-0-081-080	021-0-092-050	021-0-106-010	021-0-131-110
021-0-081-120	021-0-092-060	021-0-106-020	021-0-131-120
021-0-081-130	021-0-092-070	021-0-106-030	021-0-131-160
021-0-081-140	021-0-092-080	021-0-106-040	021-0-131-170
021-0-081-150	021-0-092-090	021-0-106-080	021-0-131-230
021-0-081-170	021-0-092-100	021-0-106-095	021-0-131-240
021-0-081-180	021-0-092-110	021-0-106-100	021-0-131-250
021-0-081-210	021-0-092-120	021-0-111-010	021-0-140-010
021-0-081-220	021-0-101-010	021-0-111-030	021-0-140-020
021-0-081-230	021-0-101-020	021-0-111-040	021-0-140-130
021-0-081-240	021-0-101-050	021-0-111-050	021-0-140-140
021-0-081-250	021-0-101-080	021-0-111-060	021-0-140-150
021-0-081-335	021-0-101-090	021-0-111-070	021-0-140-160
021-0-081-345	021-0-101-100	021-0-111-080	021-0-140-170
021-0-081-355	021-0-101-110	021-0-111-100	021-0-140-180
021-0-081-365	021-0-101-120	021-0-111-110	021-0-140-190
021-0-081-375	021-0-101-130	021-0-111-120	021-0-140-205
021-0-081-385	021-0-102-010	021-0-112-020	021-0-140-210
021-0-081-395	021-0-102-040	021-0-113-040	021-0-140-220
021-0-081-405	021-0-102-060	021-0-113-050	021-0-140-230
021-0-081-430	021-0-102-070	021-0-113-060	021-0-140-240
021-0-082-010	021-0-102-090	021-0-113-070	021-0-140-250
021-0-082-020	021-0-102-100	021-0-113-080	021-0-140-260
021-0-082-030	021-0-102-110	021-0-113-090	021-0-140-330
021-0-082-060	021-0-103-010	021-0-113-100	021-0-140-340
021-0-082-070	021-0-103-020	021-0-113-110	021-0-140-360
021-0-082-080	021-0-103-030	021-0-113-120	021-0-140-370
021-0-082-090	021-0-103-040	021-0-113-130	021-0-140-380
021-0-082-100	021-0-104-010	021-0-113-150	021-0-140-400
021-0-082-110	021-0-104-020	021-0-113-180	021-0-140-410
021-0-082-120	021-0-104-030	021-0-113-200	021-0-140-420
021-0-082-130	021-0-104-040	021-0-113-230	021-0-140-430
021-0-082-140	021-0-104-050	021-0-113-250	021-0-140-440
021-0-082-150	021-0-104-060	021-0-113-260	021-0-140-450
021-0-082-160	021-0-104-070	021-0-113-270	021-0-140-460
021-0-082-170	021-0-104-080	021-0-113-280	021-0-140-480
021-0-091-010	021-0-104-090	021-0-113-290	021-0-140-490
021-0-091-020	021-0-105-010	021-0-113-300	021-0-140-500
021-0-091-030	021-0-105-040	021-0-113-310	021-0-140-510
021-0-091-040	021-0-105-060	021-0-113-320	021-0-150-015
021-0-091-050	021-0-105-070	021-0-113-330	021-0-150-025
021-0-091-060	021-0-105-080	021-0-120-010	021-0-150-035
021-0-092-010	021-0-105-090	021-0-131-010	021-0-160-015
021-0-092-020	021-0-105-100	021-0-131-020	021-0-160-025
021-0-092-030	021-0-105-110	021-0-131-030	021-0-160-035

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021-0-160-045
022-0-012-010
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022-0-051-290
022-0-052-010

Parcels

022-0-052-020	022-0-062-205	022-0-081-020	022-0-082-140
022-0-052-030	022-0-063-015	022-0-081-030	022-0-082-150
022-0-052-050	022-0-063-025	022-0-081-040	022-0-083-020
022-0-052-060	022-0-063-035	022-0-081-050	022-0-083-030
022-0-052-070	022-0-063-045	022-0-081-060	022-0-083-040
022-0-052-080	022-0-063-055	022-0-081-070	022-0-083-050
022-0-052-090	022-0-063-065	022-0-081-080	022-0-083-060
022-0-052-100	022-0-063-075	022-0-081-090	022-0-083-070
022-0-052-110	022-0-063-085	022-0-081-100	022-0-083-080
022-0-052-120	022-0-063-095	022-0-081-110	022-0-083-090
022-0-061-025	022-0-063-105	022-0-081-120	022-0-083-100
022-0-061-035	022-0-063-115	022-0-081-130	022-0-083-110
022-0-061-045	022-0-063-125	022-0-081-140	022-0-083-120
022-0-061-055	022-0-063-135	022-0-081-150	022-0-083-130
022-0-061-065	022-0-063-145	022-0-081-160	022-0-083-140
022-0-061-075	022-0-064-015	022-0-081-230	022-0-084-010
022-0-061-085	022-0-064-025	022-0-081-240	022-0-084-020
022-0-061-095	022-0-065-015	022-0-081-250	022-0-084-030
022-0-061-105	022-0-065-025	022-0-081-260	022-0-084-040
022-0-061-115	022-0-065-035	022-0-081-270	022-0-084-070
022-0-061-125	022-0-065-045	022-0-081-280	022-0-084-080
022-0-061-135	022-0-066-015	022-0-081-290	022-0-084-090
022-0-061-145	022-0-066-025	022-0-081-300	022-0-084-100
022-0-061-155	022-0-071-010	022-0-081-310	022-0-084-110
022-0-061-165	022-0-071-020	022-0-081-320	022-0-084-130
022-0-061-170	022-0-071-030	022-0-081-330	022-0-090-010
022-0-061-180	022-0-071-040	022-0-081-340	022-0-090-040
022-0-062-015	022-0-071-050	022-0-081-350	022-0-090-070
022-0-062-025	022-0-071-060	022-0-081-360	022-0-090-080
022-0-062-035	022-0-071-070	022-0-081-370	022-0-090-100
022-0-062-045	022-0-071-080	022-0-081-380	022-0-090-110
022-0-062-055	022-0-071-090	022-0-081-390	022-0-090-120
022-0-062-065	022-0-071-100	022-0-081-400	022-0-090-140
022-0-062-075	022-0-071-110	022-0-082-010	022-0-090-150
022-0-062-085	022-0-072-010	022-0-082-020	022-0-090-160
022-0-062-095	022-0-072-020	022-0-082-030	022-0-090-180
022-0-062-105	022-0-072-030	022-0-082-040	022-0-090-190
022-0-062-115	022-0-072-040	022-0-082-050	022-0-090-200
022-0-062-125	022-0-072-050	022-0-082-060	022-0-090-210
022-0-062-135	022-0-072-060	022-0-082-070	022-0-090-220
022-0-062-145	022-0-072-070	022-0-082-080	022-0-090-230
022-0-062-155	022-0-072-080	022-0-082-090	022-0-090-250
022-0-062-165	022-0-072-090	022-0-082-100	022-0-090-260
022-0-062-175	022-0-072-100	022-0-082-110	022-0-090-270
022-0-062-185	022-0-072-110	022-0-082-120	022-0-090-280
022-0-062-195	022-0-081-010	022-0-082-130	022-0-090-290

Parcels

022-0-090-300	022-0-110-020	022-0-120-095	022-0-130-165
022-0-090-400	022-0-110-040	022-0-120-105	022-0-130-175
022-0-090-410	022-0-110-060	022-0-120-115	022-0-130-185
022-0-090-420	022-0-110-070	022-0-120-125	022-0-130-195
022-0-090-450	022-0-110-090	022-0-120-135	022-0-130-205
022-0-090-480	022-0-110-100	022-0-120-145	022-0-130-215
022-0-090-490	022-0-110-130	022-0-120-155	022-0-130-225
022-0-090-500	022-0-110-150	022-0-120-165	022-0-130-235
022-0-090-510	022-0-110-160	022-0-120-175	022-0-130-240
022-0-090-520	022-0-110-190	022-0-120-185	022-0-140-030
022-0-100-020	022-0-110-200	022-0-120-195	022-0-140-040
022-0-100-030	022-0-110-210	022-0-120-205	022-0-140-050
022-0-100-080	022-0-110-220	022-0-120-215	022-0-140-060
022-0-100-090	022-0-110-230	022-0-120-225	022-0-140-080
022-0-100-100	022-0-110-240	022-0-120-235	022-0-140-090
022-0-100-110	022-0-110-250	022-0-120-245	022-0-140-100
022-0-100-130	022-0-110-260	022-0-120-255	022-0-140-110
022-0-100-150	022-0-110-300	022-0-120-265	022-0-140-120
022-0-100-160	022-0-110-320	022-0-120-275	022-0-140-130
022-0-100-170	022-0-110-330	022-0-120-285	022-0-140-140
022-0-100-180	022-0-110-340	022-0-120-290	022-0-140-150
022-0-100-190	022-0-110-350	022-0-120-300	022-0-140-160
022-0-100-200	022-0-110-380	022-0-120-330	022-0-140-170
022-0-100-230	022-0-110-390	022-0-120-340	022-0-140-180
022-0-100-240	022-0-110-400	022-0-120-350	022-0-140-190
022-0-100-250	022-0-110-410	022-0-120-360	022-0-140-200
022-0-100-260	022-0-110-430	022-0-120-370	022-0-140-210
022-0-100-270	022-0-110-440	022-0-120-380	022-0-140-220
022-0-100-280	022-0-110-460	022-0-120-390	022-0-140-230
022-0-100-290	022-0-110-470	022-0-120-400	022-0-140-260
022-0-100-300	022-0-110-480	022-0-120-410	022-0-140-270
022-0-100-310	022-0-110-490	022-0-130-015	022-0-140-290
022-0-100-320	022-0-110-500	022-0-130-025	022-0-140-300
022-0-100-330	022-0-110-520	022-0-130-035	022-0-140-310
022-0-100-340	022-0-110-530	022-0-130-045	022-0-140-320
022-0-100-350	022-0-110-540	022-0-130-055	022-0-140-330
022-0-100-360	022-0-110-550	022-0-130-065	022-0-140-340
022-0-100-380	022-0-110-560	022-0-130-075	022-0-140-350
022-0-100-390	022-0-110-570	022-0-130-085	022-0-140-365
022-0-100-420	022-0-120-010	022-0-130-095	022-0-140-370
022-0-100-430	022-0-120-020	022-0-130-105	022-0-140-380
022-0-100-440	022-0-120-040	022-0-130-115	022-0-140-390
022-0-100-450	022-0-120-050	022-0-130-125	022-0-140-400
022-0-100-460	022-0-120-065	022-0-130-135	022-0-140-410
022-0-100-470	022-0-120-075	022-0-130-145	022-0-140-460
022-0-110-010	022-0-120-085	022-0-130-155	022-0-140-470

022-0-140-490	022-0-151-270	022-0-161-025	022-0-162-065
022-0-140-500	022-0-151-280	022-0-161-035	022-0-162-075
022-0-140-510	022-0-151-290	022-0-161-040	022-0-162-085
022-0-140-520	022-0-151-300	022-0-161-060	022-0-162-095
022-0-140-530	022-0-151-310	022-0-161-070	022-0-162-105
022-0-140-540	022-0-151-320	022-0-161-080	022-0-162-120
022-0-140-550	022-0-151-330	022-0-161-090	022-0-162-145
022-0-140-560	022-0-151-340	022-0-161-100	022-0-171-015
022-0-140-570	022-0-151-350	022-0-161-110	022-0-171-025
022-0-140-580	022-0-151-360	022-0-161-120	022-0-171-035
022-0-140-590	022-0-151-370	022-0-161-130	022-0-171-045
022-0-140-600	022-0-152-010	022-0-161-140	022-0-171-055
022-0-140-610	022-0-152-020	022-0-161-150	022-0-171-065
022-0-140-630	022-0-152-030	022-0-161-160	022-0-171-075
022-0-140-640	022-0-152-040	022-0-161-170	022-0-171-085
022-0-140-650	022-0-152-050	022-0-161-180	022-0-172-015
022-0-140-660	022-0-152-070	022-0-161-195	022-0-172-025
022-0-140-670	022-0-152-080	022-0-161-205	022-0-172-035
022-0-140-680	022-0-152-090	022-0-161-215	022-0-172-045
022-0-140-690	022-0-152-100	022-0-161-225	022-0-172-055
022-0-151-010	022-0-152-110	022-0-161-235	022-0-172-065
022-0-151-020	022-0-152-120	022-0-161-240	022-0-172-075
022-0-151-030	022-0-152-130	022-0-161-250	022-0-172-085
022-0-151-040	022-0-152-140	022-0-161-270	022-0-172-095
022-0-151-050	022-0-152-150	022-0-161-280	022-0-172-105
022-0-151-060	022-0-152-160	022-0-161-290	022-0-172-115
022-0-151-070	022-0-152-170	022-0-161-300	022-0-172-125
022-0-151-080	022-0-152-180	022-0-161-310	022-0-172-135
022-0-151-090	022-0-152-190	022-0-161-320	022-0-172-145
022-0-151-100	022-0-152-200	022-0-161-330	022-0-172-155
022-0-151-110	022-0-152-210	022-0-161-340	022-0-172-165
022-0-151-120	022-0-152-220	022-0-161-350	022-0-173-015
022-0-151-130	022-0-152-230	022-0-161-360	022-0-173-025
022-0-151-140	022-0-152-240	022-0-161-370	022-0-173-035
022-0-151-150	022-0-152-250	022-0-161-380	022-0-173-045
022-0-151-160	022-0-152-280	022-0-161-390	022-0-173-055
022-0-151-170	022-0-152-290	022-0-161-405	022-0-173-065
022-0-151-180	022-0-152-300	022-0-161-415	022-0-173-075
022-0-151-190	022-0-152-310	022-0-161-420	022-0-173-085
022-0-151-200	022-0-152-320	022-0-161-430	022-0-181-015
022-0-151-210	022-0-152-330	022-0-161-440	022-0-181-025
022-0-151-220	022-0-152-340	022-0-161-450	022-0-181-035
022-0-151-230	022-0-152-350	022-0-162-015	022-0-181-045
022-0-151-240	022-0-152-360	022-0-162-035	022-0-181-055
022-0-151-250	022-0-152-370	022-0-162-045	022-0-181-065
022-0-151-260	022-0-161-015	022-0-162-055	022-0-181-075

Parcels

022-0-181-085	022-0-191-055	022-0-193-045	022-0-200-115
022-0-181-095	022-0-192-015	022-0-193-055	022-0-200-125
022-0-181-105	022-0-192-025	022-0-193-060	022-0-200-135
022-0-181-115	022-0-192-035	022-0-193-075	022-0-200-145
022-0-182-015	022-0-192-045	022-0-193-080	022-0-200-155
022-0-182-025	022-0-192-055	022-0-193-095	022-0-200-165
022-0-182-035	022-0-192-065	022-0-193-105	022-0-200-175
022-0-182-045	022-0-192-075	022-0-194-015	022-0-200-185
022-0-182-055	022-0-192-085	022-0-194-025	022-0-200-195
022-0-182-065	022-0-192-095	022-0-194-035	022-0-200-205
022-0-182-075	022-0-192-105	022-0-194-045	022-0-200-215
022-0-182-085	022-0-192-115	022-0-194-055	022-0-200-225
022-0-182-095	022-0-192-125	022-0-194-065	022-0-200-235
022-0-182-105	022-0-192-135	022-0-194-075	022-0-200-245
022-0-182-115	022-0-192-145	022-0-194-080	022-0-200-255
022-0-182-125	022-0-192-150	022-0-194-095	022-0-200-265
022-0-182-135	022-0-192-160	022-0-194-105	022-0-200-275
022-0-182-145	022-0-192-170	022-0-194-110	022-0-200-285
022-0-183-015	022-0-192-180	022-0-194-120	022-0-200-295
022-0-183-025	022-0-192-190	022-0-194-130	022-0-200-305
022-0-183-035	022-0-192-205	022-0-194-145	022-0-200-315
022-0-183-045	022-0-192-215	022-0-194-155	022-0-200-325
022-0-183-055	022-0-192-225	022-0-194-165	022-0-200-335
022-0-183-065	022-0-192-230	022-0-195-010	022-0-200-345
022-0-183-075	022-0-192-245	022-0-195-020	022-0-200-355
022-0-183-085	022-0-192-255	022-0-195-030	022-0-200-365
022-0-183-095	022-0-192-265	022-0-195-045	022-0-200-375
022-0-183-100	022-0-192-275	022-0-195-055	022-0-200-385
022-0-183-110	022-0-192-285	022-0-196-015	022-0-200-395
022-0-183-120	022-0-192-295	022-0-196-020	022-0-200-405
022-0-184-010	022-0-192-305	022-0-196-030	022-0-200-415
022-0-184-020	022-0-192-315	022-0-196-040	022-0-200-425
022-0-184-030	022-0-192-325	022-0-196-050	022-0-200-435
022-0-184-040	022-0-192-335	022-0-196-060	022-0-200-445
022-0-184-050	022-0-192-345	022-0-196-070	022-0-200-455
022-0-184-060	022-0-192-355	022-0-196-080	022-0-200-465
022-0-184-070	022-0-192-365	022-0-196-090	022-0-200-475
022-0-184-080	022-0-192-375	022-0-200-010	022-0-200-485
022-0-184-090	022-0-192-385	022-0-200-035	022-0-200-495
022-0-185-010	022-0-192-395	022-0-200-045	022-0-200-505
022-0-185-020	022-0-192-405	022-0-200-055	022-0-200-525
022-0-185-030	022-0-192-415	022-0-200-065	022-0-200-535
022-0-191-015	022-0-192-425	022-0-200-075	022-0-210-010
022-0-191-025	022-0-193-015	022-0-200-085	022-0-210-020
022-0-191-035	022-0-193-025	022-0-200-095	022-0-210-090
022-0-191-045	022-0-193-035	022-0-200-105	022-0-210-120

Parcels

022-0-210-140	023-0-040-060	023-0-062-240	023-0-075-195
022-0-210-170	023-0-040-080	023-0-062-250	023-0-075-205
022-0-210-180	023-0-040-090	023-0-062-270	023-0-075-210
022-0-210-190	023-0-050-010	023-0-063-060	023-0-075-220
022-0-210-200	023-0-050-020	023-0-063-070	023-0-076-020
022-0-210-210	023-0-050-030	023-0-063-080	023-0-077-020
022-0-210-220	023-0-050-080	023-0-063-140	023-0-077-040
022-0-210-230	023-0-050-120	023-0-063-170	023-0-077-050
022-0-210-245	023-0-050-130	023-0-063-190	023-0-077-060
023-0-010-010	023-0-061-040	023-0-063-200	023-0-077-070
023-0-010-040	023-0-061-050	023-0-063-210	023-0-077-080
023-0-010-080	023-0-061-080	023-0-063-220	023-0-077-090
023-0-010-090	023-0-061-090	023-0-063-230	023-0-081-010
023-0-010-100	023-0-061-100	023-0-063-240	023-0-081-020
023-0-010-110	023-0-061-110	023-0-070-010	023-0-081-030
023-0-010-120	023-0-061-120	023-0-070-030	023-0-081-040
023-0-010-130	023-0-061-130	023-0-071-010	023-0-081-050
023-0-020-010	023-0-061-140	023-0-071-030	023-0-081-060
023-0-020-020	023-0-061-150	023-0-071-040	023-0-081-070
023-0-020-030	023-0-061-160	023-0-071-050	023-0-081-080
023-0-020-040	023-0-061-170	023-0-072-010	023-0-081-090
023-0-020-050	023-0-061-210	023-0-072-020	023-0-081-100
023-0-020-060	023-0-061-220	023-0-072-030	023-0-081-110
023-0-020-070	023-0-061-230	023-0-072-040	023-0-081-120
023-0-020-080	023-0-061-250	023-0-072-050	023-0-081-130
023-0-020-100	023-0-061-260	023-0-072-060	023-0-081-145
023-0-020-130	023-0-061-270	023-0-072-070	023-0-081-150
023-0-020-150	023-0-061-280	023-0-073-010	023-0-081-160
023-0-020-160	023-0-062-010	023-0-073-020	023-0-081-300
023-0-020-170	023-0-062-020	023-0-073-030	023-0-081-315
023-0-020-180	023-0-062-030	023-0-073-050	023-0-081-325
023-0-020-200	023-0-062-040	023-0-073-060	023-0-081-335
023-0-020-210	023-0-062-050	023-0-073-070	023-0-081-345
023-0-030-020	023-0-062-060	023-0-073-080	023-0-081-355
023-0-030-030	023-0-062-070	023-0-073-090	023-0-081-365
023-0-030-040	023-0-062-080	023-0-073-100	023-0-081-370
023-0-030-050	023-0-062-090	023-0-073-110	023-0-081-400
023-0-030-060	023-0-062-100	023-0-074-010	023-0-081-410
023-0-030-130	023-0-062-110	023-0-074-020	023-0-081-420
023-0-030-140	023-0-062-120	023-0-074-030	023-0-081-430
023-0-030-150	023-0-062-130	023-0-074-050	023-0-081-440
023-0-030-180	023-0-062-140	023-0-074-060	023-0-081-450
023-0-030-190	023-0-062-150	023-0-074-070	023-0-081-460
023-0-040-020	023-0-062-160	023-0-075-050	023-0-082-010
023-0-040-030	023-0-062-170	023-0-075-170	023-0-082-020
023-0-040-040	023-0-062-230	023-0-075-185	023-0-082-030

Parcels

023-0-082-040	023-0-100-100	023-0-110-450	023-0-141-170
023-0-082-050	023-0-100-140	023-0-110-460	023-0-141-200
023-0-082-070	023-0-100-150	023-0-110-470	023-0-141-210
023-0-082-090	023-0-100-160	023-0-120-010	023-0-141-220
023-0-082-105	023-0-100-170	023-0-120-020	023-0-141-230
023-0-082-115	023-0-100-180	023-0-120-040	023-0-141-240
023-0-082-120	023-0-100-190	023-0-120-060	023-0-141-250
023-0-082-130	023-0-100-200	023-0-120-070	023-0-141-260
023-0-083-010	023-0-100-210	023-0-120-080	023-0-141-270
023-0-083-020	023-0-100-220	023-0-120-090	023-0-141-280
023-0-083-030	023-0-100-230	023-0-120-105	023-0-141-310
023-0-083-040	023-0-100-240	023-0-120-110	023-0-141-330
023-0-083-050	023-0-100-250	023-0-120-120	023-0-141-340
023-0-083-060	023-0-100-285	023-0-120-170	023-0-141-360
023-0-083-070	023-0-110-010	023-0-120-180	023-0-141-380
023-0-083-080	023-0-110-040	023-0-120-190	023-0-141-410
023-0-083-090	023-0-110-080	023-0-120-200	023-0-141-420
023-0-083-100	023-0-110-110	023-0-120-210	023-0-141-430
023-0-083-110	023-0-110-120	023-0-120-220	023-0-142-010
023-0-083-120	023-0-110-130	023-0-120-230	023-0-142-020
023-0-083-130	023-0-110-150	023-0-130-010	023-0-142-030
023-0-083-140	023-0-110-160	023-0-130-020	023-0-142-040
023-0-083-150	023-0-110-170	023-0-131-010	023-0-142-050
023-0-090-010	023-0-110-180	023-0-131-025	023-0-142-060
023-0-090-020	023-0-110-190	023-0-132-050	023-0-142-070
023-0-090-030	023-0-110-200	023-0-132-070	023-0-142-080
023-0-090-040	023-0-110-210	023-0-132-090	023-0-142-090
023-0-090-060	023-0-110-220	023-0-132-110	023-0-142-100
023-0-090-080	023-0-110-230	023-0-132-120	023-0-142-150
023-0-090-120	023-0-110-240	023-0-132-160	023-0-142-170
023-0-090-140	023-0-110-250	023-0-132-170	023-0-150-030
023-0-090-150	023-0-110-260	023-0-132-180	023-0-150-040
023-0-090-235	023-0-110-270	023-0-141-010	023-0-150-050
023-0-090-295	023-0-110-280	023-0-141-020	023-0-150-060
023-0-090-305	023-0-110-290	023-0-141-030	023-0-150-070
023-0-090-310	023-0-110-310	023-0-141-040	023-0-150-085
023-0-090-320	023-0-110-320	023-0-141-050	023-0-150-175
023-0-090-330	023-0-110-330	023-0-141-060	023-0-150-205
023-0-090-345	023-0-110-340	023-0-141-070	023-0-150-250
023-0-090-355	023-0-110-360	023-0-141-080	023-0-150-285
023-0-100-020	023-0-110-370	023-0-141-090	023-0-150-295
023-0-100-040	023-0-110-390	023-0-141-100	023-0-150-315
023-0-100-050	023-0-110-400	023-0-141-110	023-0-150-345
023-0-100-060	023-0-110-410	023-0-141-120	023-0-150-405
023-0-100-080	023-0-110-420	023-0-141-130	023-0-150-415
023-0-100-090	023-0-110-440	023-0-141-140	023-0-150-425

023-0-150-435	023-0-200-025	023-0-210-215	024-0-072-305
023-0-150-445	023-0-200-035	023-0-210-225	024-0-072-335
023-0-150-455	023-0-200-045	023-0-210-235	024-0-072-345
023-0-150-475	023-0-200-055	024-0-010-010	024-0-072-365
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023-0-180-070	023-0-210-145	024-0-072-025	024-0-090-315
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023-0-180-090	023-0-210-165	024-0-072-055	024-0-090-345
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023-0-200-015	023-0-210-205	024-0-072-265	024-0-090-380

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Parcels

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030-0-160-240

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030-0-160-255	030-0-220-155	031-0-062-175	031-0-094-045
030-0-160-265	030-0-220-165	031-0-070-105	031-0-094-075
030-0-160-275	030-0-220-215	031-0-070-115	031-0-094-085
030-0-160-295	030-0-220-235	031-0-070-125	031-0-094-115
030-0-160-305	030-0-220-245	031-0-070-135	031-0-094-125
030-0-170-050	030-0-220-255	031-0-070-195	031-0-094-135
030-0-170-080	030-0-220-275	031-0-070-220	031-0-094-145
030-0-170-100	030-0-220-295	031-0-070-240	031-0-094-155
030-0-170-110	030-0-220-325	031-0-070-260	031-0-094-175
030-0-170-120	030-0-220-335	031-0-070-270	031-0-094-185
030-0-170-140	030-0-220-345	031-0-070-280	031-0-094-195
030-0-170-190	030-0-220-355	031-0-070-290	031-0-094-215
030-0-170-200	030-0-220-365	031-0-070-300	031-0-094-225
030-0-180-055	030-0-230-015	031-0-070-320	031-0-094-235
030-0-190-115	030-0-230-025	031-0-091-015	031-0-094-250
030-0-190-135	030-0-230-035	031-0-091-035	031-0-094-265
030-0-190-165	030-0-230-045	031-0-091-045	031-0-094-295
030-0-190-175	030-0-230-055	031-0-091-085	031-0-094-305
030-0-190-205	030-0-230-065	031-0-091-095	031-0-094-315
030-0-190-225	030-0-230-075	031-0-091-105	031-0-094-345
030-0-190-235	030-0-230-085	031-0-091-135	031-0-094-375
030-0-190-245	030-0-230-105	031-0-091-155	031-0-094-385
030-0-190-255	030-0-230-115	031-0-091-165	031-0-094-395
030-0-190-265	030-0-230-125	031-0-092-015	031-0-094-435
030-0-200-015	030-0-230-135	031-0-092-035	031-0-094-445
030-0-200-031	030-0-230-145	031-0-092-065	031-0-094-455
030-0-200-032	030-0-230-155	031-0-092-075	031-0-094-465
030-0-200-045	030-0-230-165	031-0-092-085	031-0-094-475
030-0-200-055	030-0-230-175	031-0-092-105	031-0-094-485
030-0-200-065	030-0-230-215	031-0-092-115	031-0-094-505
030-0-200-075	030-0-230-235	031-0-092-125	031-0-094-515
030-0-200-085	030-0-230-245	031-0-092-135	031-0-094-525
030-0-220-015	030-0-230-255	031-0-093-025	031-0-094-535
030-0-220-025	030-0-230-275	031-0-093-045	031-0-094-555
030-0-220-035	030-0-230-285	031-0-093-055	031-0-094-575
030-0-220-045	030-0-230-295	031-0-093-065	031-0-094-585
030-0-220-055	030-0-230-305	031-0-093-075	031-0-094-595
030-0-220-065	030-0-240-010	031-0-093-085	031-0-094-605
030-0-220-075	030-0-240-035	031-0-093-095	031-0-094-615
030-0-220-085	030-0-240-045	031-0-093-115	031-0-094-625
030-0-220-095	030-0-240-055	031-0-093-135	031-0-094-635
030-0-220-105	030-0-240-065	031-0-093-155	031-0-094-645
030-0-220-115	030-0-240-075	031-0-093-165	031-0-101-030
030-0-220-125	030-0-240-085	031-0-093-175	031-0-101-045
030-0-220-135	031-0-062-155	031-0-093-185	031-0-101-055
030-0-220-145	031-0-062-165	031-0-093-195	031-0-101-065

031-0-101-075	031-0-111-325	031-0-113-045	031-0-114-315
031-0-101-085	031-0-111-335	031-0-113-055	031-0-114-325
031-0-101-095	031-0-111-375	031-0-113-095	031-0-120-010
031-0-101-110	031-0-111-385	031-0-113-145	031-0-120-170
031-0-101-135	031-0-111-425	031-0-113-155	031-0-120-180
031-0-101-145	031-0-111-435	031-0-113-180	031-0-160-125
031-0-101-155	031-0-111-445	031-0-113-190	031-0-171-030
031-0-101-165	031-0-111-455	031-0-113-205	031-0-174-090
031-0-101-175	031-0-111-475	031-0-113-215	031-0-183-020
031-0-101-185	031-0-111-495	031-0-113-235	031-0-183-030
031-0-101-195	031-0-111-505	031-0-113-255	031-0-183-040
031-0-101-205	031-0-111-515	031-0-113-285	031-0-183-050
031-0-101-215	031-0-111-525	031-0-113-295	031-0-183-120
031-0-101-225	031-0-111-575	031-0-113-305	031-0-183-130
031-0-101-235	031-0-111-585	031-0-113-325	031-0-183-140
031-0-101-265	031-0-111-595	031-0-113-355	031-0-190-010
031-0-101-275	031-0-111-625	031-0-113-365	031-0-190-060
031-0-101-285	031-0-111-635	031-0-113-375	031-0-190-180
031-0-101-295	031-0-111-675	031-0-113-385	031-0-190-380
031-0-101-305	031-0-111-685	031-0-113-395	031-0-190-475
031-0-101-315	031-0-111-695	031-0-113-405	031-0-190-485
031-0-101-325	031-0-111-705	031-0-113-415	031-0-190-490
031-0-101-335	031-0-111-715	031-0-113-425	031-0-190-535
031-0-101-345	031-0-111-725	031-0-113-435	031-0-190-625
031-0-101-355	031-0-111-755	031-0-113-445	031-0-190-680
031-0-101-365	031-0-111-775	031-0-114-045	031-0-200-015
031-0-101-375	031-0-112-015	031-0-114-055	031-0-200-025
031-0-101-385	031-0-112-045	031-0-114-065	031-0-200-035
031-0-101-395	031-0-112-075	031-0-114-085	031-0-200-045
031-0-101-405	031-0-112-085	031-0-114-095	031-0-200-055
031-0-111-035	031-0-112-095	031-0-114-105	031-0-200-065
031-0-111-045	031-0-112-105	031-0-114-115	031-0-200-075
031-0-111-055	031-0-112-145	031-0-114-125	031-0-200-085
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031-0-111-075	031-0-112-175	031-0-114-155	031-0-200-105
031-0-111-085	031-0-112-215	031-0-114-165	031-0-200-115
031-0-111-095	031-0-112-255	031-0-114-175	031-0-200-125
031-0-111-105	031-0-112-265	031-0-114-195	031-0-200-135
031-0-111-115	031-0-112-275	031-0-114-205	031-0-200-145
031-0-111-145	031-0-112-295	031-0-114-215	031-0-200-155
031-0-111-155	031-0-112-305	031-0-114-235	031-0-200-165
031-0-111-215	031-0-112-345	031-0-114-245	031-0-200-185
031-0-111-225	031-0-112-355	031-0-114-265	031-0-200-195
031-0-111-235	031-0-112-365	031-0-114-275	031-0-200-205
031-0-111-245	031-0-112-375	031-0-114-295	031-0-200-215
031-0-111-255	031-0-113-035	031-0-114-305	031-0-210-025

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031-0-210-065	032-0-020-165	032-0-061-015	032-0-130-105
031-0-210-075	032-0-030-015	032-0-061-035	032-0-130-115
031-0-210-115	032-0-030-025	032-0-061-045	032-0-130-120
031-0-210-125	032-0-030-035	032-0-061-055	032-0-130-195
031-0-210-175	032-0-030-045	032-0-061-065	032-0-130-205
031-0-210-225	032-0-030-055	032-0-061-075	032-0-130-215
031-0-210-245	032-0-030-075	032-0-061-085	032-0-130-245
031-0-210-255	032-0-030-085	032-0-061-095	032-0-140-430
031-0-210-285	032-0-030-095	032-0-061-105	032-0-150-030
031-0-210-305	032-0-030-105	032-0-062-015	032-0-150-040
031-0-210-315	032-0-030-115	032-0-062-025	032-0-150-065
031-0-210-375	032-0-030-125	032-0-062-045	032-0-150-075
031-0-210-395	032-0-041-015	032-0-062-055	032-0-150-080
031-0-210-405	032-0-041-025	032-0-062-095	032-0-150-100
031-0-210-415	032-0-041-045	032-0-062-135	032-0-172-015
031-0-210-425	032-0-041-055	032-0-062-145	032-0-172-025
031-0-222-075	032-0-041-065	032-0-062-155	032-0-172-085
031-0-222-085	032-0-041-075	032-0-062-165	032-0-172-095
031-0-222-095	032-0-041-085	032-0-062-175	032-0-172-105
031-0-223-025	032-0-041-095	032-0-062-185	032-0-174-045
031-0-223-060	032-0-041-105	032-0-062-195	032-0-174-065
031-0-223-075	032-0-041-115	032-0-062-215	032-0-174-095
031-0-223-085	032-0-041-125	032-0-062-225	032-0-174-110
031-0-223-115	032-0-041-135	032-0-063-025	032-0-174-120
031-0-223-125	032-0-042-025	032-0-063-055	032-0-174-190
031-0-223-200	032-0-042-035	032-0-063-065	032-0-175-065
032-0-010-015	032-0-042-055	032-0-063-075	032-0-175-075
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032-0-010-040	032-0-042-075	032-0-063-105	032-0-175-095
032-0-010-065	032-0-050-025	032-0-070-030	032-0-175-125
032-0-010-085	032-0-050-035	032-0-070-070	032-0-176-045
032-0-010-120	032-0-050-045	032-0-070-085	032-0-176-055
032-0-010-130	032-0-050-055	032-0-070-105	032-0-176-065
032-0-010-150	032-0-050-065	032-0-110-015	032-0-176-075
032-0-010-160	032-0-050-075	032-0-120-015	032-0-176-095
032-0-020-015	032-0-050-095	032-0-120-030	032-0-176-105
032-0-020-055	032-0-050-105	032-0-120-040	032-0-176-115
032-0-020-065	032-0-050-125	032-0-120-050	032-0-176-125
032-0-020-075	032-0-050-135	032-0-120-065	032-0-176-135
032-0-020-095	032-0-050-145	032-0-120-075	032-0-177-015
032-0-020-105	032-0-050-165	032-0-120-085	032-0-177-025
032-0-020-115	032-0-050-225	032-0-120-115	032-0-177-035
032-0-020-125	032-0-050-235	032-0-120-125	032-0-177-045
032-0-020-135	032-0-050-255	032-0-130-050	032-0-177-065
032-0-020-145	032-0-050-265	032-0-130-060	032-0-177-075
032-0-020-155	032-0-050-275	032-0-130-080	032-0-177-085

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032-0-177-095	032-0-222-065	032-0-243-325	032-0-261-045
032-0-177-105	032-0-222-075	032-0-243-335	032-0-262-015
032-0-192-015	032-0-222-085	032-0-243-345	032-0-262-025
032-0-192-160	032-0-230-025	032-0-243-355	032-0-262-035
032-0-192-175	032-0-230-035	032-0-243-365	032-0-262-045
032-0-192-180	032-0-230-045	032-0-243-375	032-0-262-055
032-0-192-190	032-0-230-055	032-0-243-385	032-0-262-065
032-0-201-015	032-0-230-065	032-0-260-015	032-0-262-075
032-0-201-025	032-0-230-075	032-0-260-025	032-0-262-085
032-0-201-055	032-0-230-085	032-0-260-035	032-0-263-015
032-0-201-085	032-0-230-095	032-0-260-045	032-0-263-025
032-0-201-105	032-0-230-400	032-0-260-055	032-0-263-035
032-0-201-115	032-0-242-195	032-0-260-065	032-0-263-045
032-0-201-145	032-0-242-205	032-0-260-075	032-0-263-055
032-0-201-155	032-0-242-215	032-0-260-085	032-0-263-065
032-0-201-165	032-0-242-225	032-0-260-095	032-0-263-075
032-0-201-205	032-0-242-235	032-0-260-105	032-0-263-085
032-0-201-225	032-0-242-245	032-0-260-115	032-0-263-095
032-0-201-235	032-0-242-255	032-0-260-125	032-0-263-105
032-0-202-015	032-0-242-265	032-0-260-135	032-0-263-115
032-0-202-055	032-0-242-275	032-0-260-145	032-0-263-125
032-0-202-065	032-0-242-285	032-0-260-155	032-0-263-135
032-0-202-075	032-0-242-295	032-0-260-165	032-0-263-145
032-0-202-095	032-0-242-315	032-0-260-175	032-0-263-155
032-0-202-105	032-0-242-325	032-0-260-185	032-0-263-165
032-0-202-115	032-0-242-335	032-0-260-195	032-0-263-175
032-0-221-065	032-0-242-345	032-0-260-205	032-0-263-185
032-0-221-075	032-0-242-355	032-0-260-215	032-0-263-195
032-0-221-085	032-0-242-365	032-0-260-225	032-0-263-205
032-0-221-095	032-0-243-065	032-0-260-235	032-0-263-215
032-0-221-105	032-0-243-075	032-0-260-245	032-0-263-225
032-0-221-115	032-0-243-085	032-0-260-255	032-0-263-235
032-0-221-125	032-0-243-095	032-0-260-265	032-0-263-245
032-0-221-135	032-0-243-195	032-0-260-275	032-0-263-255
032-0-221-145	032-0-243-205	032-0-260-285	032-0-263-260
032-0-221-215	032-0-243-215	032-0-260-295	032-0-264-015
032-0-221-225	032-0-243-225	032-0-260-305	032-0-264-025
032-0-221-235	032-0-243-235	032-0-260-315	032-0-264-035
032-0-221-245	032-0-243-245	032-0-260-325	032-0-264-045
032-0-221-255	032-0-243-255	032-0-260-335	032-0-264-055
032-0-221-265	032-0-243-265	032-0-260-345	032-0-264-065
032-0-221-275	032-0-243-275	032-0-260-355	032-0-264-075
032-0-221-285	032-0-243-285	032-0-260-365	032-0-264-085
032-0-221-315	032-0-243-295	032-0-261-015	032-0-264-095
032-0-221-325	032-0-243-305	032-0-261-025	032-0-264-105
032-0-221-335	032-0-243-315	032-0-261-035	032-0-264-115

032-0-264-125	032-0-267-145	032-0-269-195	033-0-030-175
032-0-264-135	032-0-267-155	032-0-269-205	033-0-030-180
032-0-264-145	032-0-267-165	032-0-269-215	033-0-030-190
032-0-264-155	032-0-267-175	032-0-269-225	033-0-030-205
032-0-264-165	032-0-267-185	033-0-020-015	033-0-030-215
032-0-264-175	032-0-267-195	033-0-020-085	033-0-030-225
032-0-264-185	032-0-267-205	033-0-020-095	033-0-030-235
032-0-264-195	032-0-267-215	033-0-020-110	033-0-040-030
032-0-265-015	032-0-268-015	033-0-020-135	033-0-040-060
032-0-265-025	032-0-268-025	033-0-020-175	033-0-040-070
032-0-265-035	032-0-268-035	033-0-020-185	033-0-040-085
032-0-265-045	032-0-268-045	033-0-020-195	033-0-040-090
032-0-265-055	032-0-268-055	033-0-020-205	033-0-040-100
032-0-265-065	032-0-268-065	033-0-020-215	033-0-040-110
032-0-265-075	032-0-268-075	033-0-020-225	033-0-040-130
032-0-265-085	032-0-268-085	033-0-020-245	033-0-040-140
032-0-266-015	032-0-268-095	033-0-020-255	033-0-040-150
032-0-266-025	032-0-268-105	033-0-020-275	033-0-040-165
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061-0-160-150	061-0-172-080	061-0-182-250	061-0-201-190
061-0-160-160	061-0-172-110	061-0-182-265	061-0-201-210
061-0-160-170	061-0-172-130	061-0-182-275	061-0-201-260
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061-0-160-205	061-0-181-045	061-0-182-340	061-0-201-280
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061-0-160-335	061-0-181-165	061-0-190-070	061-0-202-030
061-0-160-345	061-0-181-190	061-0-190-080	061-0-202-040
061-0-160-355	061-0-181-200	061-0-190-090	061-0-202-060
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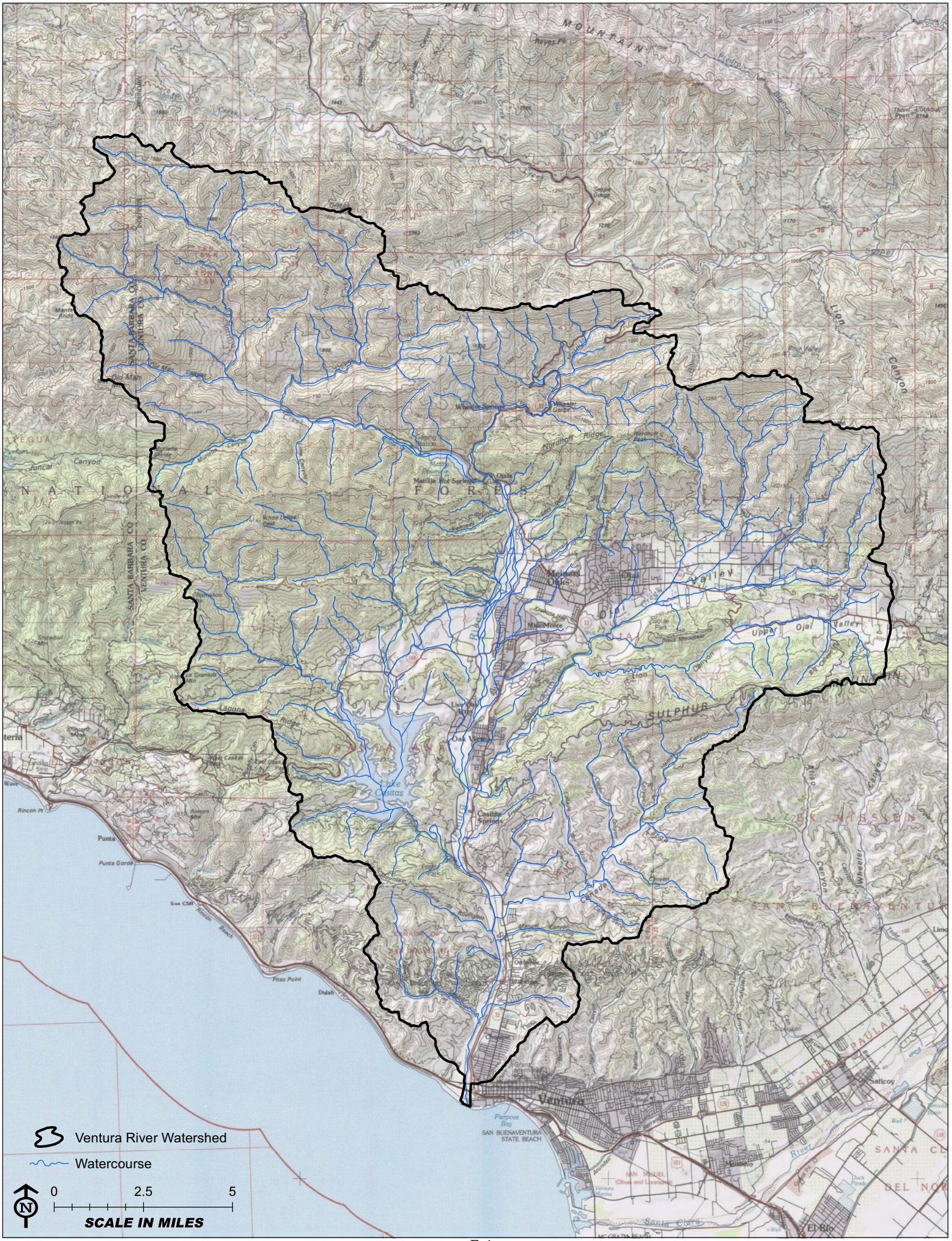
073-0-350-255	073-0-380-045	901-0-130-270	901-0-130-730

901-0-130-740
901-0-130-750
901-0-130-760
901-0-130-770
901-0-130-780
901-0-130-790
901-0-130-800
901-0-130-810
901-0-130-820
901-0-130-830
901-0-130-840
901-0-130-850
901-0-130-860
901-0-130-870
901-0-130-880
901-0-130-890
901-0-130-900

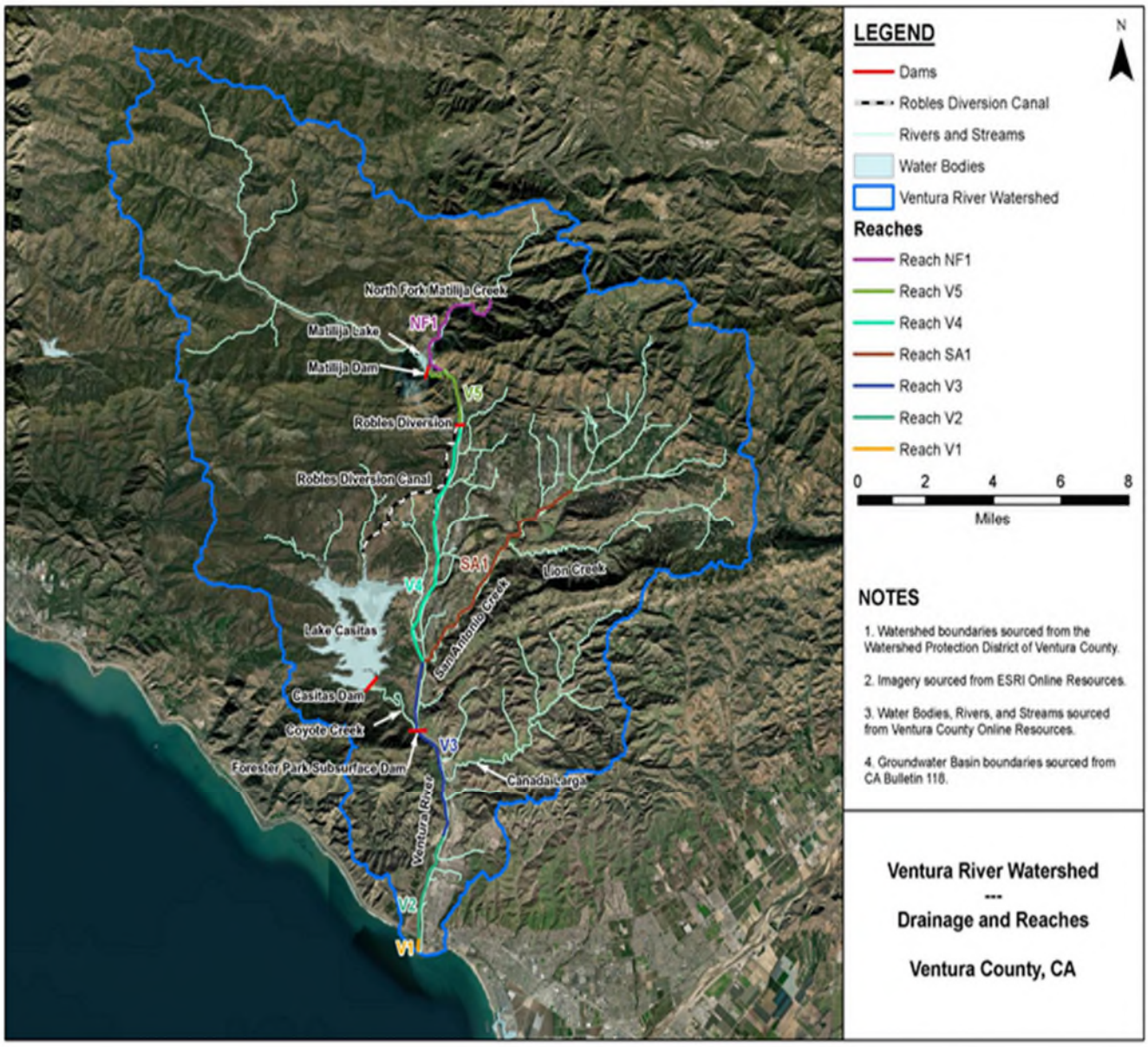
Exhibit D – List of Defaulted Cross-Defendants –

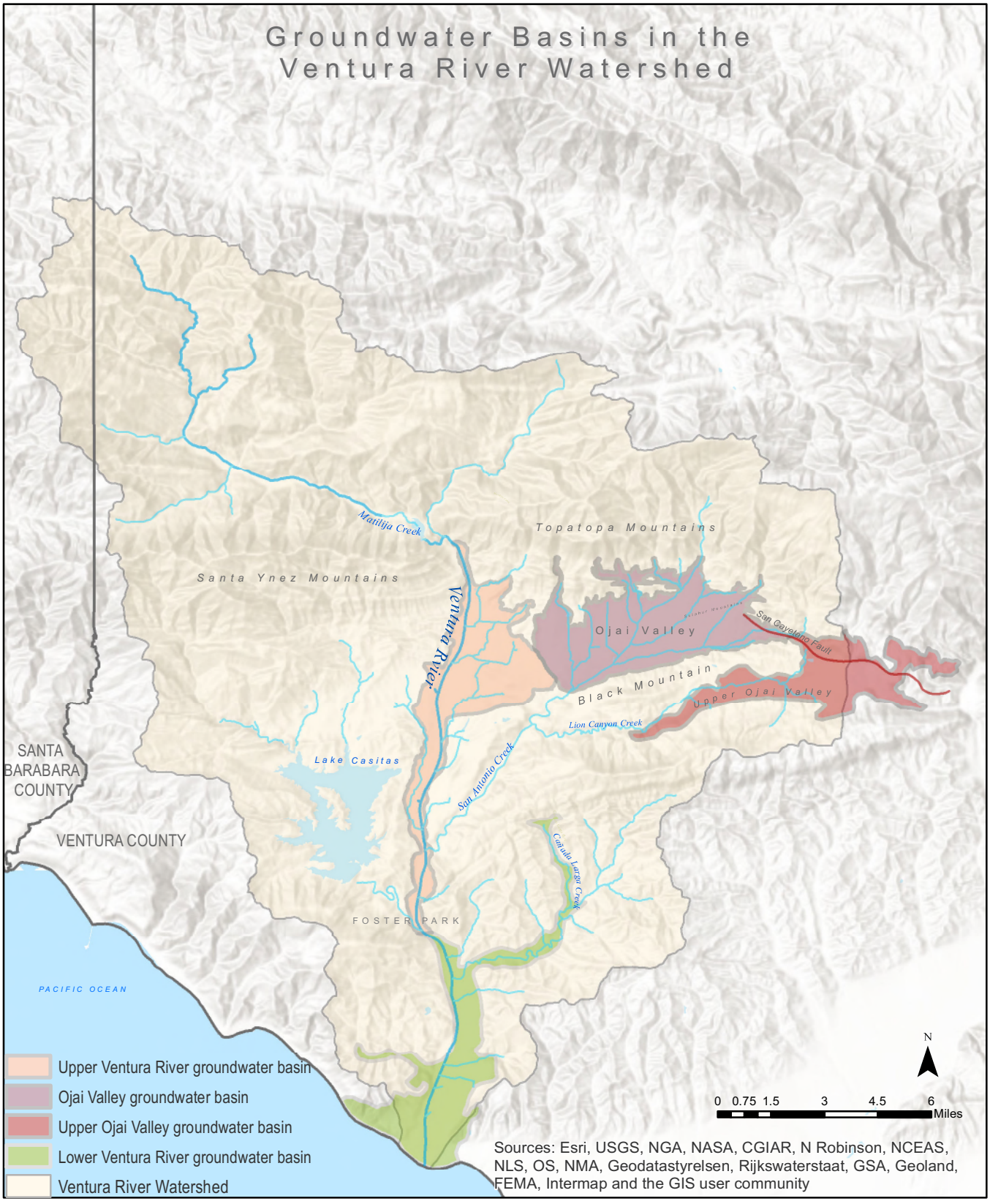
To be Completed with Court Confirmation

Exhibit E – Watershed and Basin Maps

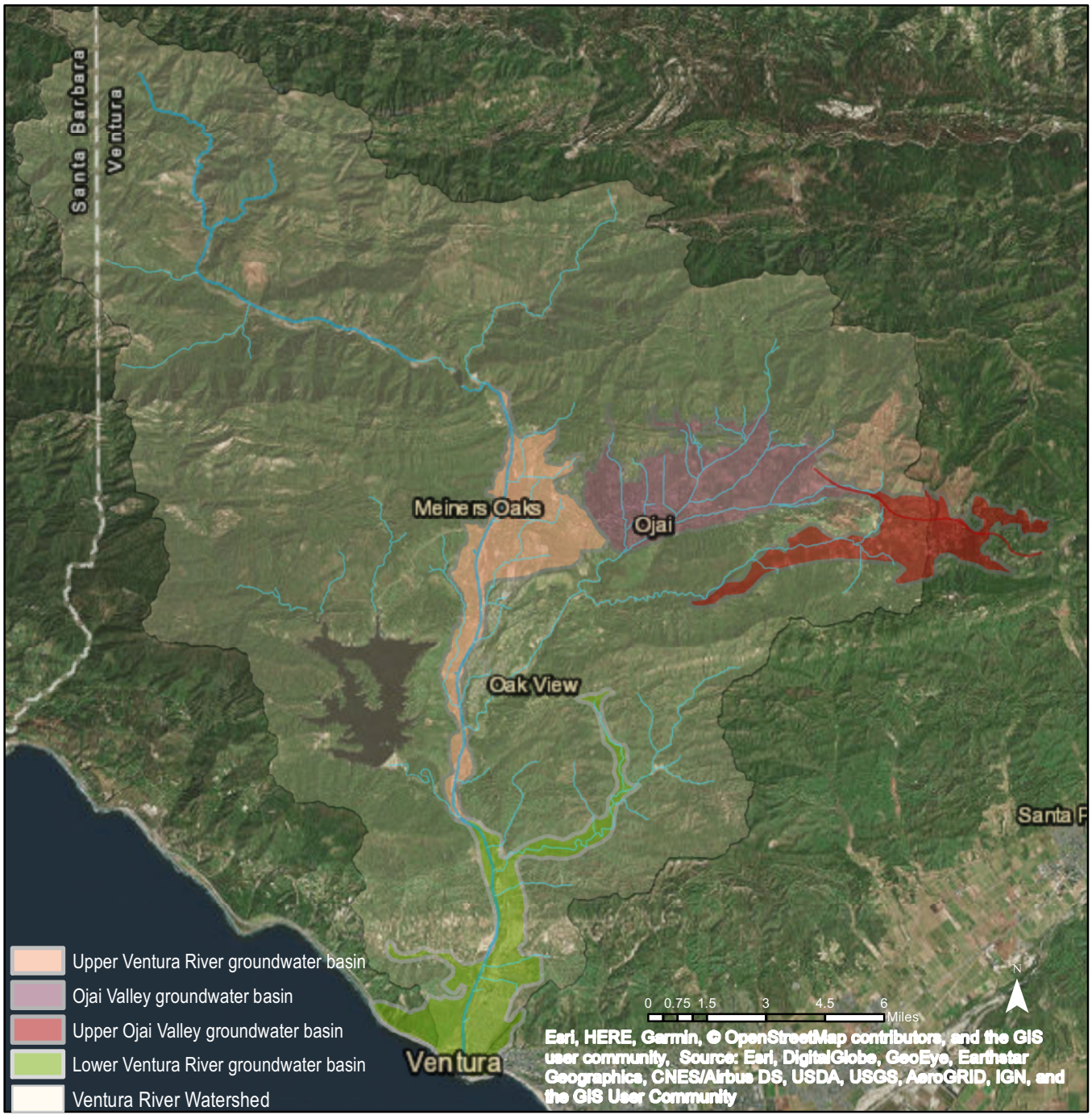

Ventura River Watershed
Watercourse
0
2.5
5
SCALE IN MILES

Ventura River Reaches Map

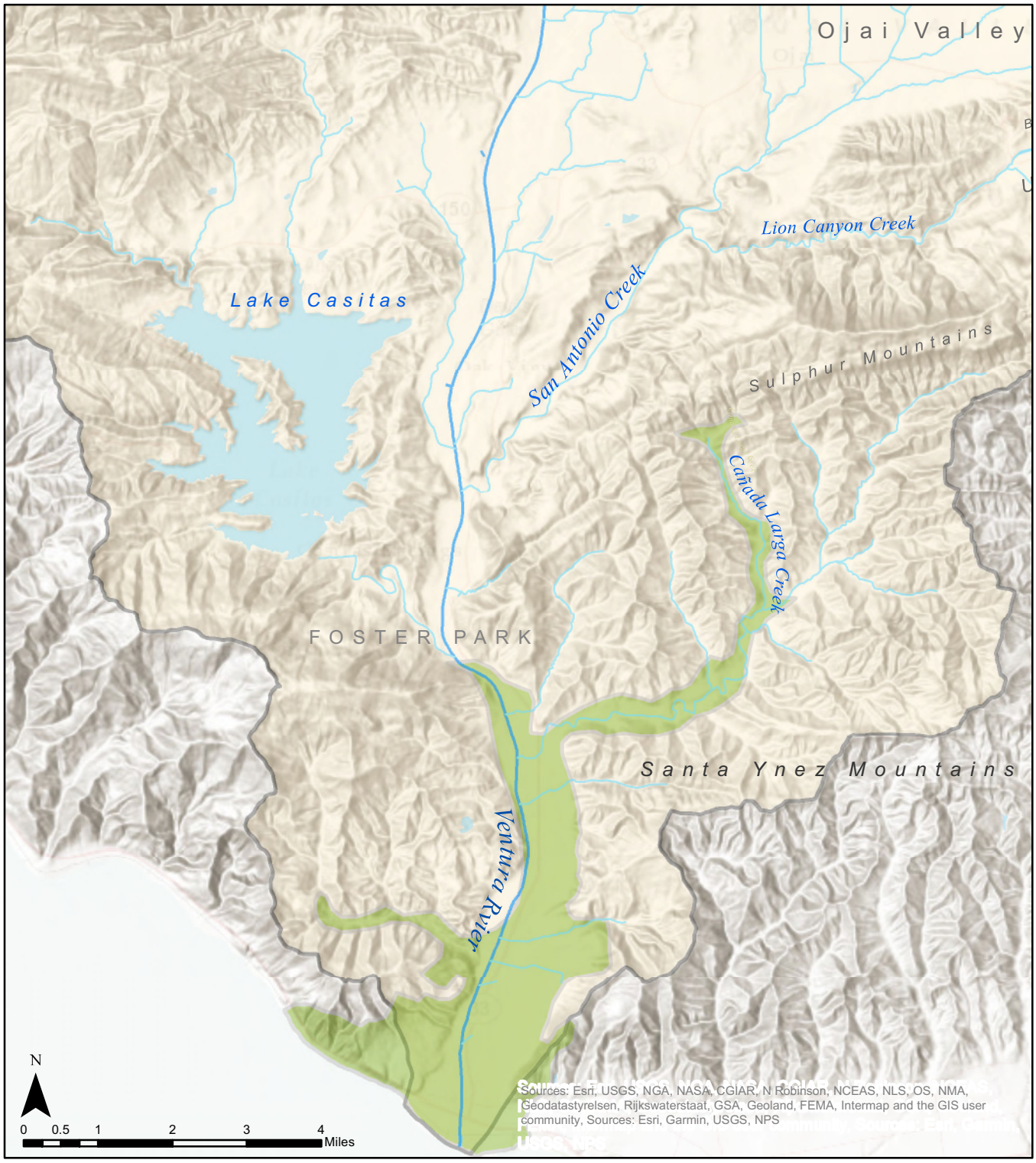



Groundwater Basins in the Ventura River Watershed
Matilija Creek
Topatopa Mountains
Santa Ynez Mountains
Ventura River
Ojai Valley
San Cayetano Fault
Black Mountain
Upper Ojai Valley
Lion Canyon Creek
SANTA BARABARA COUNTY
Lake Casitas
San Antonio Creek
VENTURA COUNTY
Canada Larga Creek
FOSTER PARK
PACIFIC OCEAN
Upper Ventura River groundwater basin
Ojai Valley groundwater basin
Upper Ojai Valley groundwater basin
Lower Ventura River groundwater basin
Ventura River Watershed
N
0 0.75 1.5 3 4.5 6
Miles
Sources: Esri, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Groundwater Basins in the Ventura River Watershed



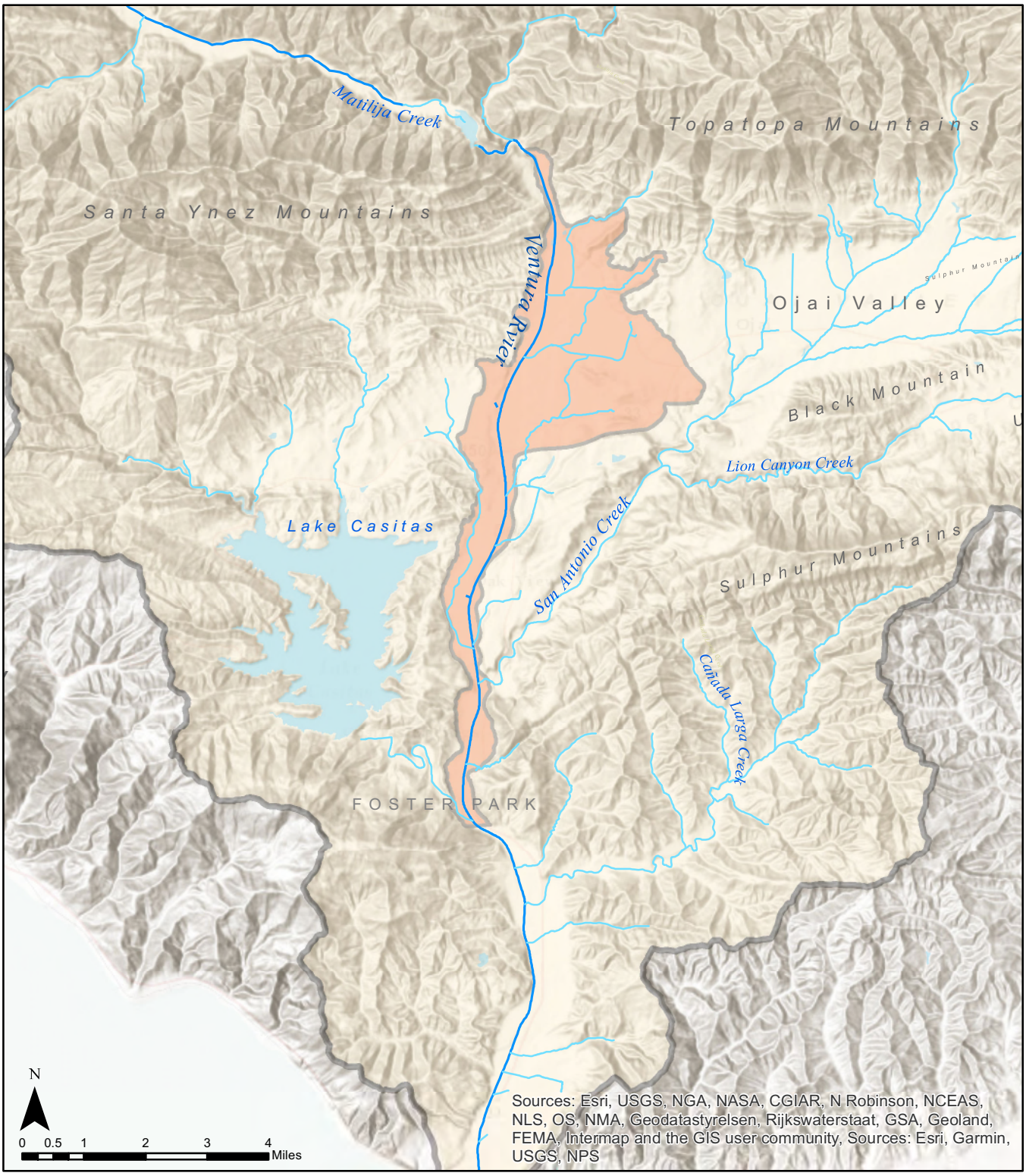
Lower Ventura River Groundwater Basin



Lower Ventura River groundwater basin extent

Ventura River Watershed

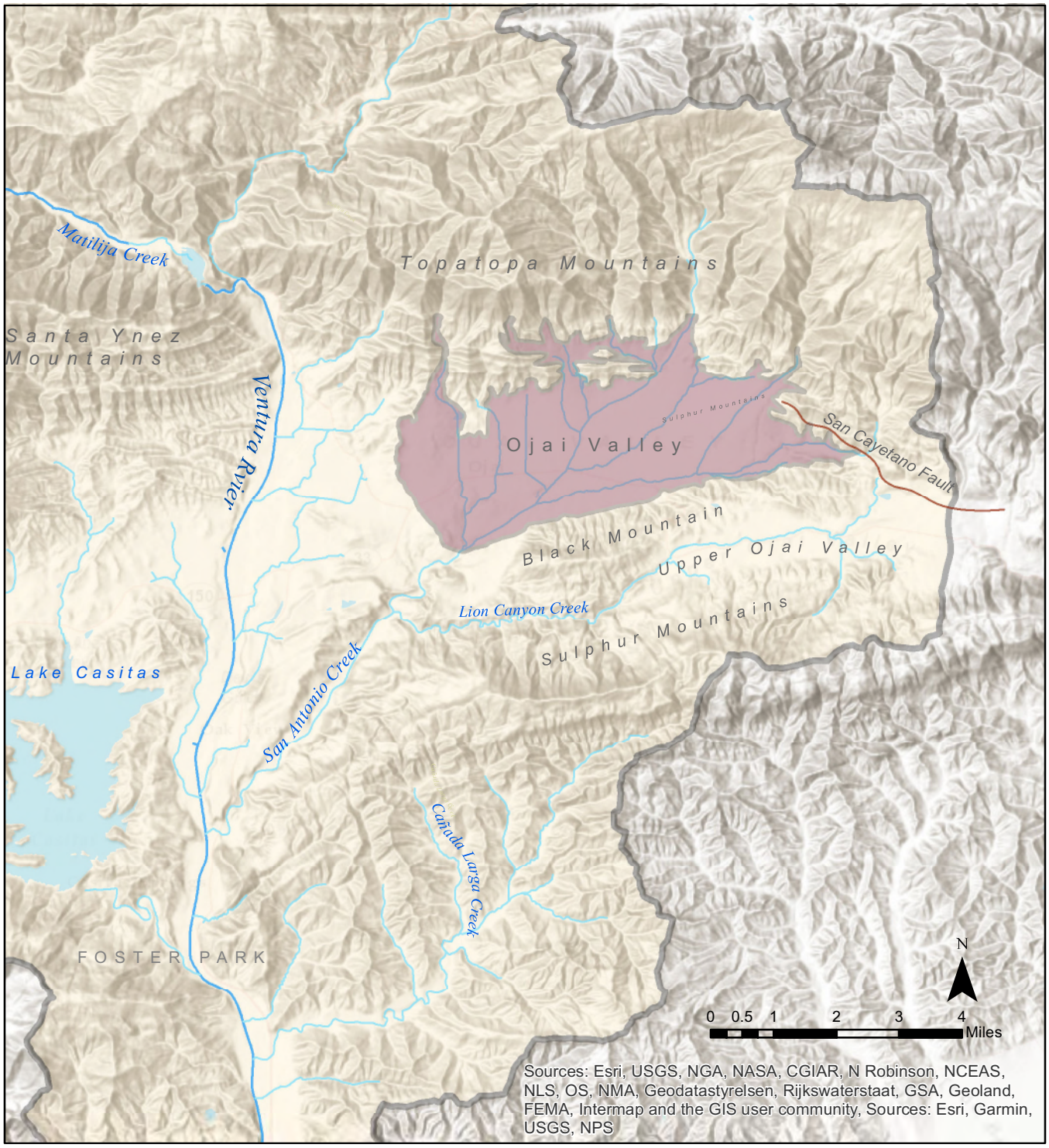
Upper Ventura River Groundwater Basin



Ventura River Watershed

Upper Ventura River groundwater basin extent

Ojai Valley Groundwater Basin



Ventura River Watershed

Ojai Valley groundwater basin extent

Upper Ojai Valley Groundwater Basin

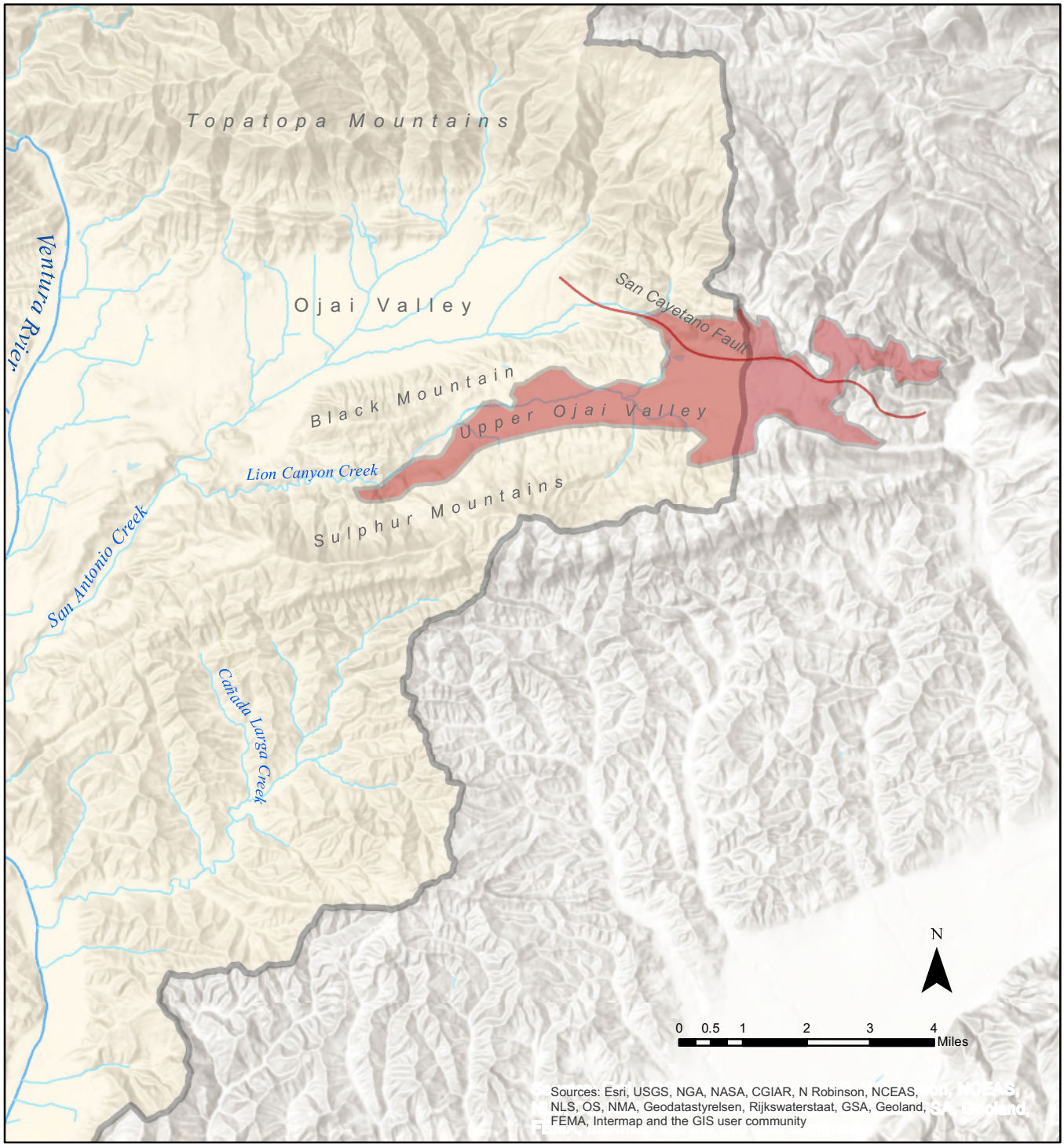


Exhibit F – Production Forbearance Program

1. Eligibility. Any Producer is eligible to enroll in the Court-approved and MC-developed and administered Production Forbearance Program as set forth herein.

2. Methods. Any Producer may reduce their Production under methods developed pursuant to this Court approved Production Forbearance Program or otherwise approved by the MC after making a finding that the Production reduction is in compliance with the goals and objectives of the Production Forbearance Program and the Physical Solution.

3. Term. A Producer may enroll in the Production Forbearance Program permanently or temporarily, (for periods not less than one year) and thereby agrees to voluntarily reduce Production by an amount the Producer determines in its sole discretion ("Enrollment Period"). An Enrollment Period may be antedated to no earlier than January 2, 2020, so long as the MC makes a finding that the Production reduction measure undertaken prior to the entry of this Stipulated Physical Solution and Judgment reasonably satisfied the MC's requirements under sections 2 and 4.

4. Administration of the Production Forbearance Program. The MC shall develop procedures to administer the Production Forbearance Program, including: the creation of simple enrollment forms (an example is provided at the end of this exhibit); notice of enrollment; identification of the methodology employed; basic verification methods to demonstrate reduced Production; monitoring; and termination of enrollment. The MC shall approve a Producer's application for enrollment so long as the Producer fulfills the enrollment's procedural requirements.

5. No Verification of Streamflow Enhancement Required. No enrolled Producer will be required to demonstrate a quantifiable streamflow enhancement resulting from reduced Production. However, enrolled Producers must verify reduced Production using the methods approved by the MC

6. Future Required Demand Management. The Physical Solution contemplates potential mandatory demand management measures that the MC and/or the Court may impose to meet the objectives of the Physical Solution. When setting a Producer's base Production amount for that purpose, if such a setting is ever required, the base period shall not include Enrollment Period(s). If base Production or future allocations are quantified by another method, past and ongoing conservation measures shall be equitably tailored to account for an enrolled Producer's voluntary efforts pursuant to the Production Forbearance Program.

7. Future Water Rights Determination. In any future water rights determination, any base or historical period used to quantify a temporarily enrolled Producer's water right shall not include Enrollment Period(s). Reduced Production during an Enrollment Period shall not be evidence of abandonment, forfeiture, or failure to engage in self-help.

8. Statutory Water Conservation Provisions. The Court finds reduced Production pursuant to an appropriative right under the Production Forbearance Program qualifies the Producer for the protections set forth in Water Code section 1011.

9. No Other Approvals Necessary. No other state agency or Court approval is required to afford an enrolled Producer in the benefits and protections provided by the Production Forbearance Program.

Exhibit F – Production Forbearance Program – Temporary Enrollment Form

Date:

Name:

Place of Use (APN #s, Address):

Method of Production:

Statement of Diversion and Use # or Permit or License #, if applicable:

Well name, State Well Number, and Recordation Number, if applicable:

Previous Five-Year Production Average:

Description of Proposed Water Conservation Measures:

Estimated Amount of Water Forborne:

Anticipated Term of Enrollment:

Signature:

Exhibit G – Monitoring and Reporting Program

1. Hydrology Monitoring Program

a. Water Quality Monitoring

The purpose of the water quality monitoring program is to characterize water chemistry and temperature conditions relevant to assessing habitat suitability and the health of the Fishery. Monitoring includes measurement of both air and water temperature, conductivity (as a measure of salinity), and where relevant, dissolved oxygen at or near locations where either sensitive habitat exists or where habitat enhancement projects associated with the Physical Solution are being implemented.

i. Water Temperature

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. Instrumentation for monitoring water temperatures is readily available either as standalone programmable temperature recorders (e.g., Onset temperature data loggers) 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 the mainstem and appropriate portions of the tributaries from March through November, when stream flows are typically low and do not threaten loss of equipment. Units will be accessed for performance checks and data downloads on a periodic basis, typically monthly or quarterly. All instrumentation will be tested for accuracy annually before deployment, as recommended by manufacturer specifications, and recalibrated as needed.

ii. Dissolved Oxygen

Dissolved oxygen (DO) is a critical measure of the suitability of surface waters for fish habitat. Dissolved oxygen data can be acquired on a continuing basis via instrumentation and maintained on submersible datalogger units for periodic download. An additional component of the monitoring program will be to collect dissolved oxygen data in areas identified as critical

spawning/rearing and refuge habitat. This data will be collected by portable recording DO unit and downloaded on a monthly basis. This instrumentation will be deployed from late March through November when flows are lower and will be accessed for performance checks and data downloads on a periodic basis, typically weekly or monthly.

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 fishery and habitat monitoring efforts. These multiple parameter units typically include sensors such as temperature, pH, and electrical conductivity. All instrumentation will be tested for accuracy annually before deployment, as recommended by manufacturer specifications, and recalibrated as needed**.**

iii. Additional Water Quality Parameters

In addition to the field-measured water quality parameters, the physical solution monitoring program recommends that additional water quality samples be collected for laboratory analysis on a semi-annual basis and compared on an inter- and intra-station basis. This will allow a measure of water quality and an assessment of water types that may be present at different locations along the course of the river. The tested parameters will include cations (Ca, Mg, Mn, K), anions (CO3, HCO3, SO4, NO3), Fe, and Mn.

If other deleterious surface water quality conditions are observed or suspected, additional sampling for pollutants or chemicals of concern (COCs) can be performed in conjunction with periodic monitoring events or on an as needed basis. Typical COCs that might occur in the watershed would be those associated with urban and agricultural runoff such as nitrates, high TDS, salts, volatile and semi-volatile organic compounds, coliform bacteria, and metals. Since there are a number of entities that already evaluate surface water quality conditions in the watershed, efforts to perform additional water quality analyses will be integrated with other programs in order to minimize duplication of effort and maximize the collection of data relevant to project needs.

iv. Flow Monitoring

The instream flow monitoring will be divided into two portions. A regional monitoring effort will involve downloading data from active USGS, City of Ventura, Casitas MWD, or other public entity gages to evaluate the larger scale flows in the watershed. Currently, there are three gages on the mainstem that monitor and report average daily flows: USGS gage at Foster Park in Reach V3 (USGS gage 11118500), and the City of Ventura Water's gages at and above Foster Park. 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 on the World Wide Web, 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 additional to the regional in-stream flow monitoring, a site-specific in-stream flow monitoring program is proposed for areas where critical habitat elements are located and/or at locations where physical solution programs with flow components 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 program will involve establishing a gaging station early in each post-storm season, ideally one in each reach where conditions permit. These stations will allow for the collection of continuous water level and water temperature data from a removable stilling well installed in the river channel outfitted with a recording 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 on a monthly basis.

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.

v. Surface water groundwater monitoring

A detailed sub-River data collection program is recommended in areas where surface water-groundwater interaction is suspected and where such interaction is critical to habitat maintenance. These monitoring stations will include a small-diameter steel pipe placed through the riverbed equipped with a recording water level and temperature transducer. A stilling well will also be installed in close proximity equipped with a water level/temperature transducer to collect surface water levels and temperatures. The depth to water measurements will be referenced to fixed survey points to calculate water level elevations to compare groundwater elevations to surface water elevations. Surface water and groundwater temperatures will also be compared. Trend comparison studies that include concurrent pumping by local wells will also be performed to determine whether surface water and groundwater levels respond to natural diurnal changes, precipitation and climatic conditions, well pumping, and/or diversion.

2. Fish Monitoring Program

a. Core Fishery 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 mainstem Ventura River below Matilija Dam, North Fork Matilija Creek, and San Antonio 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 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 restoration/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 returns that were designed and implemented for 6 years of fish monitoring by Allen (2015). In addition, the protocols follow those identified and described in several California Department of Fish and Wildlife 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).* Population metrics, such as smolt-to-adult survival and cohort replacement rates, can also be quantified based on results of the proposed Passive Integrated Transponder (PIT) tag monitoring element. Since each biological monitoring method has strengths and weaknesses, a variety of monitoring techniques has been proposed, ranging from electrofishing to seasonal snorkel surveys to PIT-tag mark-recapture studies. 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.

Surveys of fishery resources will include snorkel surveys, electrofishing, PIT tagging and lifecycle monitoring, and *O. mykiss* genetics assessment.

i. Spring and Fall Snorkel Surveys

Spring and fall snorkel surveys were selected as the preferred monitoring method in an effort to reduce the risk of incidental take of *O. mykiss*. However, in the event that instream flows are too low to allow snorkel surveys, sampling will be conducted using a backpack electro-shocker and block nets in accordance with CDFW and NMFS protocols. 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, genetic characteristics, health and condition, and size classes of *O. mykiss* in the North Fork Matilija and San Antonio Creeks 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 mainstem Ventura River.

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). However, snorkeling is not effective in shallow depths, as is the case for riffle habitat. In that case, electrofishing can be highly effective to generate abundance estimates. For this program, sampling 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 low-flow period in early-summer and again in the fall.

Snorkel surveys will be conducted in portions of the lower watershed that are legally accessible and have the potential to contain *O. mykiss*. We propose that two snorkeling surveys

per year be conducted, with one survey during the spring (May–June) to assess over-wintering success and the second survey during the fall (October–November) to assess over-summering success. Survey reaches will be consistent with the locations and protocol of Allen (2015).

The species composition, abundance, geographic distribution, and size classes of *O. mykiss* and all other fish species (e.g., Centrarchids, Ictalurids, stickleback, etc.) observed will be recorded. The biannual surveys are expected to take approximately two weeks to complete. Surveys will be conducted in designated survey reaches where access is permitted and will include pool, riffle, and run habitats. Riffle habitats will be sampled using electrofishing methodology since they are too shallow to allow effective snorkel surveys. 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.

In the case of electrofishing, a standard three-pass depletion survey design will be used to estimate the abundance and 95 percent confidence intervals at each location (habitat unit) as well as *O. mykiss* density (e.g., catch per unit effort [CPUE] reflected by *O. mykiss* per 100 m^2).

CPUE can be calculated based on fish density and standardized by sampling effort (i.e., snorkel time and habitat unit area) with corresponding confidence intervals (Hankin and Reeves 1988). Results will be used to test for statistically significant differences and trends in the abundance and density of *O. mykiss* and other fishes in response to implementation of site-specific habitat enhancement actions, in response to variation in hydrologic conditions within and among years, and in the various study reaches. Observations of individual *O. mykiss* showing external signs of disease (e.g., blackspot disease), deformities, or other abnormalities) will be recorded. Results of these surveys will be used to evaluate year class abundance and the status of the population in achieving metrics of good condition.

ii. PIT Tagging/Lifecycle Monitoring

Limited electrofishing collections and associated Passive Integrated Transponder (PIT) tagging will be used to:

- Characterize the size distribution (length frequency) of juvenile and adult *O. mykiss*;

- Determine *O. mykiss* smolt and returning adult migration rates and seasonal migration timing;
- Develop estimates of juvenile *O. mykiss* production (number of juveniles per spawning adult);
- Collect *O. mykiss* tissue samples and have them processed by a qualified genetic testing laboratory to monitor genetic structure, diversity, and anadromy (e.g., Omy5 allele; Leitwein et al. 2017) and support the development of the California genetics database developed and held by NMFS;
- Capture wild *O. mykiss* for installation of PIT tags and PIT tag detections;
- Develop annual estimates of cohort replacement rate based on results of adult *O. mykiss* escapement; and
- Develop estimates of *O. mykiss* adult straying within the lower watershed based on PIT tag detection at mainstem and tributary sampling sites.

Backpack electrofishing following standard CDFW and NMFS protocols will be conducted during the fall at sites in the mainstem river (e.g., San Antonio Creek confluence to Foster Park), San Antonio Creek, and North Folk Matilija Creek as part of the population surveys and to collect *O. mykiss* for PIT tagging. PIT tags are each unique and identify individual fish whenever the tag is detected in the future. The date, time, length, weight, individual tag number, and location of capture and release will be recorded. Fish will be measured to the nearest millimeter (fork length [FL]); scales and a small tissue clip will be removed from the upper lobe of the caudal fin from all *O. mykiss*. Scales will be processed for aging. Fin clips will be preserved in 95 percent ethanol and sent to the NMFS Southwest Fisheries Science Center or other qualified laboratory for genetic analysis. In the event of an *O. mykiss* mortality, the fish will be preserved in 95 percent ethanol for further processing. Otoliths from mortalities will be dissected for age and growth assessment and analyzed. Reproductive condition and sex will be determined by visual inspection for adult *O. mykiss*. All mortalities will be reported to CDFW and NMFS as part of incidental take.

PIT tags will be inserted into *O. mykiss* at least 100 millimeters (mm) (FL) captured in the electrofishing. Fish will be released directly into the stream to continue migration in the direction of travel in which they were captured.

iii. Lifecycle Monitoring (PIT Tagging)

PIT tagging will be used to:

- Determine *O. mykiss* smolt and returning adult migration rates and correlations with environmental covariates;
- Estimate juvenile *O. mykiss* survival;
- Detect and individually identify juvenile and adult *O. mykiss*;
- Identify the source of juvenile *O. mykiss* that survive to return as adults (e.g., mainstem river, North Fork Matilija Creek, etc.);
- Characterize the migration timing, abundance of returning adult *O. mykiss*, and their age distribution using non-lethal monitoring methods;
- Use multiple tag detection arrays to develop general estimates of reach-specific *O. mykiss* outmigrant survival rates and determine key reaches in the mainstem and tributaries where migration is impeded and locations where the risk of predation mortality is increased (predator hot spots) based on results of reach-specific survival estimates; and
- Estimate smolt to adult ocean survival from returning adult *O. mykiss*.

To reduce handling stress, fish will not be tagged when water temperature is above 18 C or the fish have been stressed by other factors such as excessive handling. Because larger PIT tags tend to have greater detection ranges, the largest PIT tags that do not affect juvenile *O. mykiss* survival will be used. The 100 mm (FL) size threshold will be used based on results of PIT tag size and fish size tagging studies, which suggest little to no effects of 23 mm PIT tags injected into salmonids 100 mm (FL) or greater in length (Zydlewski et al. 2003; Bateman and Gresswell 2006; Bond et al. 2007). *O. mykiss* less than 250 mm (FL) will be tagged in the body cavity (just off the ventral midline and posterior to the pectoral fin) and fish greater than 250 mm will be tagged using the inter-muscle method either in the pelvic or dorsal region.

PIT tagging will follow PTAGIS (2014) protocol, created for salmonid monitoring in the Columbia Basin, and BioMark fish tagging methods, and may be revised as needed. PIT tags have been used extensively for salmonid studies on the Columbia River and elsewhere in the Pacific Northwest.

PIT tag detection has the advantage of being non-lethal and does not require capture or handling of the fish. PIT tag detector arrays will be placed lower North Fork Matilija Creek and San Antonio Creek and two arrays (for redundancy and to estimate tag detection probability) will be positioned in the mainstem river upstream of the lagoon and estuary. There is also a potential to position a PIT detector in the Robles fish ladder. Detector arrays will be operated continuously throughout the November through June migration monitoring period. Arrays are capable of being kept in place at higher flows and may be successful in documenting migration during and following storm events. However, at extremely elevated flows, arrays will need to be removed from the river to minimize equipment damage and/or loss.

iv. ***O. mykiss Genetics***

A tissue sample, typically a small piece of the caudal fin, will be taken for all *O. mykiss* collected by electrofishing (or a subsample in the event that more than 50 *O. mykiss* are collected at a single location). Tissue samples will be labeled and preserved in 95 percent ethanol. Tissue samples will be provided periodically to the NMFS Southwest Fishery Science Center or other qualified genetics laboratory for genetic analysis.

3. Performance Assessment Monitoring for Restoration/ Enhancement Features

Performance monitoring will be conducted in San Antonio Creek, North Fork Matilija Creek, and the mainstem Ventura River wherever habitat enhancement features are installed. In general, supplemental monitoring will be conducted using snorkel surveys for fish distribution and abundance, and habitat mapping, visual survey, photo-documentation, and GPS methods for restoration/enhancement feature installations and gravel augmentation programs, all of which will be assessed through adaptive management techniques. Performance assessment 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. Supplemental Habitat Monitoring Program

Supplemental Habitat monitoring will be considered in order to:

- Periodically (5-year interval) conduct habitat inventories within North Fork Matilija Creek, San Antonio 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 hydrologic monitoring program) within North Fork Matilija Creek, San Antonio Creek, and the mainstem river for use in environmental analyses of wild *O. mykiss* production, survival, and migration rates.

a. Habitat Conditions

Habitat suitability of a stream reach for various life stages 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 (mapping) will be conducted periodically in the mainstem river and in North Fork Matilija and San Antonio creeks after substantial channel-altering flow events, approximately every 5 years. 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. Selected mainstem and tributary stream sections will be subsampled following CDFW methods. Data will be collected at Level 4, which classifies habitat units into 24 specific habitat types within the riffle, flatwater, and pool categories. Photos will be taken of each individual habitat unit surveyed, facing the upstream and downstream direction, and will be catalogued.

i. *Photo Points*

In addition to photos taken during habitat surveys, photos may be periodically taken from specific locations throughout the watershed to document visible habitat changes over time. This effort would occur annually in the fall and would continue, with additional photo points added as needed to aid in evaluating specific habitat enhancement projects. 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).

ii. Lagoon and Estuary Breaching

Monitoring of the lagoon and estuary sand bar status may be used to determine migratory access between the river and ocean. A recording water surface elevation probe would be deployed in the lagoon and estuary to monitor water surface elevation throughout the year. Monitoring of lagoon and estuary passage conditions and breaching of the sand bar would include periodic visual observations from November 1 through June 30 each year to determine dates of sandbar breach and lagoon and estuary closure. Lagoon and estuary monitoring is currently conducted by Casitas Municipal Water District and would not be duplicated by this element of the monitoring program unless the current monitoring effort is curtailed.

5. Incidental Take

Although the proposed monitoring program has been designed to reduce the risk of injury and mortality of *O. mykiss*, electrofishing and tagging require handling that contributes to stress as well as some level of risk of mortality. Snorkel surveys, habitat monitoring, flow monitoring, water quality monitoring, and lagoon and estuary breaching are not expected to result in incidental take of *O. mykiss* other than temporary and localized disturbance. As the *O. mykiss* population grows in size within the watershed the numbers of juvenile *O. mykiss* collected in electrofishing is expected to increase. Mortality of collected juvenile *O. mykiss* is expected to be substantially less than 5%.

Monitoring the status and response of *O. mykiss* to the proposed Physical Solution is a fundamental element in determining the performance of the actions in benefiting the *O. mykiss* population and the contribution of the program to conservation of the species. Information

on abundance of various life stages of *O. mykiss*, reproductive success, age and growth, juvenile survival, adult returns, and cohort replacement rates are all important metrics used to assess the status of the species. The proposed monitoring plan will contribute to the growing body of scientific information on the status and trends in *O. mykiss* size, abundance, and geographic distribution, as well as factors affecting the quality and availability of suitable habitat for *O. mykiss* within the mainstem river and major tributaries.

6. Reporting

Annual monitoring reports will present a tabular and graphic summary of monitoring results of each year's activities. For the purposes of annual reporting, the monitoring period has been defined as the water year extending from October 1 through September 30. The annual report format will be standardized. Annual reports will be publicly available in January of the year following each year of monitoring activities.

Appendix E

UVRGA Stakeholder Engagement Plan

TENTATIVE FINAL

STAKEHOLDER ENGAGEMENT PLAN

UPPER VENTURA RIVER GROUNDWATER BASIN

(4-003.01) VENTURA COUNTY, CALIFORNIA

SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA) PROGRAM

PREPARED AND ADOPTED BY THE UPPER VENTURA RIVER GROUNDWATER AGENCY, MAY 10, 2018

UPDATED SEPTEMBER 10, 2020

Table of Contents

1 INTRODUCTION

This Stakeholder Engagement Plan (Engagement Plan) summarizes the strategies to educate and involve stakeholders (those individuals and representatives of organizations who have a direct stake in the outcome of the planning process) and other interested parties in the preparation and implementation of a Groundwater Sustainability Plan (GSP) for the Upper Ventura River Groundwater Basin (UVR Basin) – Department of Water Resources (DWR) Basin No. 4-003.01 (Figure 1). This GSP will be prepared in accordance with the Sustainable Groundwater Management Act (SGMA), which was signed by Governor Brown in September 2014 and became effective January 1, 2015.

SGMA provides a framework to regulate groundwater for the first time in California's history. The intent of SGMA is to strengthen local management of specified groundwater basins that are most critical to the state's water needs by regulating groundwater and land use management activities. SGMA also aims to preserve the jurisdictional authorities of cities, counties and water agencies within groundwater basins while protecting existing surface water and groundwater rights.

The Upper Ventura River Groundwater Agency (UVRGA or Agency), a Groundwater Sustainability Agency (GSA), was formed by five local agencies: County of Ventura (County), City of San Buenaventura (City), Casitas Municipal Water District (CMWD), Meiners Oaks Water District (MOWD), and Ventura River Water District (VRWD). There was extensive stakeholder engagement during that process. The governing board consists of one representative from each of those agencies plus two stakeholder directors representing environmental and agricultural interests. The GSA is responsible for developing a GSP for the UVR Basin to achieve long-term groundwater sustainability. Additionally, SGMA requires and directs GSAs to encourage active involvement of stakeholders and interested parties in the process to sustainability manage the basin.

2 PURPOSE

The purpose of the outreach activities described in this Engagement Plan is to encourage the active involvement of individual stakeholders and stakeholder organizations, and other interested parties in the development and implementation of the GSP for the UVR Basin. This GSP is required under SGMA to be completed no later than January 31, 2022. The projects and management actions necessary to implement the GSP could affect individuals and groups who have a stake in ensuring the basin is sustainably managed as required by SGMA.

In an effort to understand and involve stakeholders and their interests in the decision- making and activities, the UVRGA has prepared this Engagement Plan to encourage broad, enduring and productive involvement during the GSP development and implementation phases. This Engagement Plan will assist the UVRGA in providing timely information to stakeholders and receive input from interested parties during GSP development. This Engagement Plan will identify stakeholders who have an interest in groundwater in the UVR Basin, and recommend outreach, education and communication strategies for engaging those stakeholders during the development and implementation of the GSP. The plan also includes an approach for evaluating

the overall success of stakeholder engagement and education of both stakeholders and the public. In consideration of the interests of all beneficial uses and users of groundwater in the basin, this Engagement Plan has been developed pursuant to California Water Code Section 10723.2. Additionally, this Engagement Plan has been developed to encourage the active involvement of diverse social, cultural, and economic elements of the population within the UVR Basin, in accordance with GSP Regulations Section 354.10.

3 GENERAL INFORMATION

The following personnel will serve as contacts for the public during GSA formation and GSP preparation.

3.1 Agency Administrator

For general information about UVRGA and the GSP status, contact:

Maureen Tucker, Paralegal, Olivarez, Madruga, Lemieux, O'Neill, LLP, (805)495-4770, email mtucker@omlolaw.com

3.2 Executive Director and GSP Project Manager

The UVRGA's Executive Director and GSP Project Manager will be available for stakeholders and the public seeking specific detailed information about the GSP. Contact:

Bryan Bondy, PG, CHG, (805) 212-0484, email BBondy@uvrgroundwater.org

4 OUTREACH ACTIVITIES

The UVRGA will implement the following outreach activities to maximize stakeholder involvement during the development of the GSP and throughout SGMA implementation.

4.1 Public Notices

To ensure that the general public is apprised of local activities and allow stakeholders to access information, SGMA specifies several public notice requirements for GSAs. Refer to Table 1 in Appendix A for a summary of statutory requirements. Three sections of the California Water Code require public notice before establishing a GSA, adopting (or amending) a GSP, or imposing or increasing fees:

- Section 10723(b). "Before electing to be a groundwater sustainability agency, and after publication of notice pursuant to Section 6066 of the Government Code, the local agency or agencies shall hold a public hearing in the county or counties overlying the basin."

- Section 10728.4. "A groundwater sustainability agency may adopt or amend a groundwater sustainability plan after a public hearing, held at least 90 days after providing notice to a city or county within the area of the proposed plan or amendment. …"

- Section 10730(b)(1). "Prior to imposing or increasing a fee, a groundwater sustainability agency shall hold at least one public meeting, at which oral or written presentations may be made as part of the meeting....(3) At least 10 days prior to the meeting, the groundwater sustainability agency shall make available to the public data upon which the

proposed fee is based."

- In accordance with California Water Code Section 10723(b), the following was noticed to the public: On March 9, 2017, the UVRGA held a public hearing to consider becoming a GSA for the UVR Basin. The public hearing was noticed in the *Ventura County Star* and *Ojai Valley News* in accordance with Government Code Section 6066.

- Future noticing will occur as required by SGMA.

4.2 Stakeholder Identification

Pursuant to Water Code Sections 10723.8(a)(4) and 10723.2, the Agency will consider the interests of all beneficial uses and users of groundwater, as well as those responsible for implementing a GSP.

UVRGA has engaged stakeholders in the development of the Agency to serve as the GSA. For example, during development of the joint powers authority agreement ("JPA Agreement") forming the Agency, the signatory members held numerous public meetings to discuss important terms to be included in the JPA Agreement. The signatory members also held multiple stakeholder outreach meetings to engage and educate stakeholders within the UVR Basin about the SGMA requirements the JPA Agreement, and the Agency's intention to form a GSA for the UVR Basin. In addition to the Agency's public outreach efforts, it also designated two seats on its seven-seat Board of Directors for Stakeholder Directors: one seat is reserved for an Agricultural Stakeholder Director and one seat is reserved for an Environmental Stakeholder Director.

The Agency plans to continue its practice of seeking broad stakeholder engagement in management of the UVR Basin's groundwater resources as it undertakes the process to develop and implement the Plan for the UVR Basin over the next several years.

SGMA mandates that a GSA establish and maintain a list of persons interested in receiving notices regarding plan preparation, meeting announcements, and availability of draft plans, maps, and other relevant documents. The UVRGA compiled a list of interested persons for this purpose that will be maintained throughout the GSA formation and GSP development phases. An initial list of stakeholders and interested parties include, but are not limited to, the following:

a) Holders of overlying groundwater rights, including:

    1) Agricultural well owners - There are agricultural users of groundwater operating on land overlying the UVR Basin. To account for these users' interests, the Agency designated a seat on its seven-member governing board to be filled by an Agricultural Stakeholder Director. The Agricultural Stakeholder Director is appointed from nominations received by the Ventura County Farm Bureau. The Agricultural Stakeholder Director is responsible for engaging the UVR Basin's agricultural users of groundwater and representing their interests before the Agency.

    2) Domestic well owners - There are many domestic wells overlying the UVR Basin. It is believed that the majority—if not all—of these domestic well owners are de minimis users, as defined by SGMA. The Agency anticipates

that the Plan will address the collective interests of domestic users of groundwater wells and plans to engage in outreach to domestic well owners throughout the development of the Plan through inviting their participation in the Agency's public meetings.

b) Municipal Well Operators - The Agency is a joint powers authority created by five local public agencies. Two of the Agency's signatory members—the City of San Buenaventura and Casitas Municipal Water District—operate municipal wells within the UVR Basin and are represented on the Agency's Board of Directors.

c) Public water systems

1) Casitas Municipal Water District
2) Casitas Mutual Water Company
3) Meiners Oaks Water District
4) Rancho Matilija Mutual Water Company
5) Tico Mutual Water Company
6) Ventura River Water District
7) Ventura Water (City of San Buenaventura)

Signatory members to the JPA Agreement forming the Agency, as well as the Agency itself, have communicated with these entities throughout development of the JPA Agreement and the Agency's decision to form a GSA for the UVR Basin. The Agency will continue to communicate with these entities concerning Plan development and implementation and opportunities to participate in the process, including through the advisory committee to be established. In addition to holding multiple public meetings, the Agency also plans to retain a seat on an advisory committee for a representative chosen from among the public water companies overlying the UVR Basin.

d) Local land use planning agencies - Both the County of Ventura ("County") and the City of Ojai have land use planning authority on land overlying the UVR Basin. The County is a signatory member to the JPA Agreement forming the Agency and represented on the Agency's Board of Directors. As noted above, although the City of Ojai declined to participate in the JPA, the Agency intends to coordinate with the City of Ojai and keep them informed about Plan development activities through public meetings and other outreach. SEP

e) Environmental and Ecosystem - There are numerous environmental organizations dedicated to preserving and maintaining environmental values operating within the boundaries of the UVR Basin. To account for these users' interests, the Agency designated a seat on its seven- member governing board to be filled by an Environmental Stakeholder Director. The Environmental Stakeholder Director is appointed from nominations received from local environmental nonprofit organizations supportive of the UVR Basin's groundwater sustainability. The Environmental Stakeholder Director is responsible for engaging stakeholders within the UVR Basin representing environmental users of surface and groundwater and

representing their interests before the Agency. Environmental organizations include, but are not necessarily limited to:

1) California Department of Fish and Wildlife
2) State Water Resources Control Board, Instream Flow element of California Water Action Plan
3) Los Angeles Regional Water Quality Control Board
4) National Marine Fisheries Service
5) Santa Barbara Channelkeeper
6) Matilija Coalition
7) Surfrider Foundation
8) Friends of the Ventura River
9) Ojai Valley Land Conservancy
10) Ojai Green Coalition
11) Cal Trout
12) Ventura River Watershed Council

f) Surface water users, if there is a hydrologic connection between surface and groundwater. Based on past studies performed in the UVR Basin, there is a hydrologic connection between surface and groundwater in certain areas of the Ventura River. The State Water Resources Control Board ("SWRCB") identifies Six entities and/or individuals that have claimed either riparian or appropriative surface water rights to the Ventura River. Three of these six rights holders are signatory members to the JPA Agreement forming the Agency and represented on the Agency's Board of Directors. The Agency plans to engage with the other three water rights holders throughout development of the Plan to better understand and take into account their interests.

1) City of San Buenaventura
2) Casitas Municipal Water District
3) Meiners Oaks Water District
4) Ernest Ford
5) Michael Cromer
6) Rancho Matilija

g) The federal government – No land overlying the UVR Basin is managed by the Federal Government

h) California Native American Tribes

1) Barbareño-Ventureño Band of Mission Indians

A representative of overlying California Native American tribes is on the Agency's interested parties list, as a result of which this individual receives notices of all

Agency meetings and other stakeholder involvement opportunities.

i) Disadvantaged communities, including, but not limited to, those served by private domestic wells or small community water systems. The community of Casitas Springs is recognized as a disadvantaged community. The community is served by Casitas Mutual Water Company, Ventura River Water District, and Casitas Municipal Water District, the latter two being signatory members to the JPA Agreement forming the Agency. Thus the community is represented on the Agency's Board of Directors.

    1) Casitas Springs
    2) Ojala

j) Entities listed in Section 10927 that are monitoring and reporting groundwater elevations in all or a part of a groundwater basin managed by the groundwater sustainability agency. The County is the designated California Statewide Groundwater Elevation Monitoring ("CASGEM") entity for the UVR Basin. The County is a signatory member to the JPA Agreement forming the Agency and represented on the Agency's Board of Directors.

The UVRGA intends to work cooperatively with partner agencies, stakeholders, and interested parties to develop and implement the GSP for the UVR Basin and will maintain a list of stakeholders and interested parties to be included in the formation of the GSP. A person can be added to the interested parties list by following directions on the UVRGA website: http://www.uvrgroundwater.org or by contacting the Executive Director.

4.3 Integrated Regional Water Management

The Ventura River Watershed Council is actively involved in the community on a wide range of issues affecting the watershed, including the UVR Basin. The Council prepared a watershed management plan in 2015. Since this group provides a forum for the discussion of issues that are important to the community, it is important for this group to be well informed throughout GSP development. Representatives from the UVRGA attend Council meetings to provide up-to-date information and hear feedback from Council members.

4.4 Public Hearings/Meetings

4.4.1 Planning Commission

Updates on SGMA planning and implementation will be provided to the Ventura County and City of Ojai Planning Commissions.

4.4.2 Public Meetings

Comprehensive stakeholder involvement will include regularly scheduled public meetings to aid in developing and implementing the GSP. Each GSP chapter will be the subject of a public meeting to receive comments prior to approval. In addition to signing up to receive information about GSP development at the UVRGA webpage, interested parties may participate in the development and implementation of the GSP by attending and participating in public meetings (Water Code Section 10727.8(a)). Prior public meetings have been held at the Casitas Municipal Water District, 1055 Ventura Avenue, Oak View, or the Oak View Community Center, 18 Valley Rd, Oak View. Future public meetings will likely be held at these locations. During the COVID-18 pandemic, public meetings have been and will be held virtually using GotoMeeting

or similar platform. Special meetings may be held at different locations to accommodate a larger attendance. Each meeting will have a scheduled time for public comments. Information about upcoming meetings can be found on the UVRGA website: http://www.uvrgroundwater.org.

4.4.3 Local Agency Meetings

To ensure their constituency is kept informed of the progress of GSP development and implementation, the Directors representing UVRGA member agencies, which consist of County of Ventura, City of San Buenaventura , Casitas Municipal Water District , Meiners Oaks Water District, and Ventura River Water District have committed to providing periodic updates during their regularly scheduled board meetings. These meetings offer a chance for the public to receive information and provide comment. Information about upcoming meetings are provided on the following agency websites, or by the means each agency currently meets its legal noticing requirements, whichever is appropriate:

http://venturariverwd.com

http://casitaswater.org

http://meinersoakswater.com

http://cityofventura.ca.gov

http://ventura.org (Board of Supervisors and Planning Commission)

4.5 Direct Mailings/Email

Public meetings and project information will be disseminated through email, from the Agency office, or direct mail under special circumstances if requested. This communication will provide information for the Ventura River valley community, public agencies, and other interested persons/organizations about milestones, meetings, and the progress of GSP development. Property owners with groundwater wells within the basin are notified via email and/or direct mailings about the establishment of an interested persons list and given the opportunity to receive future notices.

4.6 Newsletters/Columns

Updates will be provided to the *Ventura County Star* and the *Ojai Valley News* newspapers to advise, educate, and inform the public on SGMA implementation.

4.7 UVRGA Website

Updates on the GSP development and implementation will be provided on the UVRGA website. In addition, general information about SGMA and groundwater conditions will be produced by the UVRGA. This information will include maps, timelines, frequently asked questions, groundwater information, and schedules/agenda of upcoming meetings and milestones. This information will be accessible on the UVRGA webpage located at: http://www.urvgroundwater.org. UVRGA staff will update the website and invite users to request information or be added to the interested persons list.

4.8 Database

To distribute information about GSP development, an email list has been compiled into a database of interested persons and stakeholders. The database will be updated regularly to add names of attendees at public meetings along with those requesting information via email or the

through the UVRGA website.

4.9 Tribal Engagement

Portions of the Barbareno-Ventureno Band of Mission Indians are located within the UVR Basin. Although the tribe is not subject to the requirements of SGMA, any federally recognized Indian tribe may voluntarily participate with GSAs in the preparation or administration of a GSP.

Since tribal participation is integral to the success of groundwater sustainability in the UVR Basin, tribal participation is encouraged. After the UVRGA was formed, communication was established with the Tribal Elder, Julie Tumamait, to determine the preferred level of involvement throughout GSP development and implementation. UVRGA will maintain close contact with Barbareno-Ventureno Band of Mission Indians throughout the GSP development process and GSP implementation.

4.10 Additional Opportunities

Additional opportunities for stakeholder participation (e.g., an advisory committee) will be considered as GSP development progresses and as stakeholder interests evolve.

5 EVALUATION

To determine the level of success of the Engagement Plan, the UVRGA will implement the following measures:

5.1 Attendance/Participation

A record of those attending public meetings will be maintained throughout the GSP development process. The UVRGA will utilize sign-in sheets and request feedback from attendees to determine adequacy of public education and productive engagement in the GSP development and implementation process. Meeting minutes will also be prepared and will be provided on the UVRGA website once approved.

5.2 Adherence to Schedule

Public participation in developing projects and management actions for inclusion in the GSP is instrumental to the success of the GSP. Keeping these tasks on schedule will be an important indicator of stakeholder involvement.

5.3 Plan Update

This Plan will be updated at least annually.

APPENDIX A

TABLE 1

During GSA Formation:	
"Before electing to be a groundwater sustainability agency... the local agency or agencies shall hold a public hearing."	Water Code Sec. 10723 (b)
"A list of interested parties [shall be] developed [along with] an explanation of how their interests will be considered."	Water Code Sec. 10723.8.(a)(4)
During GSP Development and Implementation:	
"A groundwater sustainability agency may adopt or amend a groundwater sustainability plan after a public hearing".	Water Code Sec. 10728.4
"Prior to imposing or increasing a fee, a groundwater sustainability agency shall hold at least one public meeting".	Water Code Sec. 10730(b)(1)
"The groundwater sustainability agency shall establish and maintain a list of persons interested in receiving notices regarding plan preparation, meeting announcements, and availability of draft plans, maps, and other relevant documents".	Water Code Sec. 10723.4
"Any federally recognized Indian Tribe... may voluntarily agree to participate in the preparation or administration of a groundwater sustainability plan or groundwater management plan... A participating Tribe shall be eligible to participate fully in planning, financing, and management under this part".	Water Code Sec. 10720.3(c)
"The groundwater sustainability agency shall make available to the public and the department a written statement describing the manner in which interested parties may participate in the development and implementation of the groundwater sustainability plan".	Water Code Sec. 10727.8(a)
Throughout SGMA Implementation:	
"The groundwater sustainability agency shall consider the interests of all beneficial uses and users of groundwater".	Water Code Sec. 10723.2
"The groundwater sustainability agency shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the groundwater basin".	Water Code Sec. 10727.8(a)

Appendix F

List of Public Meetings (Reg. §354.10)

TENTATIVE FINAL

Note: to be updated following December UVRGA public hearing

Upper Ventura River GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

202 W. El Roblar Dr.
Ojai, CA 93023
(805) 646-2114
www.uvrgroundwater.org

Groundwater Sustainability Plan (GSP)

Historical Information on Public Meetings Related to the GSP Development

(Time Period: 2017-December through 2021-October)

MEETING DATE	MEETING TYPE (Regular, Special, Workshop)	ACTION ITEM (Agenda Item Title)	RECOMMENDED ACTION (Agenda Item Description)	ACTION TAKEN (Approved, No Motion, Deferred, Continued)
2017-12-14	Regular	GSP initial notification.	Approval of Initial Notification to DWR of Development of a Groundwater Sustainability Plan.	Approved.
2018-04-12	Regular	GSP technical scope Tasks 1, 2.2, 2.5, 2.6, 3.1	SOPs and QA/QC document approval. Surface water flow and subsurface inflow studies. Stakeholder Engagement Plan approval.	Continued.
2018-05-03	Regular	GSP technical scope Task 1	Board comments on Draft Monitoring and Data Collection Protocols.	Continued.
2018-05-10	Regular	GSP technical scope Tasks 1, 2.2, 2.6, 3.1	Monitoring and Data Collection Protocols. Surface water flow and subsurface inflow studies. Stakeholder Engagement Plan approval.	Approved.
2018-06-14	Regular	GSP technical scope Tasks 1, 3.1	Data Quality Control review implementation. GSP Grant Work Plan Update. Stakeholder Engagement Plan Implementation.	Continued.
2018-07-12	Regular	GSP technical scope Tasks 1, 2.2, 3.1	Data Quality Control review implementation. Surface water flow study update. Technical Advisory Committee establishment.	Continued.
2018-09-13	Regular	GSP technical scope Tasks 1, 2.1, 3.1	Monitoring and Data Collection Protocols revision. Data Quality Control Review implementation. Groundwater Monitoring Network update.	Approved.
2018-09-13	Regular	GSP technical scope Task 3.1	Technical Advisory Committee establishment guidelines.	Continued.
2018-10-11	Regular	GSP Tasks Update	Prop 1 Sustainable Groundwater Planning (SGWP) Grant Agreement execution. State Water Resources Control Board Groundwater-Surface Water Workshop authorization.	Approved.

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2018-11-08	Regular	GSP Tasks Update	Technical Advisory Committee recruitment.	Continued.
2019-01-10	Regular	GSP Tasks Update (Grant Task Nos. 2, 6, and 9)	Grant Task Nos. 6 (Subsurface Inflow Data) and 2 (Project Monitoring Plan) approval. GSP Project Management Planning (Grant Task 9 – Organizational Activities) presentation. Technical Review Group (Grant Task 9 – Organizational Activities) discussion.	Approved.
2019-03-14	Regular	GSP Tasks Update (Grant Category (b) and (c), Task 9)	Extraction Fee Development update. Data Gap Tasks update. GSP development support services consideration of INTERA. GSP Technical Review Group selection.	Approved.
2019-03-28	Regular	Extraction Fees (Grant Category (c), Task 9)	Multi-Year Budget and Groundwater Extraction Fee.	Continued.
2019-04-11	Regular	Extraction Fees (Grant Category (c), Task 9)	Multi-Year Budget and Groundwater Extraction Fee update. GSP Development Support Services.	Approved.
2019-05-09	Regular	Extraction Fees (Grant Category (c), Task 9)	Fee Study Report consideration. Extraction Fee Recommendations review.	Approved.
2019-06-13	Regular	Stakeholder Engagement Plan (Grant Category (c), Task 10)	Stakeholder Engagement Plan annual review and update	Deferred.
2019-07-11	Regular	No GSP relevant items	n/a.	n/a.
2019-10-10	Regular	GSP Tasks Update (Grant Category (b), and (c), Task 10)	Stakeholder Engagement Plan annual review and update. Data Gap Tasks update.	Continued.
2019-11-14	Regular	Stakeholder Engagement Plan (Grant Category (c), Task 10)	Stakeholder Engagement Plan annual update and implementation. Intera Work Order No. 2 (GSP development) approval.	Approved.
2019-12-12	Regular	GSP Development and Preparation (Grant Category (d): Task 11)	Kear Groundwater Work Order No. 7 (GSP development) approval.	Approved.
2020-01-24	Special Meeting	No GSP relevant items	n/a.	n/a.

Note: to be updated following December UVRGA public hearing

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(Time Period: 2017-December through 2021-October)

MEETING DATE	MEETING TYPE (Regular, Special, Workshop)	ACTION ITEM (Agenda Item Title)	RECOMMENDED ACTION (Agenda Item Description)	ACTION TAKEN (Approved, No Motion, Deferred, Continued)
2020-02-13	Regular	GSP Tasks Update (Grant Category (b), Tasks 1, 3, and 7)	Well Monitoring Network Annual Data Logger and Surface Water – Groundwater Interface Monitoring reports. Surface Water Flow Data Technical Memorandum. DMS demonstration. Report on meeting with DWR and SWRCB.	Approved.
2020-03-12	Regular	GSP Development and Preparation (Grant Category (d) Task 11)	GSP development update.	No motion required.
2020-03-12	Regular	Stakeholder Engagement Plan (Grant Category (c), Task 10)	Plan for Workshop No. 1 scheduling.	Approved.
2020-03-12	Regular	GSP Development and Preparation (Grant Category (d) Task 11)	Groundwater Dependent Ecosystems.	No motion required.
2020-03-23	Special Meeting	No GSP relevant items	n/a.	n/a.
2020-04-09	Regular	GSP Tasks Update (Grant Categories (d), Task 11 and (c) Task 10).	GSP progress update. Groundwater Sustainability Plan Workshop No. 1 cancellation.	No motion required.
2020-04-09	Regular	Grant Administration (Grant Category (a)).	Sustainable Groundwater Management Planning Grant Proposed Amendments.	Approved.
2020-05-14	Regular	GSP Tasks Update (Grant Category (d), Task 11; and (e)).	GSP progress update. Intera Work Order No. 3 approval. Amendment No. 1 to Kear Groundwater Work Order No. 1 approval.	Approved.
2020-06-11	Regular	GSP Tasks Update (Grant Category (d), Task 11; and (e)).	Sustainability Goal Discussion, draft approval.	Approved.
2020-06-23	Special Meeting	GSP Development and Preparation (Grant Category (d); Task 11)	Sustainability Goal Discussion, draft approval.	Approved.
2020-07-09	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.
2020-07-09	Regular	Stakeholder Engagement Plan (Grant Category (c); Task 10)	Ad Hoc Stakeholder Engagement Plan annual review.	Approved.

Note: to be updated following December UVRGA public hearing

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(Time Period: 2017-December through 2021-October)

MEETING DATE	MEETING TYPE (Regular, Special, Workshop)	ACTION ITEM (Agenda Item Title)	RECOMMENDED ACTION (Agenda Item Description)	ACTION TAKEN (Approved, No Motion, Deferred, Continued)
2020-07-20	Workshop	Stakeholder Engagement Plan (Grant Category (c), Task 10)	Executive Director Bondy presented an interactive webinar providing an overview of SGMA, description of GSP components, and description of the Agency's process and schedule for developing the GSP.	No motion required.
2020-08-13	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update. GSP Workshop No. 1 Recap. Sustainability Goal approval. Sustainable Management Criteria screening results. Pumping estimation for GSP discussion.	Approved.
2020-08-13	Regular	Grant Administration (Grant Category (a))	Pursue Biological Consulting and Field Monitoring Support Services Contract consideration - Rincon Consultants, Inc.	Approved.
2020-09-10	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.
2020-09-10	Regular	Stakeholder Engagement Plan (Grant Category (c), Task 10)	Stakeholder Engagement Plan annual review amendment approval.	Approved.
2020-10-08	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.
2020-10-08	Regular	Establish Monitoring Network (Grant Category) (b); Task 1)	Rincon Consultants Work Order No. 2 approval.	Approved.
2020-11-12	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.
2020-12-10	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update. Subsidence Sustainability Indicator discussion. Discussion of assumptions for 50-Year Future Model Simulations.	No motion required.
2021-01-14	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.
2021-01-14	Regular	Stakeholder Engagement Plan (Grant Category (c), Task 10)	Workshop No. 2 scheduling (Mar. 2nd). GSP Newsletter Volume 2, Issue 1 approval.	Approved.

Note: to be updated following December UVRGA public hearing

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2021-01-14	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	Degraded Water Quality Sustainability Indicator discussion.	No motion required.
2021-02-11	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.
2021-02-11	Regular	Establish Monitoring Network (Grant Category) (b); Task 1)	Well Monitoring Network annual data deliverable for Water Year 2019/2020 - consideration.	Approved.
2021-02-11	Regular	Grant Administration (Grant Category (a)).	Rincon Consultants Work Order No. 1 proposed budget Increase.	Approved.
2021-02-11	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	Item 10d Presentation - Abhishek Singh of Intera described the development of the UVRGA numerical model, including model construction and calibration.	No motion required.
2020-03-02	Workshop No. 2	Stakeholder Engagement Plan (Grant Category (c), Task 10)	Executive Director Bondy and Abhishek Singh, Intera, Inc. presented an interactive webinar consisting of an overview of sustainable management criteria (SMC) requirements, description of numerical flow model construction and calibration, proposed SMC for the degraded water quality sustainability indicator, and next steps for GSP development.	No motion required.
2021-03-11	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update. Groundwater Modeling results update.	No motion required.
2021-03-11	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	Degraded Water Quality SMC.	Approved.
2021-03-11	Regular	Stakeholder Engagement Plan (Grant Category (c), Task 10)	Proposed special meetings for GSP development (4th Thursday of the Month). Workshop No. 3 (April 29th).	No motion required.

Note: to be updated following December UVRGA public hearing

Upper Ventura River GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

202 W. El Roblar Dr.
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(805) 646-2114
www.uvrgroundwater.org

Groundwater Sustainability Plan (GSP)

Historical Information on Public Meetings Related to the GSP Development

(Time Period: 2017-December through 2021-October)

MEETING DATE	MEETING TYPE (Regular, Special, Workshop)	ACTION ITEM (Agenda Item Title)	RECOMMENDED ACTION (Agenda Item Description)	ACTION TAKEN (Approved, No Motion, Deferred, Continued)
2021-03-25	Special Meeting	GSP Development and Preparation (Grant Category (d); Task 11)	Item 7a Presentation - Groundwater Modeling results - Executive Director Bondy gave a presentation addressing SMC development status and schedule, surface water and groundwater budgets, and pumping effects on groundwater levels.	No motion required.
2021-04-08	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	Executive Director Bondy and Rincon Consultants staff members Steve Howard and Kiernan Brtalik provided a presentation concerning SMC for the chronic lowering of groundwater levels and reduction of groundwater storage sustainability indicators.	No motion required.
2021-04-22	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	Executive Director Bondy and Rincon Consultants staff members Steve Howard and Kiernan Brtalik provided a presentation concerning SMC for the depletions of interconnected surface water sustainability indicator.	No motion required.
2021-04-29	Workshop No. 3	Stakeholder Engagement Plan (Grant Category (c), Task 10) GSP Development and Preparation (Grant Category (d); Task 11)	Executive Director Bondy and Rincon Consultants staff members Steve Howard and Kiernan Brtalik presented an interactive webinar consisting of an overview of SMC requirements, groundwater dependent ecosystems identification, and proposed SMC for the groundwater levels, groundwater storage, and depletions of interconnected surface water sustainability indicators.	No motion required.
2021-05-13	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.

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2021-05-13	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	Items 10b and 10c Presentations -Groundwater level and storage and depletion of interconnected surface water sustainability indicators SMC. Executive Director Bondy prefaced Items 10b and 10c by reminding everyone that the SMC for the GSP are a starting point.	Approved.
2021-05-27	Special Meeting	GSP Development and Preparation (Grant Category (d); Task 11)	Item 7a Presentation - GSP 20-Year Implementation budget projection, Fiscal Year 2022 budget, and Multi-Year budget projection.	Approved.
2021-05-27	Special Meeting	GSP Development and Preparation (Grant Category (d); Task 11)	Discussion of Process for releasing the Draft GSP for Public Comment schedule.	No motion required.
2021-06-10	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.
2021-07-08	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update.	No motion required.
2021-07-08	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	Obtain Board feedback on the Preliminary Draft GSP Executive Summary and Sections 1 through 3.	No motion required.
2021-07-22	Special Meeting	GSP Development and Preparation (Grant Category (d); Task 11)	Obtain Board feedback on the Preliminary Draft GSP Sections 4 through 7.	No motion required.
2021-08-12	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update. Preliminary Draft GSP was updated and a Draft GSP was issued on August 10 for a 60-day Public Comment period.	No motion required.
2021-08-12	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	Degraded Water Quality SMC reconsideration.	Approved.

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(Time Period: 2017-December through 2021-October)

MEETING DATE	MEETING TYPE (Regular, Special, Workshop)	ACTION ITEM (Agenda Item Title)	RECOMMENDED ACTION (Agenda Item Description)	ACTION TAKEN (Approved, No Motion, Deferred, Continued)
2021-09-09	Regular	GSP Development and Preparation (Grant Category (d); Task 11)	GSP progress update. The Draft GSP is out for public comment. Executive Director Bondy issued a special newsletter about the Draft GSP Public Comment period and was interviewed by the Ojai Valley News for an article that ran on August 26.	No motion required.
2021-08-12	Special Meeting	Stakeholder Engagement Plan (Grant Category (c), Task 10) GSP Development and Preparation (Grant Category (d); Task 11)	GSP Stakeholder Workshop 4B. Executive Director Bondy gave a presentation summarizing the Draft GSP.	No motion required.
2021-10-14	Regular	GSP Reviews and Approvals (Grant Category (e); Task 12)	GSP update. Draft GSP Public Comments.	
2021-10-14	Regular	Grant Administration (Grant Category (a))	Intera, Inc. Work Order No. 3 budget modification.	
2021-10-14	Regular	Grant Administration (Grant Category (a))	Rincon Consultants, Inc. Work Order No. 1 budget modification.	

Appendix G

GSP Comments and Responses (Reg. §354.10)

TENTATIVE FINAL

Comment Number	Entry Date	First Name	Last Name	Email Address	Phone Number	Mailing Address	GSP Referenced	Comment/Question	Response
1	3-Feb-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.4.2 Minimum Thresholds	Significant and unreasonable effects impacting surface water quality are caused by groundwater conditions throughout portions of the basin. Lowering of groundwater levels reduces surface flows. Reduced surface flows may cause water quality conditions that do not support beneficial uses. Such water quality conditions include lowered dissolved oxygen and increased temperatures. These flow-related impacts are highlighted in various watershed studies including the TMDL for Algae, Eutrophic Conditions, and Nutrients in the Ventura River. Water quality impacts to interconnected surface waters due to groundwater pumping should be addressed within the Groundwater Sustainability Plan. The Draft Sustainable Management Criteria for Degraded Water Quality acknowledges this surface-groundwater interdependence related to nitrate. The GSP should similarly address interdependences related to dissolved oxygen and temperature. Thank you for your consideration.	Effects on aquatic beneficial users related to flow are addressed in the GSP through the development of sustainable management criteria for the depletions of interconnected surface water (see GSP text Section 4.9). It is also noted that the GSP recommends monitoring programs for both the Confluence Aquatic GDE and Foster Park Aquatic GDE that include water quality monitoring, field observations of instream habitat and aquatic species, and in-situ water quality and flow measurements (Section 5.0). The details of the monitoring programs will be decided when the monitoring workplans are developed and approved by the UVRGA Board.
2	18-Jun-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		This memo is a follow up from our conversation regarding development of the Groundwater Sustainability Plan (GSP). The primary concern we discussed is the elimination of large portions of the basin from SGMA oversight through the assumption that surface water is somehow “disconnected” from groundwater. Apart from the fact that there are fundamental flaws in the methodology used to make this determination, the resulting conclusions and management criteria are not consistent with avoiding undesirable results.	As discussed in the responses to several comments below, there is clear evidence from both measured data and numerical modeling that the Ventura River is disconnected from the underlying water table in much of the Robles and Santa Ana Areas most of the time. However, this is not the reason for concluding that riparian vegetation and critical riffles in the Robles and Santa Ana Areas are not significantly and unreasonably impacted by pumping. That conclusion was made based on the lack of material groundwater dependency (in the case of riparian vegetation; Appendix O and GSP text Section 3.2.7.2.1) and the low modeled stream flow depletion rates compared to typical flows (in the case of the critical riffles; Appendix P and Appendix N, and GSP text Sections 3.2.6 and 4.9). The methodologies used are sound and consistent with SGMA requirements (§354.16(f)(g), §354.28(c)(6)).
3	18-Jun-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		The Upper Ventura River Groundwater Basin is a shallow alluvial aquifer integral to the riparian floodplain ecosystem of the main stem Ventura River. Throughout these reaches of the river, groundwater and surface water are connected, and to suggest they are not is to undermine the intent of the Sustainable Groundwater Management Act.	The term interconnected means that the water table is in contact with water in the Ventura River (i.e. no unsaturated sediments exist between the river and the water table). Available data and numerical modeling included in the GSP show that the water table elevation is typically below the Ventura River channel elevation in the Robles and Santa Ana Areas (Section 3.2), which, by definition, means interconnection does not exist at that location. Identifying areas of interconnection and lacking interconnection is a SGMA requirement and does not undermine the intent of SGMA.
4	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		Upon review of the GSP it is clear that the primary Sustainable Management Criteria (SMC) for the Upper Ventura River Groundwater Basin (UVRGB) is the Depletion of Interconnected Surface Water. The analyses presented do not adequately assess the groundwater/surface water interactions within and between the different reaches of the Basin or acknowledge the impact of groundwater pumping on surface flows.	The analysis of Depletion of Interconnected Surface Water (Appendix N and GSP text Sections 3.2.6 and 4.9) meets or exceeds SGMA requirements (§354.28(c)(6)). We encourage the commentor to review the summary of streamflows and streamflow depletions for different reaches of the Ventura River in Table 3.2-01 of the GSP. This table and the corresponding text in Section 3.2.6 of the GSP provides an in-depth assessment of groundwater-surface water interactions and the effects of pumping in the Basin.
5	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		The Riparian Groundwater Dependent Ecosystems Assessment Report characterizes the Robles reach as a “Losing reach with generally disconnected groundwater- surface water.” This categorization eliminates the majority of this Groundwater Dependent Ecosystem from consideration under SGMA by assuming that it is “disconnected” and thus has too great a depth to groundwater to support riparian habitat. Other reaches are similarly dismissed.	The categorization of the groundwater-surface water interaction of the Robles reach has no bearing on whether riparian vegetation is or is not classified as a GDE in the GSP. The decision whether to classify riparian vegetation as groundwater dependent or not is based on vegetation biology (including documented maximum rooting depths for plant species within the riparian communities) and groundwater levels, not the nature of the groundwater-surface water interaction in that reach. The approach for assessing and screening potential GDEs is detailed in depth in Section 2.3 of the Riparian Groundwater Dependent Ecosystem Assessment (Appendix O of the GSP).

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6	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		The analysis presented relies heavily on the Nature Conservancy “Natural Communities (NC) Dataset,” using vegetation communities to eliminate GDE polygons from the Upper Ventura River Groundwater Basin. The NC dataset is a statewide geographic computer database that maps vegetation types in all potential GDEs throughout the State of California. The large geographic scope of this map does not accurately represent current on-the ground conditions, and more robust ground truthing should be undertaken. Even the aerial photos presented tell a different story than is acknowledged in the narrative (i.e. Figure 6 North Robles Habitat Area Photographs, Aquatic GDE Characterization report).	The analysis of groundwater dependency was based on the dominant species indicated for each NCAAG dataset polygon. Biologists on the UVRGA GSP Development Team confirmed the NCAAG dataset classifications are representative of the dominant species throughout the Basin (Appendix O and GSP text Section 3.2.7). UVRGA recognizes that species other than the dominant species are present within the different areas, but concluded that screening based on the dominant species is appropriate for addressing SGMA requirements. As documented through the GDE analysis, it is understood that while riparian communities may exist in certain areas, such as the Robles reach, these communities appear to be dependent on non-groundwater sources of water, and not on material groundwater connection. The aerial photographs in the Aquatic GDE Assessment do show riparian vegetation in the North Robles Reach. However, the assessment of groundwater data, modeling results, and maximum rooting depths indicate that this reach is not groundwater dependent. Modeling results further demonstrate that groundwater pumping has a minimal effect on groundwater elevations in this reach (Appendix L).
7	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		Unfortunately, the UVRGSA analysis does not fully implement the Best Practices for using the NC Dataset guidance provided by the Nature Conservancy, which presents six best practices for using local groundwater data to confirm whether mapped features in the NC dataset are supported by groundwater. (Best Practices for using the NC Dataset, TNC July 2019). According to this guidance: -While depth-to-groundwater levels within 30 feet of the land surface are generally accepted as being a proxy for confirming that polygons in the NC dataset are supported by groundwater, it is highly advised that fluctuations in the groundwater regime be characterized to understand the seasonal and interannual groundwater variability in GDEs. (see Best Practice #2.) -One of the key factors to consider when mapping GDEs is to contour depth-to-groundwater in the aquifer that is supporting the ecosystem (see Best Practice #5).	SGMA requires GSAs to identify groundwater dependent ecosystems within the basin, utilizing data available from the DWR or the best available information (§354.16(g)). The TNC best practices are not adopted by DWR as a regulation or as a best management practice. Having said that, UVRGA endeavored to follow the TNC guidance while identifying and considering GDEs in the GSP. Regarding TNC Best Practice #2, UVRGA did consider groundwater level fluctuations in the riparian GDE screening process by considering high and low groundwater levels during representative wet, normal, and dry years. Thus, the analysis considered the full range of expected groundwater levels. This is explained on page 7 of the Riparian GDE memo. Regarding TNC Best Practice #5, contoured groundwater levels were used in the riparian GDE screening. Modeled groundwater levels were used, which provide gridded groundwater levels throughout the basin, which provides superior coverage compared to solely using observed contours. This is described on page 7 of the memo.
8	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		The GIS Spatial Analysis of Maximum Rooting Depth and Groundwater Level presented in the Riparian GDE document does not present such contour depth-to-groundwater mapping or account for temporal variability	The groundwater level grids (superior to contours) were not depicted in the memo. However, the results of the spatial analysis performed using the grids are described in the memo. UVRGA understands that while the descriptions and approach for analyzing the rooting depth and groundwater level was robust, figures depicting this analysis with modeled groundwater level conditions would aid stakeholder’s understanding. As such, figures depicting modeled groundwater levels throughout the Basin will be included in the Final Riparian GDE Assessment Memo (Appendix O). It should be noted that the actual analysis used grid-based data from the numerical model, which is superior to contours because it provides a continuous distribution of data for analysis. These figures will present the groundwater levels for the 6 hydrologic conditions analyzed in UVRGA’s assessment.

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9	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		Furthermore, TNC guidance acknowledges that; *In many situations, the hydrologic connection of NC dataset polygons will not initially be clearly understood if site-specific groundwater monitoring data are not available. If sufficient data are not available in time for the 2020/2022 plan, The Nature Conservancy strongly advises that questionable polygons from the NC dataset be included in the GSP until data gaps are reconciled in the monitoring network. Erring on the side of caution will help minimize inadvertent impacts to GDEs as a result of groundwater use and management actions during SGMA implementation.* *Many of California's GDEs have adapted to dealing with intermittent periods of water stress, however if these groundwater conditions are prolonged, adverse impacts to GDEs can result.* Therefore, it is likely that the NC vegetation mapping is representative of conditions in which groundwater levels have been frequently and repeatedly pumped beyond the reach of riparian tree roots. Meanwhile, field observations over the past few wetter years show that the riparian vegetation has rebounded, illustrating how the ecosystem responds with the variation in water years. Receding groundwater levels and corresponding loss of surface flows in the current drought will likely reverse this recent trend, with the potential loss of the many young sycamores.	UVRGA concluded that the plant biology and modeled groundwater levels are sufficient to screen the groundwater dependency of the various dominant vegetation types throughout the Basin. UVRGA concluded that there is compelling evidence to conclude the lack of groundwater dependency in the areas that were not included as GDEs in the GSP. Modeling results indicate that groundwater levels in the Robles and Santa Ana area naturally fluctuate significantly below the rooting depth of the dominant species classified in those areas. UVRGA has modeled the water table elevations (Appendix L) and streamflow absent groundwater pumping and determined that the incremental increase in groundwater levels and streamflow that would occur absent pumping (Appendix N and GSP text Sections 3.2.6 and 4.9) is small and is not the reason sycamores are generally sparse in the Robles and Santa Ana areas. Even absent all pumping in the Basin, UVRGA's biologists do not anticipate widespread recruitment of sycamores in the Robles and Santa Ana Areas, as the difference in groundwater levels does not appear to be particularly meaningful in terms of the water requirements of hardwood species, given the seasonal fluctuation of water availability.
10	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		TNC guidance for determining GDEs recognizes the importance of surface flows; *In addition, SGMA requires that significant and undesirable adverse impacts to beneficial users of surface water be avoided. Beneficial users of surface water include environmental users such as plants or animals, which therefore must be considered when developing minimum thresholds for depletions of interconnected surface water*.	UVRGA has clearly and explicitly considered effects on GDEs in the formulation of the sustainable management criteria for the depletions of interconnected surface water (Section 4.9) and chronic lowering of groundwater levels (Section 4.4).
11	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		The Model Results and SMC Implications Presentation (March 25, 2021) reaches the conclusion that: *• Basin water budget is dominated by streamflow percolation into the Basin and groundwater discharge to Ventura River* *• GW pumping averages only ~10% of the GW Budget As low as 4% in wet years Up to 31% in dry years* *• Basin GW levels will be lower in dry seasons, but Basin will still re-fill in normal to wet years* The conclusion that there is no impact from pumping based on the fact that the basin rapidly refills in the wet season points to the likelihood that the surface water is in fact "connected" to groundwater during these periods. Moreover, the fact that pumping represents up to 31% of the budget in the critical dry years raises the question of how these groundwater extractions impact surface flows and groundwater levels.	UVRGA has not concluded that there is no impact from pumping based on the fact that the basin rapidly refills. UVRGA has evaluated the effects of pumping on riparian and aquatic GDEs (Appendix O Figures 4a through 4d; Appendix P Figures 9 through 13; GSP Sections 3.2.6 and 4.9, Table 3.2-01, Figures 4.9-01 and 4.9-03) and developed sustainable management criteria to prevent significant and unreasonable effects on those beneficial users of groundwater. In addition, biological monitoring programs are included in the GSP.
12	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		The Model Results identify four areas of concentrated pumping, three of which directly impact groundwater levels in the "Robles Reach." This reach is the area with the most storage in the basin, and should be considered as the "primary sub-basin" for water supply. Pumping in this reach directly affects conditions throughout the basin.	UVRGA does not agree with the conclusion that pumping in the "Robles Reach" affects conditions throughout the Basin. Pumping in the "Robles Reach" does not have a significant effect on groundwater/surface water conditions upstream of the "Robles Reach". UVRGA agrees that pumping in the "Robles Reach" affects conditions in downstream areas. In fact, UVRGA has calculated and presented the indirect depletion of surface water in the Foster Park and Confluence areas caused by upstream pumping (Appendix N; GSP Section 3.2.6 and 4.9, Table 3.2-01, Figures 4.9-01 and 4.9-03).

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13	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		The analyses and graphs presented in the Model Results do not provide information on the spacial and temporal surface flow conditions as they relate to groundwater levels. Because the downstream reaches are largely dependent on surface and groundwater flows out of this sub-basin, further analysis is needed to more clearly define the relationship between groundwater levels and surface flows. The analyses should, at a minimum, determine threshold groundwater levels at which surface flows are diminished or eliminated, both in the reach being monitored and downstream. This relationship was established decades ago in the Ventura River Conjunctive Use Report (1978) which states that; *Flows in the live stretch are affected by both the rate of recharge of the upper part of the Ventura River groundwater basin and by the rate of groundwater extraction from wells in the river.* Investigations published in the Conjunctive Use Report identified groundwater elevation thresholds in the upper basin at which flows in the live reach will cease; *when the water level in well 4N23WI6C4 falls below Elevation 495, surface flow in much of the live stretch stops although some pools remain. A flow of 1 cfs or more in the live stretch corresponds with a water level in this well of greater than about Elevation 507.*	UVRGA is aware of the historically developed correlations between groundwater levels and streamflow and reviewed that information during GSP development. However, the relationship between groundwater levels and surface flows is not a SGMA requirement and is not particularly useful for managing depletions of interconnected surface water because UVRGA is not charged with managing the total flow in the river. UVRGA is only responsible for managing depletion, not total flow. The correlations do not differentiate between total flow and depletion. Models, such as the numerical model developed by UVRGA, are needed to calculate depletion rate. UVRGA has calculated depletion rates (Appendix N and GSP text Section 3.2.6, Table 3.2-01) and has developed SMC to avoid significant and unreasonable depletions (Section 4.9), in accordance with SGMA requirements (§354.16(f)(g), §354.28(c)(6)).
14	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		Groundwater levels also affect surface flows in the Robles Reach, which frequently dries up despite constant inflows. Unfortunately, the Aquatic GDE Impact Analysis is quick to dismiss the effect of groundwater elevation on surface flows; *No monitoring is recommended at either of the critical riffle aquatic GDEs or the Robles Habitat Area, as impacts from pumping in these areas were determined to be minimal or non-existent.* This conclusion is inconsistent with the guidance provided in Monitoring Networks and Identification of Data Gaps BMP (DWR 2016) which states: *23 CCR §354.34(c))(6): Depletions of Interconnected Surface Water. Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following:* *(A) Flow conditions including surface water discharge, surface water head, and baseflow contribution.* *(B) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.* *(C) Temporal change in conditions due to variations in stream discharge and regional groundwater extraction.* *(D) Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water. DWR guidance provides detailed information on developing a monitoring network to accurately assess these concerns.* DWR Guidance provides detailed information on developing a monitoring network to accurately assess these concerns.	Depletion of surface water in the "Robles Reach" was estimated using the numerical model. The model was run with and without pumping to determine streamflow depletions (Appendix N; GSP Section 3.2.6 and 4.9, Table 3.2-01, Figures 4.9-01 and 4.9-03). The results indicated that depletion in the Robles Reach was very small compared to surface water flows during the steelhead migration season. Therefore, it was concluded that there are no significant and unreasonable depletions of surface water in the critical riffle areas caused by pumping. UVRGA concludes that detailed monitoring is not necessary in these areas due to the very low modeled depletions and believes that the limited funding available for monitoring should be prioritized in the Confluence and Foster Park Areas, where UVRGA has concluded that significant and unreasonable effects could potentially occur. It is also noted that the DWR BMPs are not binding on GSAs and are not intended to be applied without consideration of Basin-specific conditions and priorities relative to potential undesirable results in the Basin.

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15	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		Establishing Minimum Flow Thresholds As described above, the current GSP analysis incorrectly concludes that groundwater pumping has little to no effect on surface flows throughout the majority of the basin. But even for the identified groundwater dependent "Habitat Areas," the development of minimum flow thresholds is inadequate. For example; *For the Foster Park Habitat Area, while the City's low flow thresholds are based on only one HSI score evaluated in the Padre study (average thalweg depth), we understand this currently provides the best available information to establish minimum thresholds for the depletion of interconnected surface water sustainability criteria.* This statement ignores best available science, including the recently published CDFW Draft Instream Flow Recommendations (2021) as well as the NMFS Draft Biological Opinion for Foster Park Wellfield (2005).	SGMA does not require UVRGA to establish minimum surface flow thresholds. Rather, SGMA requires UVRGA to establish minimum thresholds for depletion of surface water flow (§354.16(f)(g), §354.28(c)(6)). That is a very critical distinction because it means UVRGA is not responsible for the total flow in the Ventura River. UVRGA has quantified depletion of surface water throughout the Basin (Appendix N; GSP Section 3.2.6 and 4.9, Table 3.2-01, Figures 4.9-01 and 4.9-03) and has concluded that depletions are small relative to typical surface flows upstream of the Confluence area. SMC are not required for those areas because UVRGA has concluded that the small depletions do not cause significant and unreasonable effects. For the Confluence Area, it is unclear if depletions cause significant and unreasonable effects and monitoring is proposed to answer that question. For Foster Park, the minimum thresholds are based on the current best available science, which is the site-specific study by Padre (Hopkins 2013). Neither the CDFW flow recommendations nor the NMFS draft BO identify a threshold for significant and unreasonable effects based on groundwater pumping, while such a threshold is established in the Padre study. The CDFW study and BO include surface flow recommendations or requirements, respectively, to maintain beneficial habitat conditions for steelhead, which are not indicative of significant and unreasonable effects. Although the UVRGA agrees that maintaining beneficial surface water habitat conditions is important to the health of aquatic species and their habitats including steelhead, SGMA does not require GSAs to maintain surface water conditions for riverine species, but rather to manage significant and unreasonable effects related to groundwater pumping.
16	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		Implications for the UVR Groundwater Sustainability Plan According to the Brownstein Water Group, the Cuyama Valley Basin and the Paso Robles Area Subbasin GSPs were recently deemed incomplete for deficiencies in their definitions of sustainable management criteria (SMC), including minimum thresholds and undesirable results. Some of the concerns cited by DWR are that the GSP; • *provides insufficient detail for how it determined that the selected minimum thresholds . . . are consistent with avoiding undesirable results* • *does not relate different minimum thresholds for different portions of the basin to conditions that could cause undesirable results* • *does not sufficiently discuss expected impacts and therefore "precludes meaningful disclosure to, and participation by, interested parties and residents in the Basin.* It is clear from these recent DWR determinations that much more work is needed to develop and present a clear understanding of the workings of the Upper Ventura River Groundwater Basin, the potential impacts from groundwater pumping, and a plan to better manage the limited resource to ensure future sustainability and a healthy ecosystem.	UVRGA does not agree with the conclusion that shortcomings of other GSAs necessarily means that much more work is needed by UVRGA. UVRGA reviewed the Paso Robles and Cuyama GSPs during its GSP development process and previously identified many of the same issues raised by DWR in its review. UVRGA has been developing the GSP with that understanding in mind and is making every effort to provide sufficient detail for minimum threshold determinations, to clearly relate minimum thresholds to site-specific conditions that might cause undesirable results, and to involve all stakeholders and interested parties in the GSP development process.

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17	18-Jun-21, 08-Oct-21	Paul	Jenkin	pjenkin@surfrider.org		Surfrider Foundation		Recommendation: The primary storage within the Upper Ventura River Groundwater Basin lies beneath the floodplain of the Robles reach of the Ventura River. Further analysis is needed to develop a meaningful assessment of the impact of groundwater pumping on surface flows in the Ventura River. This should include contour mapping as described in the TNC Guidance documents as well as a plan to install monitoring wells to better characterize the depth to groundwater and connectivity throughout the basin, especially through the Robles reach where the majority of pumping takes place. It is clear that this will be necessary to successfully develop the Groundwater Sustainability Plan to a level that satisfies the objectives of the Sustainable Groundwater Management Act (SGMA) in order to gain the support of local stakeholders and approval by the California Department of Water Resources.	UVRGA believes the assessment it has performed for the GSP adequately characterizes the impact of groundwater pumping on surface water flows in the Ventura River. The analysis of Depletion of Interconnected Surface Water (Appendix N and GSP text Sections 3.2.6 and 4.9) meets or exceeds SGMA requirements (§354.28(c)(6)). We encourage the commentor to review the summary of streamflows and streamflow depletions for different reaches of the Ventura River in Table 3.2-01 of the GSP. This table and the corresponding text in Section 3.2.6 of the GSP provides an in-depth assessment of groundwater-surface water interactions and the effects of pumping in the Basin. While the draft Riparian GDE Memo (Appendix O) provides a discussion and results of the depth to water and rooting depth analysis, UVRGA understands that groundwater level contour maps can help the commentor and other readers understand the relationships between the plant rooting depths and depth to groundwater. As such, contour maps based on the UVRGA numerical model outputs for each of the hydrologic conditions analyzed in the Riparian GDE Memo (wet high and low, average high and low, dry high and low) will be included in the Final Riparian GDE Memo.
18	4-Sep-21	Edward	Johnson	-	n/a	n/a	1.0 Introduction	What are the short and long-term mitigation measures that will be applied, if any, to de minimus use (<2 AF/yr) domestic wells owners if/when a maximum or minimum impact standard is reached in the relevant aquifer zone (Santa Ana, Mira Monte/Meiners Oaks, Casitas Springs, etc.)?	UVRGA does not anticipate regulating de minimus wells at this time.
19	8-Oct-21	Jennifer	Tribo	jtribo@cityofventura.ca.gov	n/a	City of Ventura		Various edits	All requested edits were made.
20		Bert	Rapp		n/a	Ventura River Water District		Various edits	All requested edits were made.
21		Bert	Rapp			Ventura River Water District		Is the groundwater quality influenced by leaching nutrients from the Monterey formation?	UVRGA provided additional text in GSP Section 3.1.3.3, “the Monterey formation is a documented source of nitrate (Las Virgenes Water District Nitrate Study <https://www.lvmwd.com/Home/ShowDocument?id=2273>) and will be further evaluated as needed during GSP implementation.”
22		Bert	Rapp	-		Ventura River Water District		Does Ventura County have results from their recent nitrate sampling study?	UVRGA is not aware of the available data from this study, but will continue to seek available data as needed during GSP implementation.
23	5-Oct-21	Erin Steven	Wilson-Olgin Slack	Steven.Slack@wildlife.ca.gov	(858) 467-4201	CDFW 3883 Ruffin Road San Diego, CA 92123	Section 4.1, starting on p. 92	**Comment #1**: Data Gaps Exist in the Hydrologic Conceptual Model (HCM) **Issue:** CDFW appreciates the efforts the UVRGA undertook to analyze the Basin’s geologic and hydrogeologic characteristics. CDFW also appreciates UVRGA’s proposed plans to utilize the updated HCM to fill in the data gaps and deficiencies identified in the Draft GSP. However, CDFW’s understanding is that the Draft GSP does not account for the wide range of hydraulic connectivity and transmissivity values across the Basin, nor does it set forth a reasonable pathway to address gaps in the data sets for these values. For example, the draft plans of the HCM for Sections 3.1 and 3.2 stated that some of the aquifer information was obtained from available driller logs and short-term pumping tests, which are not likely to provide a complete and accurate data set for assessing aquifer parameters. **Recommendation #1**: Accurate hydrogeologic modeling requires an accurate and complete data set. CDFW recommends that the GSA expand the area in which it is assessing hydraulic connectivity and transmissivity values to ensure the model contains representative conditions across the Basin. Furthermore, the GSA should consider well data with adequate construction and accurate aquifer testing information in its analysis to ensure accurate characterization of hydrogeologic conditions. The Draft GSP should also provide specific model details such as hydraulic connectivity and transmissivity values across the Basin to evaluate the accuracy of the results.	UVRGA assessed the entire Basin and considered all available data when characterizing hydrogeologic conditions. Appendix H provides details concerning the numerical model.

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24	5-Oct-21	Erin Steven	Wilson-Olgin Slack	Steven.Slack@wildlife.ca.gov	(858) 467-4201	CDFW 3883 Ruffin Road San Diego, CA 92123	Section 3.2.7.2.1, starting on p. 66 and Appendix O	**Comment #2:** The GSP Does Not Consider All Riparian Groundwater Dependent Ecosystems in the Basin **Issue**: the Draft GSP concludes that only two of the mapped iGDE areas are GDEs subject to SGMA requirements and only provides for monitoring of groundwater levels and vegetative health in these two areas. The GSA concludes that iGDEs containing coast live oaks in the Mira Monte/Meiners Oaks and Terrace Areas do not qualify as GDEs. If hydrologic connectivity exists between a terrestrial or aquatic ecosystem and groundwater, then that ecosystem is a potential GDE and must be identified in a GSP. (23 CCR § 354.16 (g).) Therefore, hydrologic connectivity between surface water and groundwater, as well as groundwater accessibility to terrestrial vegetation, must be evaluated carefully. Accurate identification and consideration of GDEs is also essential to assess whether the GSA has complied with the requirement to avoid significant and unreasonable adverse impacts to beneficial uses of surface water, including aquatic ecosystems reliant on interconnected surface water. (Water Code § 10721(x)(6).) **Recommendation #2(a)**: CDFW recommends the final GSP provide a more detailed assessment of the eight areas within the Basin that were mapped as iGDEs to determine whether they qualify as GDEs. Conclusions regarding the presence of GDEs needs to be well supported. CDFW also recommends considering best available GDEs-related data and information when conducting this analysis. Specifically, the GSA should consider the best scientific data on depth to groundwater in its analysis of ISWs, USGS data on mapped springs/seeps, and a comparison of recent groundwater level contours to vegetation root zones. CDFW believes the shallow perched aquifer and shallow alluvial aquifer, although rarely used for water supply, likely support GDEs and should be analyzed further in the Draft GSP. Groundwater within the shallow perched and alluvial aquifers is likely critical to supporting “ecological communities or species” within the Basin. (23 CCR § 351(m).) CDFW recommends using Normalized Difference Vegetation Index (NDVI) and Normalized Difference Moisture Index (NDMI) to assess habitat health for all eight iGDE areas on an annual basis. **Recommendation #2(b)**: If the GSA’s revised analysis indicates that additional iGDEs qualify as GDEs under SGMA, the Draft GSP’s sustainable management criteria should be revised to facilitate appropriate and timely monitoring and management response actions for all beneficial users within or supported by these GDEs. These GDEs should be monitored for groundwater levels and vegetative health to account for and mitigate potential adverse impacts to these GDEs from new production wells or expanded production from existing wells. The Draft GSP states that in non-drought periods, the Basin can fill up on the “order of two out of every three years and significant surface water base flow is sustained by rising groundwater in the southern part of the basin” (p. 31). This “flashy” behavior can provide recharge for the shallow alluvial aquifer and perched zones that may support GDEs. Considering this interconnection, GDEs should be carefully monitored, and groundwater pumping should be responsibly managed to avoid damaging consequences to GDEs.	UVRGA has complied with the GSP Emergency Regulations requirement to identify and consider GDEs. The NCCAG dataset used as a starting point for the GDE analysis includes mapped springs and seeps as iGDEs. Modeled groundwater depths (based on the best available groundwater data for the entire Basin) were compared with maximum rooting depths for dominant plant species within all iGDEs in the Basin. UVRGA carefully considered whether the iGDEs are actual GDEs, and reasons for screening out particular iGDEs are described in detail in the Section 2.3 of the Riparian GDE Memo. Furthermore, SGMA only requires management of groundwater that is affected by pumping within the Basin. Shallow or perched aquifers are not connected to the primary aquifer and are not impacted by pumping.
25	5-Oct-21	Continued from above					Section 3.2.7.2.1, starting on p. 66 and Appendix O	**Recommendation #2(c):** CDFW does not recommend relying solely on soils information to assess the presence of GDEs. For example, the presence of sandy, dry, and friable soils does not mean that existing plant species do not rely on groundwater for some portion of their life cycle. Capillary fringe associated with root networks from native plants could be accessing groundwater from deeper depths. **Recommendation #2(d):** CDFW recommends the final GSP develop sustainable management criteria for all areas of ISWs and GDEs within the Upper Ventura River Basin GSP.	UVRGA's GDE evaluation did not rely on soils information to assess the presence of GDEs. This comment does not appear to be applicable to this GSP. The chronic lowering of GW levels SMC apply throughout the entire Basin. SMC for depletion of ISW were developed for the area where UVRGA identified the potential for significant and unreasonable depletion.

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26	5-Oct-21	Erin Steven	Wilson-Olgin Slack	Steven.Slack@wildlife.ca.gov	(858) 467-4201	CDFW 3883 Ruffin Road San Diego, CA 92123	Page – ES-xiv Pg. 129	**Comment #4**: The GSP Minimum Thresholds and Measurable Objectives for Interconnected Surface Waters Depletion Do Not Account for the Best Available Science **Issue**: The Draft GSP relies on the Hopkins Study (2013) and Padre Study (2012) to establish minimum thresholds and measurable objectives for the depletion of ISWs in the Foster Park Habitat Area. The Draft GSP indicates that CDFW's Draft Instream Flow Recommendations (2021) (Draft Recommendations) and National Marine Fisheries Service (NMFS) Draft Biological Opinion for Foster Park Wellfield (2007) (Foster Park Draft BO) are not on point for this analysis because they do not identify a threshold for significant and unreasonable effects based on groundwater pumping, but rather contain "surface flow recommendations or requirements to maintain optimal habitat conditions for steelhead." (p.129.) CDFW believes that the Draft GSP mischaracterizes CDFW's Draft Recommendations and the Foster Park Draft BO as protecting only "optimal" conditions for steelhead. CDFW also disagrees that the Draft Recommendations and Foster Park Draft BO are not relevant to determining appropriate sustainability criteria to avoid unreasonable adverse impacts to beneficial users of ISWs. The CDFW Draft Recommendations were designed to protect the federal Endangered Species Act (FESA) listed Southern California steelhead (Oncorhynchus mykiss; Steelhead) passage and habitat for spawning and rearing, as well as supporting ecological function in the lower Ventura River. CDFW's Lower Ventura Draft Recommendations were largely based on direct measurements and modeling of site-specific flow and habitat conditions, particularly in the summer months. Groundwater pumping has the potential to drawdown surface flows, which may lead to inadequate depths for Steelhead passage or reduced habitat for steelhead spawning and rearing. This draw-down may constitute a significant and unreasonable effect on beneficial users, including Steelhead. **Recommendation #4(a)**: CDFW recommends that the Draft GSP utilize the best available information and science to develop appropriate minimum thresholds and measurable objectives for ISW depletion. Specifically, CDFW recommends that the UVRGA account for CDFW's Draft Recommendations and any subsequent updates to this document. CDFW's Draft Recommendations encompass the areas identified in the Draft GSP as Casitas Springs Area (known as Ventura Reaches 3 & 4 in CDFW's Draft Recommendations). CDFW's Draft Recommendations represent the best available science regarding flows needed to support a range of life stage needs for Steelhead, including the following: - Passage and habitat during the spawning season from December to May - Low-flow habitat from June to October - Fall pulse flows in October through December and varying peak flows from January through May. Thus, the Draft Recommendations should be used to inform the development of sustainable management criteria needed to avoid ISW depletions that may have significant and unreasonable effects on Steelhead and other beneficial users, as required under SGMA.	The CDFW instream flow recommendations (CDFW 2021a) and the NMFS Draft BO (NMFS 2007) provide surface flow recommendations and requirements, respectively, to maintain beneficial habitat conditions for steelhead within portions of the Ventura River. While these flows may provide beneficial conditions for steelhead, they do not represent the minimum threshold below which significant and unreasonable impacts to steelhead would occur due to the depletion of ISW due to pumping, as is required by SGMA. The UVRGA agrees with maintaining surface water conditions for the health and survival of aquatic species and their habitats, including steelhead. However, SGMA does not require the UVRGA to maintain surface water conditions for riverine species, but rather to manage significant and unreasonable effects related to groundwater pumping. The UVRGA has taken the CDFW and NMFS recommendations into account but believes that the flow study conducted by Padre (2013) on behalf of the City of Ventura provides the most relevant data for developing thresholds for significant and unreasonable effects of groundwater pumping in the Foster Park Habitat Area, as required by SGMA.
27	5-Oct-21	Continued from above					Page – ES-xivPg. 129	**Recommendation #4(b)**: The Foster Park Draft BO recommends a minimum maintenance flow of 11-12 cfs at the Foster Park gage (USGS 1118500) to allow for improved growth and survival of juvenile Steelhead. Although the Foster Park Draft BO has not yet been imposed as a binding regulatory requirement in the Ventura River, its scientific information can still be relevant to understanding current environmental circumstances and conditions. CDFW recommends that the final GSP consider NMFS's recommended minimum maintenance flow of 11-12 cfs at the Foster Park gage when establishing thresholds to avoid significant and unreasonable ISW depletions.	See response to comment 26 above.

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28	5-Oct-21	Erin Steven	Wilson-Olgin Slack	Steven.Slack@wildlife.ca.gov	(858) 467-4201	CDFW 3883 Ruffin Road San Diego, CA 92123		**Comment #5**: Evaluation of Multiple Minimum Thresholds **Issue**: According to UVRGA, the Evaluation of Multiple Minimum Thresholds (23 CCR §354.26(c)) is not applicable because only one minimum threshold is established for the ISW depletions sustainability indicator. CDFW disagrees with this conclusion. Because multiple areas within the Basin have ISWs, it is appropriate to have more than one minimum threshold for the ISW sustainability indicator. Areas of ISWs that overlap with GDEs support various fish and wildlife resources. The Upper Ventura River is designated critical habitat for Steelhead and contains important Steelhead spawning and rearing habitat in Southern California. Species including Steelhead, the FESA-listed and California Endangered Species Act (CESA) listed least Bell's vireo (Vireo bellii pusillus), and the FESA- and CESA-listed southwestern willow flycatcher (Empidonax traillii extimus) utilize the various habitats identified in the draft GSP as wetland and riverine features. Steelhead have a range of life cycle needs that require multiple minimum thresholds. Excessively high-water temperatures in the spring, summer, and early fall reduce available juvenile Steelhead rearing habitat. Low flows in the fall and winter can delay adult Steelhead passage to critical spawning areas. Steelhead also need passage flows during the spawning season of December-May, ecological baseflows for the low flow months of June-October, and Steelhead habitat optimum flows for the transition month of November. Multiple minimums thresholds throughout the year are needed to provide monthly flows to support Steelhead. **Recommendation #5(a)**: CDFW proposes that the final GSP incorporate Recommendations #4(a) and #4(b).	See responses to comment 26 above.
29	5-Oct-21	Continued from above						**Recommendation #5(b)**: The NMFS 2007 BO for the Robles Diversion Fish Passage Facility (Robles Diversion BO) states that during the fish passage augmentation season (January 1-June 30), bypass flows of at least 30 cfs are required at the Robles Diversion. The Robles Diversion BO also states that "the minimum flow rate providing successful steelhead migration through the lower river is 50 cfs. Therefore, downstream released flows at the diversion must be maintained at or above 50 cfs during the first 10 days of each migratory storm event (i.e., storms generating flows 150 cfs or greater, as measured at the Robles Diversion)" (p. 7). To augment these stream flows, "storm events during the months of January through June are considered potential migration events if the resulting peak discharge rate (a) exceeds 149 cfs as measured at the Robles Diversion, and (b) results in at least double the flow of any of the three days preceding the storm peak" (p. 6). Steelhead take is not anticipated with the minimum 30-50 cfs recommended by NMFS. CDFW recommends the GSA consider NMFS's recommendation of minimum flows of 30-50 cfs at the Robles Diversion Facility when developing minimum thresholds and measurable objectives to avoid ISW depletions that would have significant and unreasonable adverse impacts on Steelhead and other beneficial users of surface water.	Depletion of streamflow during migration was estimated using the numerical model. The estimated depletions of flow due to pumping during and following storm events are so small as to not be considered significant and unreasonable. Median depletion rates modeled by the UVRGA numerical model were less than 0.5 cfs for the majority of the year at the Robles Habitat Area (located downstream of the Robles Diversion). The requirements of the BO will be met through continued implementation of the necessary bypass flows by Casitas Municipal Water District.
30	5-Oct-21	Continued from above						**Recommendation #5(c)**: On August 31, 2021, the State Water Resources Control Board (SWRCB) released a Preliminary Draft version of the Groundwater-Surface Water Model of the Ventura River Watershed. This integrated groundwater-surface water model quantifies the relationship between surface flow, subsurface flow, and instream flow requirements in the Ventura River, including areas within the Basin. CDFW recommends incorporating the model's data and simulation results into the final GSP.	The SWRCB model was not available for consideration during GSP development. UVRGA created a higher resolution numerical model of the Basin which was used for GSP development. UVRGA considers its model the best available science for GSP development. Having said that, UVRGA intends to evaluate the utility of using both models together for future GSP assessments and updates (the SWRCB Board model for regional inputs the UVRGA model for improved resolution along the Ventura River). This approach will take advantage of the strengths of each model.

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31	5-Oct-21	Erin Steven	Wilson-Olgin Slack	Steven.Slack@wildlife.ca.gov	(858) 467-4201	CDFW 3883 Ruffin Road San Diego, CA 92123		**Comment #6**: Additional Sensitive Species and Habitats Proper management of both shallow and deep groundwater pumping combined with reduced surface water pumping and diverting would ensure that beneficial users in the Basin are not negatively impacted. Unsustainable use of groundwater can impact the shallow aquifers and ISWs on which species and GDEs rely, potentially resulting in adverse impacts to fish and wildlife. Determining the relationship between groundwater levels and surface water flows in the Basin will inform how the groundwater levels may be associated with the health and abundance of riparian vegetation. Poorly managed groundwater pumping and ISW flows have the potential to reduce the abundance and quality of riparian vegetation, reducing the amount of shade provided by the vegetation, and ultimately leading to increased water temperatures in the Basin. Additionally, shallow groundwater levels near interconnected surface waters should be monitored to ensure that groundwater use is not depleting ISWs and adversely affecting fish and wildlife resources in the Basin. **Recommendation #6(a)**: CDFW proposes that the final GSP incorporate Recommendation 2(a), 2(b), 2(c), and 2(d) to ensure these species would have their habitats protected into the future. CDFW believes shallow perched aquifers, intermittent surface flows and shallow alluvial aquifers, although rarely used for consumptive water supply, are extremely important to the ecological communities or species that depend on groundwater emerging from all aquifers or from groundwater occurring near the surface within the Basin.	See responses to comment 26 above.
32	5-Oct-21	Continued from above						**Recommendation #6(b)**: CDFW recommends that the UVRGA commit to Arundo (Arundo donax) removal in the Upper Ventura River within the Basin to improve groundwater supply and enhance habitat quality for nesting birds. Arundo removal is one example of a project and management action to minimize groundwater overdraft. If groundwater depletion results in reduced streamflow due to ISWs, the nesting and foraging success of the SSC yellow warbler (Dendroica petechia), the SSC yellow breasted chat (Icteria virens), least Bell's vireo, southwestern willow flycatcher, and other bird species may be diminished due to reduced nesting habitat and food availability.	Arundo removal will be considered in the feasibility analysis for addressing indirect depletion of ISW. Please see Section 6.4 Actions to Address Indirect Depletion of Interconnected Surface Water.
33	5-Oct-21	ErinSteven	Wilson-OlginSlack	Steven.Slack@wildlife.ca.gov	(858) 467-4201	CDFW 3883 Ruffin RoadSan Diego, CA 92123		**CONCLUSION**: CDFW appreciates the opportunity to provide input on the Draft GSP for you to consider as it continues to revise the document. As set forth above, the Draft GSP does not yet comply with the aspects of SGMA statutes and regulations related to fish and wildlife beneficial uses and users of groundwater and interconnected surface waters. CDFW has concerns about data gaps in the HCM, identification and consideration of riparian GDEs, and consideration of CDFW's draft flow recommendations released in February 2021 for the Lower Ventura River. CDFW recommends the UVRGA plan for and engage in responsible groundwater management that minimizes or avoids these impacts to the maximum extent feasible as required under applicable provisions of SGMA and the Public Trust Doctrine, and that the UVRGA address the abovecomments to avoid a potential 'incomplete' or 'inadequate' GSP determination, as assessed by the Department of Water Resources, for the following reasons derived from regulatory criteria for GSP evaluation: 1. The assumptions, criteria, findings, and objectives, including the sustainability goal, undesirable results, minimum thresholds, measurable objectives, and interim milestones are not reasonable and/or not supported by the best available information and best available science. (CCR § 355.4(b)(1).) (See Comments # 1, 2, 3, 4, and 5); 2. The Draft GSP does not identify reasonable measures and schedules to eliminate data gaps (CCR § 355.4(b)(2).) (See Comments # 1, 2, and 3); 3. The sustainable management criteria and projects and management actions are not commensurate with the level of understanding of the basin setting, based on the level of uncertainty, as reflected in the Draft GSP. (CCR § 355.4(b)(3).) (See Comments # 3, 4 and 5); and, 4. The interests of the beneficial uses that are potentially affected by the use of groundwater in the basin, have not been considered. (CCR § 355.4(b)(4).) (See all comments);	For the reasons stated in the responses to other CDFW comments, UVRGA does not agree with the conclusion that the GSP does not comply with SGMA statutes and regulations. Please see responses to comment 26 above.

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34	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		Based on our review, we have significant concerns regarding the treatment of key beneficial users in the Draft GSP and consider the GSP to be insufficient under SGMA. We highlight the following findings: 1. Beneficial uses and users are not sufficiently considered in GSP development. a. Human Right to Water considerations are not sufficiently incorporated. b. Public trust resources are not sufficiently considered. c. Impacts of Minimum Thresholds, Measurable Objectives and Undesirable Results on beneficial uses and users are not sufficiently analyzed. 2. Climate change is not sufficiently considered. 3. Data gaps are not sufficiently identified and the GSP needs additional plans to eliminate them. 4. Projects and Management Actions do not sufficiently consider potential impacts or benefits to beneficial uses and users.	UVRGA does not agree with the conclusion that the GSP is insufficient under SGMA. Please see UVRGA's responses to the specific comments provided in the comment letter.
35	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**Disadvantaged Communities and Drinking Water Users** The identification of Disadvantaged Communities (DACs) and drinking water users is insufficient. RECOMMENDATIONS ● Provide a map of the boundaries of the recognized DAC in the basin. Provide the population of the DAC. ● Provide a map of tribal lands within the basin. ● Include a map showing domestic well locations and average well depth across the basin. ● Identify the sources of drinking water for DAC members, including an estimate of how many people rely on groundwater (e.g., domestic wells, state small water systems, and public water systems).	DACs areas were added to Figure 2.2-02 and 3.1-37. There are no tribal trust lands located within the basin. (Section 2.2.1). It is noted that the commenter's own maps provided in Appendix E of the comment letter demonstrate this fact. Domestic wells are shown on Figure 3.1-37. Text was added to Section 2.3.1 describing the source of drinking water in the DAC areas and estimated population that rely on groundwater.
36	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**Interconnected Surface Waters** The identification of Interconnected Surface Waters (ISWs) is insufficient, due to lack of supporting information provided for the ISW analysis. RECOMMENDATIONS ● Describe the legend labels used on Figure 3.2-11 in the GSP text to make clear which stream segments are retained as ISWs or potential ISWs in the GSP. ● Further describe the groundwater elevation data and stream flow data used in the ISW analysis. Ensure depth-to-groundwater data from multiple seasons and water year types (e.g., wet, dry, average, drought) are used to determine the range of depth and capture the variability in environmental conditions inherent in California's climate. ● Overlay the stream reaches shown on Figure 3.2-11 with depth-to-groundwater contour maps to illustrate groundwater depths and the groundwater gradient near the stream reaches. Show the location of groundwater wells used in the analysis. ● For the depth-to-groundwater contour maps, use the best practices presented in Attachment D. Specifically, ensure that the first step is contouring groundwater elevations, and then subtracting this layer from land surface elevations from a Digital Elevation Model (DEM) to estimate depth-to-groundwater contours across the landscape. This will provide accurate contours of depth to groundwater along streams and other land surface depressions where GDEs are commonly found. ● Describe data gaps for the ISW analysis in the ISW section, in addition to the discussion in Sections 3.1.4 (Data Gaps and Uncertainty). On Figure 3.2-11, include reaches with data gaps as potential ISWs.	UVRGA does not agree with the conclusion that identification of interconnected surface waters (ISWs) is insufficient. The first sentence of Section 4.6 states that "the Ventura River is considered an interconnected stream system in the Basin, within complex surface water and groundwater interactions that vary significantly with time and location in the Basin." This statement means that UVRGA treats the entire river within the Basin as ISW. The analysis performed in support of ISW SMC development evaluated potential depletion impacts along the entire reach of the Ventura River within the Basin (Appendix N, and GSP text Sections 3.2.6 and 4.9) regardless of the classifications shown on Figure 3.2-11. The classifications shown on Figure 3.2-11 are conceptual and provided for descriptive purposes and reader context. No management decisions within the GSP are based on those classifications. The recommendations in the comment appear to be intended to provide justification for the classifications shown on Figure 3.2-11. UVRGA finds this unnecessary and not required by SGMA because the classifications are for background information only.

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37	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**Groundwater Dependent Ecosystems** The identification of Groundwater Dependent Ecosystems (GDEs) is insufficient. The GSP took initial steps to identify and map GDEs using the Natural Communities Commonly Associated with Groundwater dataset (NC dataset) and other sources. However, we found that mapped features in the NC dataset were improperly disregarded, as described below. ● NC dataset polygons were incorrectly removed based on the assumption that they are supported by the shallow, perched water table. However, shallow aquifers that have the potential to support well development, support ecosystems, or provide baseflow to streams are principal aquifers , even if the majority of the basin's pumping 1 is occurring in deeper principal aquifers. If there are no data to characterize groundwater conditions in the shallow principal aquifer, then the GDE should be retained as a potential GDE and data gaps reconciled in the Monitoring Network section of the GSP. ● NC dataset polygons were incorrectly removed in areas adjacent to irrigated fields due to the presence of surface water. However, this removal criteria is flawed since GDEs, in addition to groundwater, can rely on multiple water sources – including shallow groundwater receiving inputs from irrigation return flow from nearby irrigated fields – simultaneously and at different temporal/spatial scales. NC dataset polygons adjacent to irrigated land can still potentially be reliant on shallow groundwater aquifers, and therefore should not be removed solely based on their proximity to irrigated fields. RECOMMENDATIONS ● Describe a systematic approach for analyzing the basin's GDEs. For example, provide a map of the NC Dataset. On the map, label polygons retained, removed, or added to/from the NC dataset (include the removal reason if polygons are not considered potential GDEs, or include the data source if polygons are added). Discuss how local groundwater data was used to verify whether polygons in the NC Dataset are supported by groundwater in an aquifer. Refer to Attachment D of this letter for best practices for using local groundwater data to verify whether polygons in the NC Dataset are supported by groundwater in an aquifer. ● Refer to Attachment B for more information on TNC's plant rooting depth database. Deeper thresholds are necessary for plants that have reported maximum root depths that exceed the averaged 30-ft threshold, such as valley oak (Quercus lobata). We recommend that the reported max rooting depth for these deeper-rooted plants be used. For example, a depth-to-groundwater threshold of 80 feet should be used instead of the 30-ft threshold, when verifying whether valley oak polygons from the NC Dataset are connected to groundwater. It is important to re-emphasize that actual rooting depth data are limited and will depend on the plant species and site-specific conditions such as soil and aquifer types, and availability to other water sources. ● Provide depth-to-groundwater contour maps, noting the best practices presented in Attachment D. Specifically, ensure that the first step is contouring groundwater elevations, and then subtracting this layer from land surface elevations from a digital elevation model (DEM) to estimate depth-to-groundwater contours across the landscape. ● If insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons as "Potential GDEs" in the GSP until data gaps are reconciled in the monitoring network.	UVRGA does not agree with the conclusion that the identification of GDEs is insufficient. UVRGA performed a comprehensive characterization of potential GDEs and analysis to determine which vegetation communities within the Basin are materially dependent on groundwater for consideration in the GSP. Regarding perched water, potential GDEs were screened out in areas where water is perched on bedrock above the regional water table. UVRGA believes it is appropriate to screen out potential GDEs in these areas because the water is not encountered within the alluvial aquifer of the Basin, which contains the groundwater that is being managed under the GSP. Regarding screening out vegetation in areas adjacent to irrigated fields, UVRGA believes the visual evidence from aerial imagery clearly and convincingly demonstrates that certain potential GDE areas exist where they do because water from irrigation is available for them to utilize. UVRGA concludes that these plants are dependent on the irrigation water as their primary source of water for transpiration. Conversations with UVRGA's Agricultural Director provide further evidence for this. The Agricultural Director reported that she observed oaks near an orchard die after the orchard was abandoned and irrigation stopped. Furthermore, maximum rooting depths and groundwater levels were compared for vegetation communities in these areas and this analysis was also used when screening out potential GDEs. The first recommendation does not appear to be applicable to this GSP. A map of the NC Dataset (iGDEs), as well as a map of potential GDEs, within the Basin are included in the Riparian GDE Assessment Memo. Data from TNCs rooting depth database, modeled groundwater depths, aerial imagery, and other data sources were used to make determinations of groundwater dependence for communities within the Basin, as described in Section 2.3 of the Riparian GDE Memo. Maximum rooting depths provided in the TNC database were used for each potential GDE within the Basin. None of the maximum rooting depths for the iGDEs mapped within the Basin exceed 30.0 feet. UVRGA understands that rooting depths for individual species and communities vary widely due to site-specific conditions but has utilized values from the TNC Rooting Depth Database, as it represents the best available data. Regarding depth-to-groundwater contour maps, these will be added to the Riparian GDE Assessment Memo so the reader can see a presentation of the groundwater level data used to screen the potential GDEs. However, it should be noted that the actual analysis used grid-based data from the numerical model, which is superior to contours because it provides a continuous distribution of data for analysis.
38	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**Native Vegetation and Managed Wetlands** Native vegetation and managed wetlands are water use sectors that are required 2,3 to be included in the water budget. The integration of native vegetation into the water budget is sufficient. We commend the GSA for including the groundwater demands of this ecosystem in the historical, current and projected water budgets. Managed wetlands are not mentioned in the GSP, so it is not known whether or not they are present in the basin. RECOMMENDATION ● State whether or not there are managed wetlands in the basin. If there are, ensure that their groundwater demands are included as separate line items in the historical, current, and projected water budgets.	UVRGA is not aware of any managed wetlands in the Basin.

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39	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**Stakeholder Engagement during GSP development**Stakeholder engagement during GSP development is insufficient. SGMA's requirement for public notice and engagement of stakeholders is not fully met by the description in the Stakeholder Engagement Plan of the GSP (Appendix E).The GSP describes outreach to DAC members and environmental stakeholders in the basin. Outreach to these members includes representation of DAC and environmental stakeholders on the GSA's Board of Directors, reserving seats on the Stakeholder Advisory Committee for domestic well owners, newsletters and emails to the interested parties list, social media posts, telephone communications with stakeholders, updates given to the Ventura River Watershed Council, public notices, newspaper articles, and direct outreach to DAC members of the Casitas Springs community. An Ad Hoc Stakeholder Engagement Committee was also formed throughout the GSP process to actively seek input across stakeholders. However, we note the following deficiency with the overall stakeholder engagement process. While tribal stakeholders are mentioned, there is no documentation of tribal consultation to ensure participation in GSP development and implementation processes. RECOMMENDATION ● In the Stakeholder Engagement Plan, describe active and targeted consultation with tribal governments within the basin during the remainder of the GSP developmentprocess and throughout the GSP implementation phase. Refer to Attachment B for guidance on how to consult with tribal governments.	This comment does not appear to be applicable to this GSP. There are no tribal trust lands located within the Basin. (Section 2.2.1). It is noted that the commenter's own maps provided in Appendix E of the comment letter demonstrate this fact.
40	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		The consideration of beneficial uses and users when establishing sustainable management criteria (SMC) is insufficient. The consideration of potential impacts on all beneficial users of groundwater in the basin are required when defining undesirable results and establishing 4 minimum thresholds5,6 **Disadvantaged Communities and Drinking Water Users** For chronic lowering of groundwater levels, the GSP mentions impacts to drinking water users when defining undesirable results. The GSP does not, however, analyze direct and indirect impacts on DACs or tribes when defining undesirable results, or evaluate the cumulative or indirect impacts of proposed minimum thresholds on these stakeholders. The GSP starts the degraded water quality SMC section of the GSP with the statement (p. 112): "Significant changes to the degraded water quality SMC are expected before GSP Adoption." The GSP identifies constituents of concern (COCs) in the basin as the following: nitrate, TDS, sulfate, chloride, and boron. The GSP states (p. 116): "The minimum thresholds [Table 4.7-01] were selected be consistent with protection of human health (MCL for nitrate), the Upper Consumer Acceptance Levels (TDS and sulfate), and concentrations that are considered to represent toxicity thresholds for agricultural beneficial uses (chloride and boron)." The GSP only includes a very general discussion of impacts to drinking water users when defining undesirable results and evaluating the cumulative or indirect impacts of proposed minimum thresholds. The GSP does not, however, mention or discuss direct and indirect impacts on DACs or tribes when defining undesirable results for degraded water quality, nor does it evaluate the cumulative or indirect impacts of proposed minimum thresholds on these stakeholders.	UVRGA does not agree the consideration of beneficial uses and users in the SMC formulation is insufficient. The chronic lowering of groundwater levels minimum thresholds were selected specifically to protect all wells, including domestic wells in DAC areas. The discussion of water quality impacts includes discussion of domestic wells, which includes wells in the DAC area. There are no tribal trust lands located in the Basin; so, this part of the comment is not applicable. It is noted that the commenter's own maps provided in Appendix E of the comment letter demonstrate this fact.
41	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		RECOMMENDATIONS **Chronic Lowering of Groundwater Levels** ● Describe direct and indirect impacts on DACs, drinking water users, and tribes when describing undesirable results for chronic lowering of groundwater levels. ● Consider and evaluate the impacts of selected minimum thresholds and measurable objectives on DACs, drinking water users, and tribes within the basin. Further describe the impact of passing the minimum threshold for these users. For example, provide the number of domestic wells that would be de-watered at the minimum threshold.	The potential impacts are described in Section 4.4.1. Impacts described for domestic wells are inclusive of wells in DAC areas. The impact of the minimum thresholds is presented in Section 4.4.2.4 for all wells, which is inclusive of wells in DAC areas.

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42	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**Degraded Water Quality** ● Provide an updated Section 4.7 (Degraded Water Quality) for public comment before GSP adoption. ● Describe direct and indirect impacts on DACs, drinking water users, and tribes when defining undesirable results for degraded water quality. For specific guidance on how to consider these users, refer to "Guide to Protecting Water Quality Under the Sustainable Groundwater Management Act."7 ● Evaluate the cumulative or indirect impacts of proposed minimum thresholds for degraded water quality on DACs, drinking water users, and tribes.	The updated section 4.7 was provided for review prior to GSP adoption. The potential impacts are described in Section 4.7.1. Impacts described for domestic wells are inclusive of wells in DAC areas. The impact of the minimum thresholds is presented in Section 4.7.2.4 for all wells, which is inclusive of wells in DAC areas
43	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**Groundwater Dependent Ecosystems and Interconnected Surface Waters** Despite acknowledging the impacts of drought-level groundwater elevations on GDEs, the GSP appears to disregard these impacts when setting the minimum thresholds to the historical low groundwater levels at the representative monitoring sites. RECOMMENDATIONS ● Reevaluate the minimum thresholds for impacts to GDEs for the chronic lowering of groundwater level SMC. Set minimum thresholds to levels that avoid 'significant and unreasonable' effects on beneficial users. Potential impacts on environmental beneficial uses and users need to be considered when defining undesirable results8 in the basin. Defining undesirable results is the crucial first step before the minimum thresholds9 can be determined.	The GSP does not ignore the impacts of drought-level groundwater elevation on GDEs. The UVRGA considered those impacts based on historical data, including NDVI/NDMI data, groundwater level data, and aerial imagery. While NDVI/NDMI values fell during periods with drought-level groundwater elevations, those indices also rebounded following subsequent wet years when groundwater elevations rose. Thus, the UVRGA determined that impacts to vegetative growth during periods of historically low groundwater levels were not significant and unreasonable. The chronic lowering of groundwater level minimum thresholds are set at historical low based on the understanding that no significant and unreasonable effects were observed at historical low groundwater levels and that drawing groundwater levels below historical low levels may lead to undesirable results.
44	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**Groundwater Dependent Ecosystems and Interconnected Surface Waters** Two aquatic habitat areas were identified for consideration in the development of depletion of interconnected surface water SMC, Confluence Aquatic Habitat Area and Foster Park Aquatic Habitat Area. The GSP states (p. 131): "[T]here is insufficient information to assess whether depletion effects in the Confluence Aquatic Habitat Area are significant and unreasonable. SMC for the Confluence Aquatic Habitat Area cannot not be evaluated until these data gaps have been addressed. The Confluence Aquatic Habitat Area will be revisited prior to the first five-year GSP assessment after addressing the data gaps." However, preliminary SMC should be established now (instead of at the five-year update) using the best available science to avoid significant and unreasonable effects on surface water beneficial users in the basin. RECOMMENDATIONS ● Establish preliminary SMC for depletion of interconnected surface water for the Confluence Aquatic Habitat Area, instead of waiting for the five-year GSP update.	As discussed in the GSP, there are insufficient data to determine whether significant and unreasonable effects related to ISW depletion are occurring or may potential occur in the Confluence Aquatic Habitat Area. The potential for significant and unreasonable effects must be established prior to establishing any SMC. As such, there is no basis for SMC at this time. The GSP lays out a clear path for data collection and revisiting this issue based on review of the collected data.

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45	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**2. Climate Change** The SGMA statute identifies climate change as a significant threat to groundwater resources and one that must be examined and incorporated in the GSPs. The GSP Regulations10 require integration of climate change into the projected water budget to ensure that projects and management actions sufficiently account for the range of potential climate futures. The integration of climate change into the projected water budget is insufficient. The GSP does incorporate climate change into the projected water budget using DWR change factors for 2030 and 2070. However, the GSP does not consider multiple climate scenarios (e.g., the 2070 extremely wet and extremely dry climate scenarios) in the projected water budget. The GSP should clearly and transparently incorporate the extremely wet and dry scenarios provided by DWR into projected water budgets or select more appropriate extreme scenarios for their basins. While these extreme scenarios may have a lower likelihood of occurring, their consequences could be significant, therefore they should be included in groundwater planning. We acknowledge and commend the inclusion of climate change into key inputs (e.g., precipitation, evaporation, and surface water flow) of the projected water budget. The sustainable yield is calculated based on the projected pumping with climate change incorporated. However, If the water budgets are incomplete, including the omission of extremely wet and dry scenarios, then there is increased uncertainty in virtually every subsequent calculation used to plan for projects, derive measurable objectives, and set minimum thresholds. Plans that do not adequately include climate change projections may underestimate future impacts on vulnerable beneficial users of groundwater such as ecosystems, DACs, and domestic well owners. RECOMMENDATIONS ● Integrate climate change, including extremely wet and dry scenarios, into all elements of the projected water budget to form the basis for development of sustainable management criteria and projects and management actions. ● Incorporate climate change scenarios into projects and management actions.	SGMA regulations §354.18(c)(3)(A),(d)(3),(e) are covered in the Water Budget section 3.3 which provides climate change impacts for historical, current, and projected quantities. The extremely dry/wet climate change scenarios are "recommended", but not "required" per SGMA regulations and BMP (Climate Change Guidance) and the Draft GSP included the DWR-provided scenarios (see Section 3.3). Furthermore, the relative insensitivity of the calculated water budget components to the climate change scenarios (e.g., the 2070 scenario) included in the Draft GSP indicates that a similar insensitivity would be observed under the extremely dry/wet scenarios and would therefore not be informative. UVRGA will assess the need for additional uncertainty analysis for climate change impacts every 5 years.
46	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**3. Data Gaps** The consideration of beneficial users when establishing monitoring networks is insufficient, due to lack of specific plans to increase the Representative Monitoring Sites (RMSs) in the monitoring network that represent groundwater quality around DACs and domestic wells in the basin.The GSP states (p. 161): “No representative monitoring sites have been identified for the degraded water quality sustainability indicator. However, it is noted for clarification that four well groups have been established to address the four sets of closely spaced wells in the groundwater quality monitoring network (Table 5.6-01 and Figure 5.6-01). These sets of closely spaced wells are grouped (i.e., treated as a single well) for the purposes of implementing the measurable objectives and minimum thresholds for the degraded water quality sustainability indicator, as discussed in Section 4.7.1.” The GSP does not explain how the use of a well group to represent a RMS will satisfy the reporting requirements of SGMA, however. Figure 5.6-01 (Existing and Planned Water Quality Monitoring Network) shows that no monitoring wells are located across portions of the basin near DACs and domestic wells (see maps provided in Attachment E). Beneficial users of groundwater may remain unprotected by the GSP without adequate monitoring and identification of data gaps in the shallow aquifer. The Plan therefore fails to meet SGMA’s requirements for the monitoring network11. RECOMMENDATIONS ● Provide maps that overlay monitoring well locations with the locations of DACs and domestic wells to clearly identify potentially impacted areas. Increase the number of representative monitoring sites (RMSs) in the shallow aquifer across the basin for the groundwater quality condition indicator. Prioritize proximity to DACs and drinking water users when identifying new RMSs. ● Choose single wells for water quality RMSs, instead of using well groups. If well groups are used, explain how the reporting requirements of SGMA will be met.	UVRGA does not agree with the conclusion that consideration of beneficial uses in the monitoring networks is insufficient. The commenter claims that "no monitoring wells are located across portions of the basin near DACs and domestic wells." The commenter's own maps provided with the comments show that this is not the case. There is adequate coverage in the Casitas Springs Area, including Well Group 4 that addresses the DAC area. There is adequate monitoring in the Kennedy Area. Proposed Monitoring Site E will address the current lack of monitoring in the Santa Ana Area (Section 5.3.4). It is noted that the monitoring network does not include monitoring sites in the Terraces Area and eastern portion of the Mira Monte / Meiners Oaks Area because wells in these areas are believed to be screened in bedrock formations beneath the basin (Section 5.3.1). UVRGA is required to assess the monitoring networks as part of GSP implementation and the required periodic GSP assessment process. Information developed from implementation of the Section 6.2 Domestic Well Survey management action will be used to further assess potential effects and monitoring needs for domestic wells, including wells in DAC areas. The first five-year GSP assessment will consider this information and the GSP will be updated as appropriate, including potential modifications to the monitoring networks. DACs areas were added to Figure 5.6-01. Concerning the comments about well groups, UVRGA believes the GSP text adequately describes how the well group approach will meet SGMA requirements (§354.34(c)(4); §354.36(a),(c)). The text in Section 5.9 has been enhanced to further demonstrate the SGMA requirements are met.

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47	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**3. Data Gaps** The consideration of beneficial users when establishing monitoring networks is insufficient, due to lack of specific plans to increase the Representative Monitoring Sites (RMSs) in the monitoring network that represent groundwater quality around DACs and domestic wells in the basin. The GSP provides discussion of data gaps for GDEs and ISWs in Section 5.3.4 of the GSP (Assessment and Improvement of Monitoring Network) and provides planned monitoring well locations on Figure 5.3-01 (Existing and Planned Groundwater Level Monitoring Wells). The GSP could be improved by describing the aquatic GDE monitoring programs for the Foster Park and Confluence Aquatic Habitat Areas (p. 159) and how they will be used to assess the potential for significant and unreasonable impacts to GDEs and ISWs due to groundwater conditions in the basin. RECOMMENDATIONS ● Further describe the biological monitoring that can be used to assess the potential for significant and unreasonable impacts to GDEs or ISWs due to groundwater conditions in the basin. The aquatic GDE monitoring programs for the Foster Park and Confluence Aquatic Habitat Areas are mentioned on p. 159 but no further details are provided.	As stated in the applicable sections, study plans / monitoring plans will be developed for these monitoring programs during GSP implementation.
48	8-Oct-21	Ngodoo Water Policy Analyst	Atume	ngos.sgma@gmail.com		NGO Consortium		**4. Addressing Beneficial Users in Projects and Management Actions** The consideration of beneficial users when developing projects and management actions is insufficient, due to the failure to identify benefits or impacts of identified projects and management actions to beneficial users of groundwater such as DACs and tribes. The GSP includes two projects and management actions with explicit benefits to the environment (Foster Park Protocols to Address Direct Depletion of Interconnected Surface Water and Actions to Address Indirect Depletion of Interconnected Surface Water). The only other project included in the GSP is a Domestic Well Survey to collect more information about domestic wells in the basin. The GSP does not discuss the manner in which DACs and tribes may be benefitted or impacted by projects and management actions identified in the GSP, nor does the GSP discuss the potential water quality impacts from groundwater management in the basin. Potential project and management actions may not protect these beneficial users. Groundwater sustainability under SGMA is defined not just by sustainable yield, but by the avoidance of undesirable results for all beneficial users. RECOMMENDATIONS ● For DACs and domestic well owners, include a drinking water well impact mitigation program to proactively monitor and protect drinking water wells through GSP implementation. Refer to Attachment B for specific recommendations on how to implement a drinking water well mitigation program. ● For DACs, domestic well owners, and tribes, include a discussion of whether potential impacts to water quality from projects and management actions could occur and how the GSA plans to mitigate such impacts. ● Recharge ponds, reservoirs, and facilities for managed stormwater recharge can be designed as multiple-benefit projects to include elements that act functionally as wetlands and provide a benefit for wildlife and aquatic species. For guidance on how to integrate multi-benefit recharge projects into your GSP, refer to the “Multi-Benefit Recharge Project Methodology Guidance Document”12. ● Develop management actions that incorporate climate and water delivery uncertainties to address future water demand and prevent future undesirable results.	UVRGA does not agree that the consideration of beneficial users with respect to projects and management actions is insufficient. The commenter claims that UVRGA has failed to identify benefits and impacts of the projects and management actions to beneficial users such as DACs and tribes. The GSP Emergency Regulations do not specifically require GSAs to identify benefits or impacts for beneficial users, let alone specific beneficial user categories. In fact, the regulations do not require discussion of impacts at all. The regulations require GSA to identify which measurable objectives will benefit (§354.44(b)(1)) and the benefits in general (§354.44(b)(5)). These requirements have been met for each project or management action included in Section 6 of the GSP. As stated in prior responses, there are no tribal trust lands with the Basin and the commenter's own maps show this.
49	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page ES-xi	A table such as Table 3.3.03 would be helpful to summarize demands and supplies and to provide a usage order of magnitude. It would also be helpful to provide a brief discussion of climate change assumptions (order of magnitude / %changes in precipitation / ET, etc.).	Table 3.3-03 and additional explanation of climate change uncertainty was added to the ES.
50	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page ES-xii, Table ES-01	An explanation should be provided as to why the surface water historical total in/out (48,025-AFY) is lower than the current/projected in out (86,241/96,474-AFY).	Additional text describing the noted differences was included in the ES.

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51	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page ES-xiv	The well on which the groundwater levels in the hydrograph shown in Fig. ES-11 should be identified.	Well name added to chart.
52	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page ES-xxii	The Municipal and Industrial (M&I) and Agricultural (Ag) water use efficiency and Casitas Municipal Water District (CMWD) proposed projects to bridge the 5,160-AFY yield gap should be added as described in Section 6.	This comment is not consistent with the text on page ES-xxii. Therefore, the comment is unclear and cannot be addressed.
53	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 2.2.1	Section 2.2.1 lists the source types of water for municipal and industrial, agricultural, and domestic uses. Are there any significant stream, channel or surface water diversions contributing to water supplies (aside from the Robles Diversion and the privately owned agricultural diversion mentioned in Sections 3.1.1.2 and 4.9.1)? The Draft only lists diversions reported by the State Water Resources Control Board (SWRCB).	A SWRCB permit or license is required to divert surface water in the State of California. Therefore, it is appropriate to identify surface water sources of supply via SWRCB records. UVRGA did not attempt to identify illicit diversions that may or may not exist within the Basin.
54	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 2.2.2.2	Should be revised to reflect that the CMWD's 2020 Urban Water Management Plan update was completed and formally adopted.	This subject content was revised by Casitas MWD. UVRGA defers to Casitas MWD's edits.
55	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 2.2.2.2	Have there been any recent updates to the Regional Water Quality Control Board (RWQCB) total maximum daily loads (TMDLs) for the Ventura River and its tributaries? If so, these updates should be referenced in the text.	The GSP references the most current TMDLs.
56	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 2.2.3.2	It may be useful to state that that the California Well Standards Bulletins are undergoing a technical advisory committee review at the time of the GSP was prepared.	Comment noted.
57	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.orgjames.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 2.3.1	A statement should be included in Section 2.3.1 that CMWD's Mira Monte well pumps less than 1% of the water supplied by CMWD.	Subject text added with 'approximate' caveat.
58	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Sections 3.1, 3.1.3.1.3 and 3.1.3.2	Despite the lower hydraulic conductivity of the Ojai Conglomerate, could this formation potentially connect any portions of the water-bearing alluvial sediments of the Upper Ventura River Valley Basin and the Ojai Valley Basin? If so, the Ojai Valley Basin could act as a source of groundwater recharge in Section 3.1.3.2.	Potential hydraulic communication between the Upper Ventura River Basin and Ojai Basin theoretically exists via the Ojai Conglomerate. However, this potential connection is considered very small due to the low hydraulic conductivity of the formation, the limited area of this formation along the boundary, and the presence of Sespe Formation at shallow depths along the basin boundary (as indicated by Sespe Formation outcrops along the basin boundary). For these reasons, the potential flow of groundwater between the basins is considered to likely be very small. Text was added to the GSP in Section 3.1.3.2 to clarify this.
59	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Appendix H	In general, there are references throughout the text to the groundwater model in Appendix H. It would be helpful to include a summary of the model in GSP text.	A summary paragraph was added to Section 3.3 Water Budget – Water Budget Overview to introduce and summarize the numerical model.
60	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 3.1.1.3	Section 3.1.1.3 states that water is not imported to the Ventura River Watershed. It may be appropriate to note the planned CMWD interconnect project with Carpinteria Valley Water.	Comment noted. The UVRGA Board discussed this and decided it is not appropriate to include this project in the GSP at this time based on the current status.
61	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Sections 3.1.3.3, 3.2.4 and 4.7	Sections 3.1.3.3, 3.2.4 and 4.7 discuss the elevated concentrations of nitrates in the Mira Monte/Meiners Oaks Area. It should be noted that Ventura County discretionary planning reviews consider the RWQCB Basin Plan groundwater quality objectives and groundwater beneficial uses as pertains to potential development and proposed projects.	This is now noted in Section 3.2.4.

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62	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 70, last paragraph	Climate change is anticipated to change the timing and duration of precipitation events and could influence the year-to-year surface and groundwater budgets. It is suggested to rephrase or acknowledge what is anticipated from climate change, but note that there is a large level of uncertainty.	Climate change effects are discussed in detail in Section 3.3.3.3.
63	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 77 and Table 3.3-03	While estimated Municipal and Industrial (M&I) demands have decreased over time, Agricultural (Ag) demands have stayed constant and therefore start to represent a larger portion of total demand. Discussion should be included about how this is addressed in the future water demands.	Section 3.3.3.2 describes how future agricultural water demands were projected.
64	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Table 3.3-03	Table 3.3-03 shows annual Ag demands at 505 AFY, while Table 3.3-06 has a more specific Ag pumping demand. Is the difference due to Ag surface water deliveries? This should be clarified.	505 AFY in Table 3.3-03 is the estimated agricultural irrigation demand within the Basin, which is met by a combination of groundwater and surface water. The 276 AFY in Table 3.3-06 is the estimated agricultural pumping in the Basin. Note that some of the agricultural pumped groundwater is used outside of the Basin. Footnotes will be added to the subject tables.
65	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 78	Reliability of Historic Surface Water Deliveries, information should be added on how CMWD estimates planned deliveries. Regarding the following text: “The surface water supply was deemed reliable because demands were less than projected for much of the historical period and the surface water supply was less than the safe yield of the reservoir, as it was understood at the time” and “the reservoir safe yield has been re-assessed to be 10,660 AF/yr for Lake Casitas (now called “safe demand”), as discussed in Sections 3.3.2 and 3.3.3.2.” 1. The first sentence above is not necessarily accurate since not all of Lake Casitas water is delivered to the Upper Ventura River (UVR). If the other CMWD demands increase, UVR deliveries could potentially decrease. 2. Did the “Safe Demand” estimate incorporate the climate change effects as outlined in this Draft? What is the estimated portion to be delivered to the UVR if the supply is limited to the “Safe Demand”?	This subject content was revised by Casitas MWD. UVRGA defers to Casitas MWD's edits.
66	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 79, second paragraph	Clarify if stream outflows from individual streams make up 83% of the total groundwater model domain inflows.	UVRGA does not understand the comment.
67	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 82	Average 2006-2016 ”M&I GW Supplies” of 845 AFY in Table 3.3-03 “Estimated Historical Demands and Supplies in the UVRGB by Category and Source” are much less than the average 2006-2016 “M&I Pumping” of 4,707 AFY in Table 3.3-06 “UVRGB Groundwater Inflows and Outflows by Water Year, Historical and Current Period.” Is this due to M&I exports out of the basin? If so, there should be a note on Table 3.3-03 similar to the note on Ag groundwater exports. Otherwise, this discrepancy needs to be explained.	City of Ventura pumping is exported to the City of Ventura. This is discussed in Section 3.3.1.1. A footnote was added to Table 3.3-06.
68	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Pages 87-88, per Table 3.3-03	Are M&I demands appropriately estimated, given the likelihood of multiple-dry year conditions?	UVRGA does not understand the question. The question references pages 87-88, which discuss projected supplies and demands in relation to Table 3.3-03, which presents historical estimated supplies and demands.
69	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 88, in the last paragraph	There is a significant gap between the CMWD safe demand and project demand. What portion of the gap applies to UVR? Is the schedule to close this gap within the next 10 years overly optimistic?	This subject content was revised by Casitas MWD. UVRGA defers to Casitas MWD's edits.
70	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 90	Page 90 relates the conclusions from Baseline vs Climate Change. What is the frequency of ENSO/PDO events? Can it be stated that the size of the basin and its responsiveness to changes in precipitation/runoff such that the higher rain fall events of ENSO/PDO rapidly refill the basin?	The Basin is demonstrated to refill in years when Ventura River flows are approximately equal to or greater than 50% of the average annual flow (Section 4.4.3.1 and Figure 4.4-01). Therefore, higher rainfall events associated with ENSO/PDO events are not required to refill the Basin.
71	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 102, top paragraph	The statement “Modeling projections for the GSP suggest that the proposed minimum thresholds may be occasionally exceeded at some monitoring locations (Appendix Q). However, the criterion for undesirable results is not predicted to be triggered during the 50-year GSP implementation period” seems contradictory and potentially weakens the selection of MTs.	There is no contradiction. The GSP Emergency Regulations Section §354.26(b)(2) requires GSAs to define undesirable results as a combination of minimum threshold exceedances.

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72	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 115, second Paragraph,	"…and UVRGA determines that exceedances are caused by groundwater pumping." The criteria for making this determination should be identified.	The criteria will be developed as part of the annual reporting and/or 5-yr GSP assessment process.
73	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 4.7.2.4	Section 4.7.2.4 discusses the increased costs for treatment of groundwater to meet water quality objectives for municipal beneficial users. This is an important issue, especially within the Meiners Oaks Water District's pumping areas.	Comment noted.
74	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Page 132, top paragraph	Consider using groundwater levels for measuring this SMC (in addition to flows). Measurement may be implied with the addition of new wells, but it is not sufficiently described in this section.	The SMC are consistent with GSP Emergency Regulations §354.28(c)(6), which states "The minimum threshold for depletions of interconnected surface water shall be the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water and may lead to undesirable results. "
75	8-Oct-21	KimballJames	LoebMaxwell	kim.loeb@ventura.orgjames.maxwell@ventura.org	(805) 650-4083(805) 654-5164	Ventura County800 S. Victoria Avenue, Ventura, CA 93009	Page 142, Section 5.3	Additional detail would be helpful regarding the spatial and temporal extent of the monitoring network. Although the GSP network may meet the DWR BMP guidance for well density, the Miramonte/Meiners Oaks area is lacking in monitoring locations. This could be a data gap with an additional well be needing to be identified in this area.	The spatial and temporal aspects of the groundwater levels monitoring network are presented on Figure 5.3-01 and in Table 5.3-01.
76	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 5.2	Does the Draft address amending the Plan at the five-year assessment to reflect any revisions or modifications made to the RWQCB Water Quality Objectives (Section 5.2)? The Draft discusses potential modification to monitoring networks if there are significant changes in pumping patterns or groundwater quality.	Potential changes to RWQCB WQOs is one of many factors that will be reviewed during GSP assessments. UVRGA believes this is implied in the assessment requirements.
77	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 6.2	Section 6.2 states the UVRGA will attempt to survey domestic well owners in the Basin. The survey will be designed to collect information from the well owners about well status, construction, usage, etc. VCPWA-WP oversees compliance with the County Well Ordinance (No. 4468). UVRGA should notify VCPWA-WP if a well is surveyed and does not comply with the County Well Ordinance.	Comment noted.
78	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 6.2	No mention is made of the CMWD proposed projects to increase water conservation and new water supply to bridge the 5,160 AFY gap in the loss of yield from Lake Casitas. The magnitude of impact of the 5,160-AFY to the UVR should also be documented.	This subject content was revised by Casitas MWD. UVRGA defers to Casitas MWD's edits.
79	8-Oct-21	Kimball James	Loeb Maxwell	kim.loeb@ventura.org james.maxwell@ventura.org	(805) 650-4083 (805) 654-5164	Ventura County 800 S. Victoria Avenue, Ventura, CA 93009	Section 7.1.6	The Draft does not discuss any anticipated effects on the Basin from the future removal of the Matilija Dam. It might be beneficial to discuss the impacts to the Basin after execution and completion of the project, likely to occur during the 20-year measurable objectives achievement period (Section 7.1.6).	The potential removal of Matilija Dam will be addressed in future GSP updates, as appropriate, based on actual progress toward project execution.
80	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper714 Bond AvenueSanta Barbara, CA 93103	4.4 Chronic Lowering of Groundwater Levels	**Chronic Lowering of Groundwater Levels** The GSP used the lowest recorded historical groundwater level outlier as the groundwater level and storage minimum threshold. The stated purpose of establishing this threshold is to prevent significant and unreasonable effects that include causing municipal, domestic, or agricultural beneficial users to be unable to meet basic water supply needs with groundwater or alternative supplies, or permanent or prolonged impacts to riparian GDEs. We note that the ability to pump groundwater from the Robles reach is routinely disrupted during drought for many water rights holders in the basin including the existing municipal water districts. These purveyors rely significantly if not entirely during drought years on alternative supply from Lake Casitas. Lake Casitas is currently critically reduced in capacity. In light of these circumstances and the risk of increased frequency of drought due to climate change, we find the selection of the lowest recorded historical groundwater level in appropriate as a minimum threshold to prevent undesirable effects to water supplies related to chronic lowering of groundwater levels.	UVRGA does not agree with the conclusion that the minimum thresholds for chronic lowering of groundwater levels are inappropriate. As discussed in Section 4.4.1, the availability of surface water supplies from Lake Casitas is a key factor in UVRGA concluding that there have not been significant and unreasonable effects even during periods of low groundwater levels. UVRGA considers increased use of surface water supplies from Lake Casitas during dry periods a form of conjunctive use (see Section 2.2.2.3) as opposed to a significant and unreasonable effect. UVRGA will consider the availability of Lake Casitas surface water during each 5-year GSP assessment.

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81	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	**Foster Park Flow Protocols** The "Foster Park Flow Protocols" are not based on the best available science. Santa Barbara Channelkeeper negotiated the protocols with the City of Ventura as a means to provide "life support" for the lower reaches until a final outcome is reached with the Ventura River Watershed Adjudication. The State Water Board's groundwater and surface water model was not available when the protocols were developed. The California Department of Fish and Wildlife's instream flow recommendations for the Ventura River were not available when the protocols were developed. Based on current implementation of the protocols in 2021, extractions at Foster Park continued to take place even though river flows in the reach dropped below 2 CFS for prolonged periods of time. 2 CFS was identified by the City of Ventura's own 2013 Hydrology Study as a critical threshold below which is detrimental to critical habitat conditions. The "Foster Park Flow Protocols" do not have the endorsement of State and Federal resource agencies. For these reasons, the GSP should not rely on long-term implementation of the "Foster Park Flow Protocols" to ensure that undesirable results do not occur.	SGMA requires UVRGA to establish minimum thresholds for depletion of surface water flow. Minimum thresholds for Foster Park are based on the current best available science, which UVRGA believes is the site-specific study by Hopkins (2013). The CDFW flow recommendations do not identify a threshold for significant and unreasonable effects based on groundwater pumping as the Padre study included in Hopkins (2013) does. The CDFW study includes surface flow recommendations to maintain beneficial habitat conditions for steelhead. Although the UVRGA agrees that maintaining surface water conditions is important to the health of aquatic species and their habitats, including steelhead, SGMA does not require GSA to maintain optimal surface water conditions for riverine species, but rather to manage significant and unreasonable effects related to groundwater pumping. Additionally, UVRGA recommends a monitoring program to address uncertainties of impacts to the Foster Park Aquatic GDE that could be related to depletions of interconnected surface water. UVRGA proposes a study comprised of continuous water quality monitoring, field observations of instream habitat and aquatic species, and in-situ water quality and flow measurements. Data collected through these monitoring efforts will inform future minimum threshold determinations.
82	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	**GDE Analysis** The GSP has not adequately demonstrated that permanent and prolonged impacts to GDEs have not already occurred in the Robles reach due to historic groundwater extractions. Rather, the GSP essentially asserts that the Robles reach is not a GDE because certain riparian vegetation communities were not identified in the GSA's recent analysis. Significant groundwater extractions, however, have been occurring for many decades. Such extractions and any related depletions of surface water would likely have significant impact on any riparian vegetation that may have been present during the period analyzed during GSP development.	Modeling results indicate that groundwater levels in the Robles and Santa Ana area naturally fluctuate significantly below the rooting depth of the dominant species classified in those areas (i.e., scalebroom and alluvial scrub). UVRGA has modeled the water table elevations (Appendix L) and streamflow absent groundwater pumping and determined that the incremental increase in groundwater levels and streamflow that would occur absent pumping (Appendix N and GSP text Sections 3.2.6 and 4.9) is small. Even absent all pumping in the Basin, UVRGA's biologists do not anticipate widespread recruitment of riparian vegetation in the Robles and Santa Ana Areas, as the difference in groundwater levels does not appear to be particularly meaningful in terms of the water requirements of riparian species, given the seasonal fluctuation of water availability.
83	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	Channelkeeper echoes comments submitted by the Surfrider Foundation, Ventura Chapter as they related to the GDE analysis included in the draft GSP. These comments are reiterated below: "The Riparian Groundwater Dependent Ecosystems Assessment Report characterizes the Robles reach as a "Losing reach with generally disconnected groundwater- surface water." This categorization eliminates the majority of this Groundwater Dependent Ecosystem from consideration under SGMA by assuming that it is "disconnected" and thus has too great a depth to groundwater to support riparian habitat. Other reaches are similarly dismissed.	Please see response to comment 5 above.
84	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	The analysis presented relies heavily on the Nature Conservancy "Natural Communities (NC) Dataset," using vegetation communities to eliminate GDE polygons from the Upper Ventura River Groundwater Basin. The NC dataset is a statewide geographic computer database that maps vegetation types in all potential GDEs throughout the State of California. The large geographic scope of this map does not accurately represent current on-the-ground conditions, and more robust ground truthing should be undertaken. Even the aerial photos presented tell a different story than is acknowledged in the narrative.	Please see response to comment 6 above.

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85	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	Unfortunately, the UVRGSA analysis does not fully implement the Best Practices for using the NC Dataset guidance provided by the Nature Conservancy, which presents six best practices for using local groundwater data to confirm whether mapped features in the NC dataset are supported by groundwater. (Best Practices for using the NC Dataset, TNC July 2019). According to this guidance: -While depth-to-groundwater levels within 30 feet of the land surface are generally accepted as being a proxy for confirming that polygons in the NC dataset are supported by groundwater, it is highly advised that fluctuations in the groundwater regime be characterized to understand the seasonal and interannual groundwater variability in GDEs. (see Best Practice #2.) -One of the key factors to consider when mapping GDEs is to contour depth-to groundwater in the aquifer that is supporting the ecosystem (see Best Practice #5). The GIS Spatial Analysis of Maximum Rooting Depth and Groundwater Level presented in the Riparian GDE document does not present such contour depth-to-groundwater mapping or account for temporal variability	Please see response to comment 7 above.
86	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	Furthermore, TNC guidance acknowledges that; In many situations, the hydrologic connection of NC dataset polygons will not initially be clearly understood if site-specific groundwater monitoring data are not available. If sufficient data are not available in time for the 2020/2022 plan, The Nature Conservancy strongly advises that questionable polygons from the NC dataset be included in the GSP until data gaps are reconciled in the monitoring network. Erring on the side of caution will help minimize inadvertent impacts to GDEs as a result of groundwater use and management actions during SGMA implementation. Many of California's GDEs have adapted to dealing with intermittent periods of water stress, however if these groundwater conditions are prolonged, adverse impacts to GDEs can result. Therefore, it is likely that the NC vegetation mapping is representative of conditions in which groundwater levels have been frequently and repeatedly pumped beyond the reach of riparian tree roots. Meanwhile, field observations over the past few wetter years show that the riparian vegetation has rebounded, illustrating how the ecosystem responds with the variation in water years. Receding groundwater levels and corresponding loss of surface flows in the current drought will likely reverse this recent trend, with the potential loss of the many young sycamores and other riparian vegetation.	Please see response to comment 9 above.
87	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	**Determining Groundwater/Surface water interactions** TNC guidance for determining GDEs recognizes the importance of surface flows; In addition, SGMA requires that significant and undesirable adverse impacts to beneficial users of surface water be avoided. Beneficial users of surface water include environmental users such as plants or animals, which therefore must be considered when developing minimum thresholds for depletions of interconnected surface water. The Model Results and SMC Implications Presentation (March 25, 2021) reaches the conclusion that: • Basin water budget is dominated by streamflow percolation into the Basin and groundwater discharge to Ventura River • GW pumping averages only ~10% of the GW Budget As low as 4% in wet years Up to 31% in dry years • Basin GW levels will be lower in dry seasons, but Basin will still re-fill in normal to wet years The conclusion that there is no impact from pumping based on the fact that the basin rapidly refills in the wet season points to the likelihood that the surface water is in fact "connected" to groundwater during these periods. Moreover, the fact that pumping represents up to 31% of the budget in critical dry years raises the question of how groundwater extractions impact surface flows and groundwater levels.	Please see response to comments 10 and 11 above.
88	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	The Model Results identify four areas of concentrated pumping, three of which directly impact groundwater levels in the "Robles Reach." This reach is the area with the most storage in the Basin, and should be considered as the "primary sub-Basin" for water supply. The three areas of concentrated pumping in this reach are likely to affect conditions throughout the Basin.	See response to comment 12 above.

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89	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	The analyses and graphs presented in the Model Results do not provide information on the spacial and temporal surface flow conditions as they relate to groundwater levels. Because the downstream reaches are largely dependent on surface and groundwater flows out of this sub-Basin, further analysis is needed to more clearly define the relationship between groundwater levels and surface flows. The analyses should, at a minimum, determine threshold groundwater levels at which surface flows are diminished or eliminated, both in the reach being monitored and downstream. This relationship was established decades ago in the Ventura River Conjunctive Use Report (1978) which states that; Flows in the live stretch are affected by both the rate of recharge of the upper part of the Ventura River groundwater Basin and by the rate of groundwater extraction from wells in the river. Investigations published in the Conjunctive Use Report identified groundwater elevation thresholds in the upper Basin at which flows in the live reach will cease; when the water level in well 4N23WI6C4 falls below Elevation 495, surface flow in much of the live stretch stops although some pools remain. A flow of 1 cfs or more in the live stretch corresponds with a water level in this well of greater than about Elevation 507.	See response to comment 13 above.
90	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	Groundwater levels also affect surface flows in the Robles Reach, which frequently dries up despite constant inflows. Unfortunately, the Aquatic GDE Impact Analysis is quick to dismiss the effect of groundwater elevation on surface flows; No monitoring is recommended at either of the critical riffle aquatic GDEs or the Robles Habitat Area, as impacts from pumping in these areas were determined to be minimal or non-existent. This conclusion is inconsistent with the guidance provided in Monitoring Networks and Identification of Data Gaps BMP (DWR 2016) which states: 23 CCR §354.34(c))(6).	See response to comment 14 above.
91	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	The Draft GSP accurately identifies the Confluence Area as a GDE. The GSP, however, falls short in its determination that more years of study are necessary to determine if surface flow depletions caused by upstream pumping are significant and unreasonable. The confluence area is critical habitat for federally endangered Southern California steelhead trout. Steelhead have been observed over-summering in pools within this reach by state and local resource agencies. Surface water habitat and water quality conditions degrade significantly (to the point of complete dewatering) in this reach due to depletions of interconnected groundwater in the Robles reaches. The numeric model utilized to determine the effect of pumping on surface flows in the Confluence Area is not based on the best available science, which includes the State Water Resource Control Board's Groundwater and Surface Water model, currently well under development.	UVRGA recognizes that the Confluence Area provides important habitat for steelhead and other aquatic species, as outlined in the Aquatic GDE Memo. For the Confluence Area, it is unclear if depletions cause significant and unreasonable effects and monitoring is proposed to answer that question. The GSP recommends a monitoring program for the Confluence Habitat Area Aquatic GDE that may include water quality monitoring, field observations of instream habitat and aquatic species, and in-situ water quality and flow measurements. The details of the monitoring programs will be decided when the monitoring workplans are developed and approved by the UVRGA Board. The SWRCB model was not available for consideration during GSP development. However, based on review of the SWRCB model, UVRGA's numerical model provides a higher resolution of the Basin. UVRGA considers its model the best available science for GSP development. Having said that, UVRGA intends to evaluate the utility of using both models together for future GSP assessments and updates (the SWRCB Board model for regional inputs and the UVRGA model for improved resolution along the Ventura River). This approach will take advantage of the strengths of each model.

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92	8-Oct-21	Benjamin	Pitterle	ben@sbck.org	805-636-6189	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103	4.9 Depletions of Interconnected Surface Water	**"Direct" Depletions of Surface Water** The GSP defines the terms "direct" and "indirect" depletion with regard to depletion of interconnected surface waters. Direct depletion is defined as surface water depletion caused by a cone of depression from pumping wells near the Ventura River. The GSP, however, then continues to identify only the Foster Park Well field as a facility causing direct depletion. Multiple, major water extraction facilities are located in the Robles reach of the Upper Ventura River Basin. These facilities utilize wells located in direct proximity of the Ventura River. Pumping from these wells has the potential to create a cone of depression that could deplete surface flows. The Robles Reach historically receives perennial inflows from the upper Ventura River and its Matilija Creek and North Fork Matilija Creek tributaries. These inflows persist even during prolonged periods of drought. The GSP has not provided adequate evidence to support its assertion that most groundwater in the Basin "naturally" drains out of the Basin at a rate greater than inflows. In any case, pumping from wells located within the Basin and within immediate proximity of the Ventura River clearly have the capacity to produce cone of depression effects that can reduce and eliminate surface flows earlier than may naturally occur absent pumping. Such reduction in flows could have significant effects on riparian habitat and aquatic communities within the Robles Reach and downstream.	Depletion of surface water in the Robles Reach was estimated using the numerical model. The model was run with and without pumping to determine streamflow depletions. The results indicated that depletion in the Robles Reach was very small compared to surface water flows during the steelhead migration season. Therefore, it was concluded that there are no significant and unreasonable depletions of surface water in the critical riffle areas caused by pumping. UVRGA concludes that detailed monitoring is not necessary in these areas due to the very small and insignificant modeled depletions and that the limited funding available for monitoring should be prioritized in the Confluence and Foster Park Areas, where UVRGA has concluded that significant and unreasonable effects could potentially occur.
93	13-Oct-21	Michael	Flood	mflood@casitaswater.com	805-649-2251	Casitas MWD 1055 N. Ventura Ave. Oak View, CA 93022		Various edits	All requested edits were made.

Bryan Bondy

From: Upper Ventura River Groundwater Agency <sward@uvrgroundwater.org>
Sent: Wednesday, February 3, 2021 6:00 PM
To: Summer Ward
Subject: GSP Comment/Question

GSP Comment/Question Form

Last Name:	Pitterle
First Name:	Benjamin
Email Address:	ben@sbck.org
Confirm Email Address:	ben@sbck.org
Phone:	805-636-6189
Mailing Address:	714 Bond Avenue Santa Barbara, CA 93103 United States of America
GSP Section for Comment/Question:	4.4.2 Minimum Thresholds
GSP Comment/Question:	1 Significant and unreasonable effects impacting surface water quality are caused by groundwater conditions throughout portions of the basin. Lowering of groundwater levels reduces surface flows. Reduced surface flows may cause water quality conditions that do not support beneficial uses. Such water quality conditions include lowered dissolved oxygen and increased temperatures. These flow-related impacts are highlighted in various watershed studies including the TMDL for Algae, Eutrophic Conditions, and Nutrients in the Ventura River. Water quality impacts to interconnected surface waters due to groundwater pumping should be addressed within the Groundwater Sustainability Plan. The Draft Sustainable Management Criteria for Degraded Water Quality acknowledges this surface-groundwater interdependence related to nitrate. The GSP should similarly address interdependences related to dissolved oxygen and temperature. Thank you for your consideration.

Santa Barbara Channelkeeper Comments (2-3-2021)

Would you like to join the UVRGA Official Interested Parties List?:	Yes
Beneficial Uses:	Environment

This email was built and sent using Visual Form Builder.

DATE: 6-18-2021
TO: Brian Bondy, UVRGSA
FROM: Paul Jenkin
RE: **Early Comments on Draft Supporting Documents for Upper Ventura River Groundwater Sustainability Plan**

This memo is a follow up from our conversation regarding development of the Groundwater Sustainability Plan (GSP). The primary concern we discussed is the elimination of large portions of the basin from SGMA oversight through the assumption that surface water is somehow "disconnected" from groundwater. Apart from the fact that there are fundamental flaws in the methodology used to make this determination, the resulting conclusions and management criteria are not consistent with avoiding undesirable results. 2

The primary Sustainable Management Criteria (SMC) for the UVRGB is the **Depletion of Interconnected Surface Water**. The analyses presented to date do not adequately assess the groundwater/surface water interactions within and between the different reaches of the basin, or even acknowledge the impact of groundwater pumping on surface flows. 4

Screening Groundwater Dependent Ecosystems (GDEs)

The Upper Ventura River Groundwater Basin is a shallow alluvial aquifer integral to the riparian floodplain ecosystem of the main stem Ventura River. Throughout these reaches of the river, groundwater and surface water are connected, and to suggest they are not is to undermine the intent of the Sustainable Groundwater Management Act. 3

The **Riparian Groundwater Dependent Ecosystems Assessment** Report characterizes the Robles reach as a "*Losing reach with generally disconnected groundwater- surface water.*" This categorization eliminates the majority of this Groundwater Dependent Ecosystem from consideration under SGMA by assuming that it is "disconnected" and thus has too great a depth to groundwater to support riparian habitat. Other reaches are similarly dismissed. 5

The analysis presented relies heavily on the Nature Conservancy "Natural Communities (NC) Dataset," using vegetation communities to eliminate GDE polygons from the Upper Ventura River Groundwater Basin. The NC dataset is a statewide geographic computer database that maps vegetation types in all potential GDEs throughout the State of California. The large geographic scope of this map does not accurately represent current on-the-ground conditions, and more robust ground truthing should be undertaken. Even the aerial photos presented tell a different story than is acknowledged in the narrative (i.e. Figure 6 North Robles Habitat Area Photographs, Aquatic GDE Characterization report) 6

Unfortunately, the UVRGSA analysis does not fully implement the **Best Practices for using the NC Dataset** guidance provided by the Nature Conservancy, which presents six best practices for using local groundwater data to confirm whether mapped features in the NC dataset are supported by groundwater. (Best Practices for using the NC Dataset, TNC July 2019) 7

According to this guidance:

While depth-to-groundwater levels within 30 feet of the land surface are generally accepted as being a proxy for confirming that polygons in the NC dataset are supported by groundwater, ***it is highly advised that fluctuations in the groundwater regime be characterized to understand the seasonal and interannual groundwater variability in GDEs.*** *(see Best Practice #2.)*

one of the key factors to consider when mapping GDEs is to contour depth-to-groundwater in the aquifer that is supporting the ecosystem *(see Best Practice #5).*

7

The **GIS Spatial Analysis of Maximum Rooting Depth and Groundwater Level** presented in the Riparian GDE document **does not present such *contour depth-to-groundwater*** mapping or account for temporal variability.

8

In many situations, the hydrologic connection of NC dataset polygons will not initially be clearly understood if site-specific groundwater monitoring data are not available. If sufficient data are not available in time for the 2020/2022 plan, ***The Nature Conservancy strongly advises that questionable polygons from the NC dataset be included in the GSP until data gaps are reconciled in the monitoring network.*** *Erring on the side of caution will help minimize inadvertent impacts to GDEs as a result of groundwater use and management actions during SGMA implementation.*

9

Furthermore, TNC guidance acknowledges that;

Many of California's GDEs have adapted to dealing with intermittent periods of water stress, however if these groundwater conditions are prolonged, adverse impacts to GDEs can result.

Therefore, it is likely that the NC vegetation mapping is representative of conditions in which groundwater levels have been frequently and repeatedly pumped beyond the reach of riparian tree roots. Meanwhile, field observations over the past few wetter years show that the riparian vegetation has rebounded, illustrating how the ecosystem responds with the variation in water years. Receding groundwater levels and corresponding loss of surface flows in the current drought will likely reverse this recent trend, with the potential loss of the many young sycamores.

Determining Groundwater/Surface water interactions

TNC guidance for determining GDEs recognizes the importance of surface flows;

In addition, SGMA requires that significant and undesirable adverse impacts to beneficial users of surface water be avoided. ***Beneficial users of surface water include environmental users such as plants or animals, which therefore must be considered when developing minimum thresholds for depletions of interconnected surface water****.*

10

The **Model Results and SMC Implications Presentation (March 25, 2021)** reaches the conclusion that:

11

- *Basin water budget is dominated by streamflow percolation into the Basin and groundwater discharge to Ventura River*
- *GW pumping averages only ~10% of the GW Budget As low as 4% in wet years Up to 31% in dry years*
- *Basin GW levels will be lower in dry seasons, but Basin will still re-fill in normal to wet years*

11

The conclusion that there is no impact from pumping based on the fact that the basin rapidly refills in the wet season points to the likelihood that the surface water is in fact "connected" to groundwater during these periods. Moreover, the fact that pumping represents up to 31% of the budget in the critical dry years raises many questions.

The Model Results identify four areas of concentrated pumping, three of which directly impact groundwater levels in the "Robles Reach." This reach is the area with the most storage in the basin, and should be considered as the "primary sub-basin" for water supply. Pumping in this reach directly affects conditions throughout the basin.

12

The analyses and graphs presented in the Model Results do not provide information on the spacial and temporal surface flow conditions as they relate to groundwater levels. Because the downstream reaches are largely dependent on surface and groundwater flows out of this sub-basin, further analysis is needed to more clearly define the relationship between groundwater levels and surface flows. The analyses should, at a minimum, determine threshold groundwater levels at which surface flows are diminished or eliminated, both in the reach being monitored and downstream.

This relationship was established decades ago in the **Ventura River Conjunctive Use Report (1978)** which states that;

13

> *Flows in the live stretch are affected by both the rate of recharge of the upper part of the Ventura River groundwater basin and by the rate of groundwater extraction from wells in the river.*

Investigations published in the Conjunctive Use Report identified groundwater elevation thresholds in the upper basin at which flows in the live reach will cease;

> *when the water level in well 4N23Wl6C4 falls below Elevation 495, surface flow in much of the live stretch stops although some pools remain. A flow of 1 cfs or more in the live stretch corresponds with a water level in this well of greater than about Elevation 507.*

Groundwater levels also affect surface flows in the Robles Reach, which frequently dries up despite constant inflows. Unfortunately, the **Aquatic GDE Impact Analysis** is quick to dismiss the effect of groundwater elevation on surface flows;

14

> *No monitoring is recommended at either of the critical riffle aquatic GDEs or the Robles Habitat Area, as impacts from pumping in these areas were determined to be minimal or non-existent.*

This conclusion is inconsistent with the guidance provided in Monitoring Networks and Identification of Data Gaps BMP (DWR 2016) which states:

23 CCR §354.34(c))(6): Depletions of Interconnected Surface Water.
Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following:
(A) Flow conditions including surface water discharge, surface water head, and baseflow contribution.
(B) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.
(C) Temporal change in conditions due to variations in stream discharge and regional groundwater extraction.
(D) Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water.

14

DWR guidance provides detailed information on developing a monitoring network to accurately assess these concerns.

Establishing Minimum Flow Thresholds

As described above, the current GSP analysis incorrectly concludes that groundwater pumping has little to no effect on surface flows throughout the majority of the basin. But even for the identified groundwater dependent "Habitat Areas," the development of minimum flow thresholds is inadequate. For example;

> *For the Foster Park Habitat Area, while the City's low-flow thresholds are based on only one HSI score evaluated in the Padre study (average thalweg depth), we understand this currently provides the best available information to establish minimum thresholds for the depletion of interconnected surface water sustainability criteria.*

15

This statement ignores best available science, including the recently published CDFW Draft Instream Flow Recommendations (2021) as well as the NMFS Draft Biological Opinion for Foster Park Wellfield (2005).

Implications for the UVR Groundwater Sustainability Plan

According to the Brownstein Water Group, the Cuyama Valley Basin and the Paso Robles Area Subbasin GSPs were recently deemed incomplete for deficiencies in their definitions of sustainable management criteria (SMC), including minimum thresholds and undesirable results. Some of the concerns cited by DWR are that the GSP;

- *provides insufficient detail for how it determined that the selected minimum thresholds . . . are consistent with avoiding undesirable results*
- *does not relate different minimum thresholds for different portions of the basin to conditions that could cause undesirable results*
- *does not sufficiently discuss expected impacts and therefore "precludes meaningful disclosure to, and participation by, interested parties and residents in the Basin.*

16

It is clear from these recent DWR determinations that much more work is needed to develop and present a clear understanding of the workings of the Upper Ventura River Groundwater Basin, the potential impacts from groundwater pumping, and a plan to better manage the limited resource to ensure future sustainability and a healthy ecosystem.

16

Recommendation:

These initial comments are provided as requested, in good faith, prior to the release of the Draft GSP in the interest of stakeholder engagement and with the hopes that the UVRGSA is able to augment the current analysis and develop a meaningful assessment of the impact of groundwater pumping on surface flows in the Ventura River. It is clear that this will be necessary to successfully develop the Groundwater Sustainability Plan to a level that satisfies the objectives of the Sustainable Groundwater Management Act (SGMA) in order to gain the support of local stakeholders and approval by the California Department of Water Resources.

17

DATE: October 8, 2021
TO: Brian Bondy, UVRGSA
FROM: Paul Jenkin, Surfrider Foundation
RE: **Comments on Draft Upper Ventura River Groundwater Sustainability Plan**

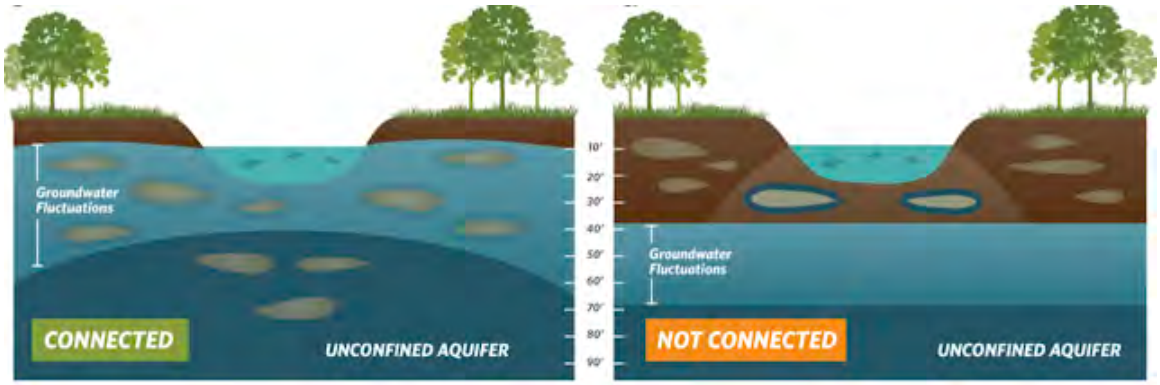
Dear Mr Bondy,

Thanks for the opportunity to review the Draft **Upper Ventura River Groundwater Sustainability Plan (GSP).** The Surfrider Foundation recognizes that sustainable management of coastal watersheds is critical to the protection and enhancement of our oceans, waves, and beaches. We have been engaged in issues affecting the Ventura River since the Ventura County Chapter was founded in 1991.

4 Upon review of the GSP it is clear that the primary Sustainable Management Criteria (SMC) for the Upper Ventura River Groundwater Basin (UVRGB) is the **Depletion of Interconnected Surface Water**. The analyses presented do not adequately assess the groundwater/surface water interactions within and between the different reaches of the basin or acknowledge the impact of groundwater pumping on surface flows.

Screening Groundwater Dependent Ecosystems (GDEs)

The Upper Ventura River Groundwater Basin is a shallow alluvial aquifer integral to the riparian floodplain ecosystem of the main stem Ventura River.



Confirming whether an ecosystem is connected to groundwater, TNC

5 The **Riparian Groundwater Dependent Ecosystems Assessment** Report characterizes the Robles reach as a "*Losing reach with generally disconnected groundwater- surface water.*" This categorization eliminates the majority of this Groundwater Dependent Ecosystem from consideration under SGMA by assuming that it is "disconnected" and thus has too great a depth to groundwater to support riparian habitat. Other reaches are similarly dismissed.

Figure 2 Potential Riparian GDEs, Hydrogeologic Areas, and Interconnected Surface Water Systems within the UVRGB

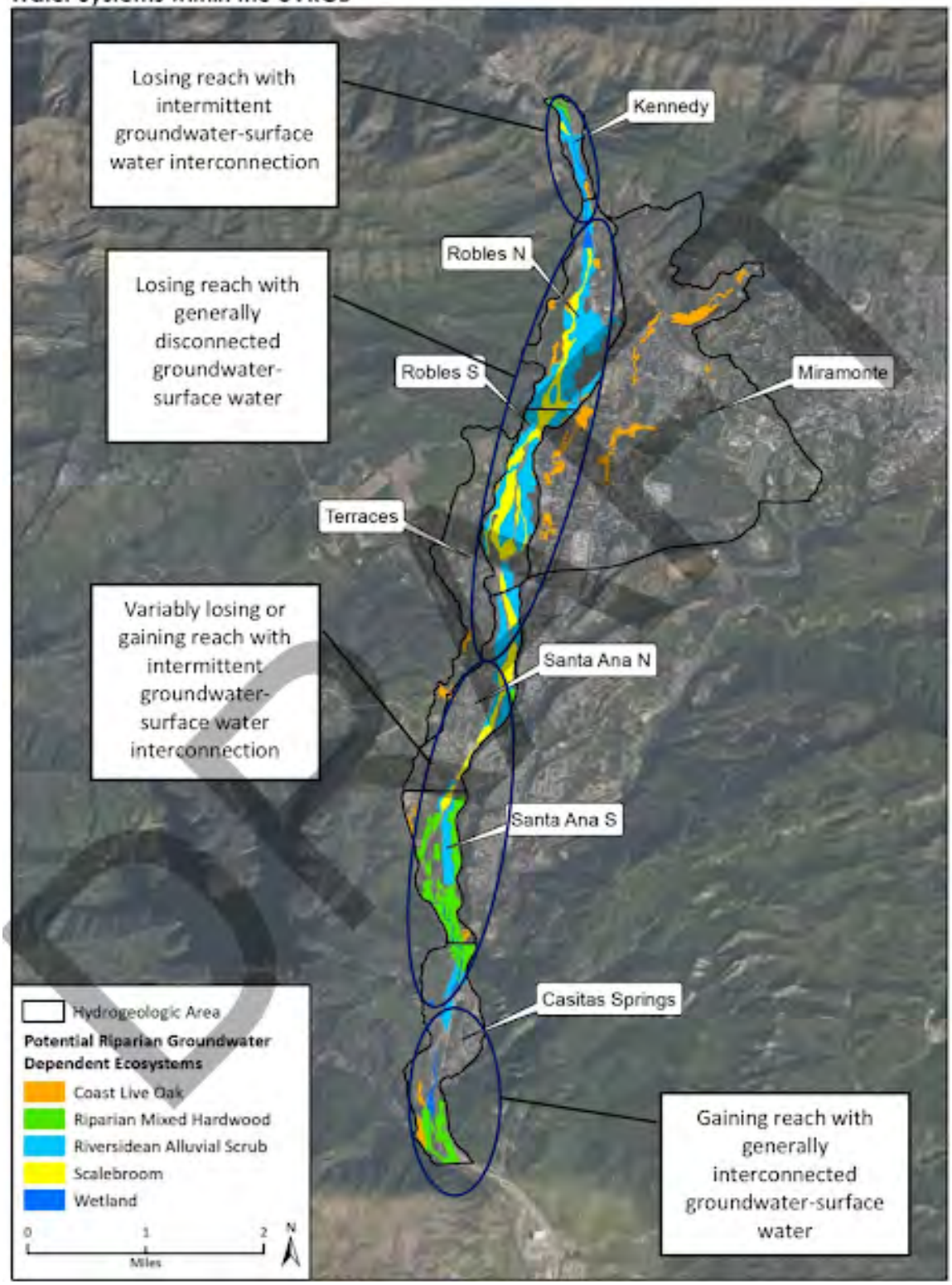


Figure 2 from Riparian Groundwater Dependent Ecosystems Assessment

6

The analysis presented relies heavily on the Nature Conservancy "Natural Communities (NC) Dataset," using vegetation communities to eliminate GDE polygons from the Upper Ventura River Groundwater Basin. The NC dataset is a statewide geographic computer database that maps vegetation types in all potential GDEs throughout the State of California. The large geographic scope of this map does not accurately represent current on-the-ground conditions, and more robust ground truthing should be undertaken. Even the aerial photos presented tell a different story than is acknowledged in the narrative (i.e. Figure 6 North Robles Habitat Area Photographs, Aquatic GDE Characterization report)

Photograph 2. Southern portion of North Robles Habitat Area (facing south)

Figure 6 North Robles Habitat Area Photographs

7

Unfortunately, the UVRGSA analysis does not fully implement the **Best Practices for using the NC Dataset** guidance provided by the Nature Conservancy, which presents six best practices for using local groundwater data to confirm whether mapped features in the NC dataset are supported by groundwater. (Best Practices for using the NC Dataset, TNC July 2019)

According to this guidance:

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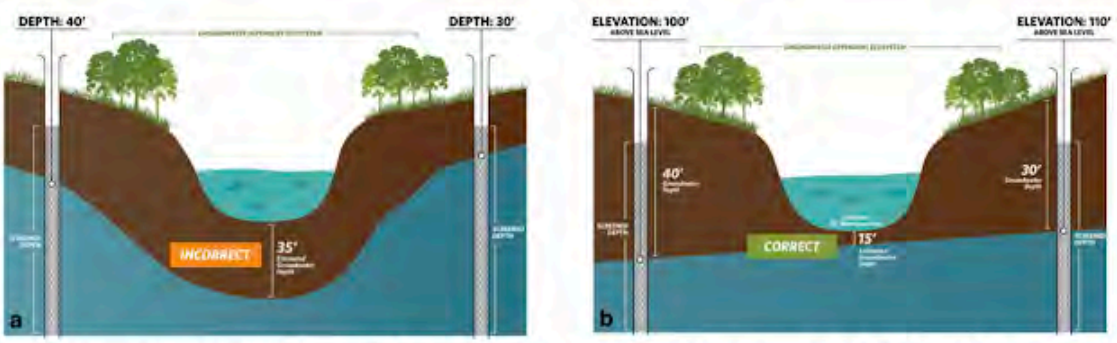

Figure 6. Contouring depth-to-groundwater around surface water features and GDEs. (a) Groundwater level interpolation using depth-to-groundwater data from monitoring wells. **(b)** Groundwater level interpolation using groundwater elevation data from monitoring wells and DEM data.

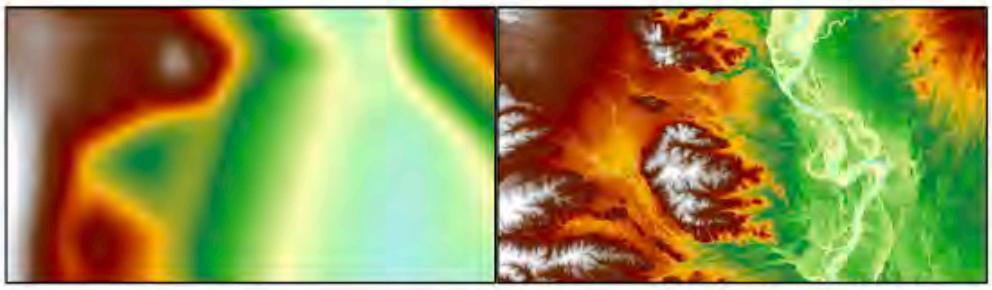

Figure 7. Depth-to-groundwater contours in Northern California. (Left) Contours were interpolated using depth-to-groundwater measurements determined at each well. **(Right)** Contours were determined by interpolating groundwater elevation measurements at each well and superimposing ground surface elevation from DEM spatial data to generate depth-to-groundwater contours. The image on the right shows a more accurate depth-to-groundwater estimate because it takes the local topography and elevation changes into account.

Figures from Best Practices for using the NC Dataset, TNC

9

Furthermore, TNC guidance acknowledges that;

In many situations, the hydrologic connection of NC dataset polygons will not initially be clearly understood if site-specific groundwater monitoring data are not available. If sufficient data are not available in time for the 2020/2022 plan, ***The Nature Conservancy strongly advises that questionable polygons from the NC dataset be included in the GSP until data gaps are reconciled in the monitoring network.*** *Erring on the side of caution will help minimize inadvertent impacts to GDEs as a result of groundwater use and management actions during SGMA implementation.*

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GDEs can result.

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Determining Groundwater/Surface water interactions

10 TNC guidance for determining GDEs recognizes the importance of surface flows;

> *In addition, SGMA requires that significant and undesirable adverse impacts to beneficial users of surface water be avoided.* ***Beneficial users of surface water include environmental users such as plants or animals, which therefore must be considered when developing minimum thresholds for depletions of interconnected surface water****.*

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- *GW pumping averages only ~10% of the GW Budget As low as 4% in wet years Up to 31% in dry years*
- *Basin GW levels will be lower in dry seasons, but Basin will still re-fill in normal to wet years*

The conclusion that there is no impact from pumping based on the fact that the basin rapidly refills in the wet season points to the likelihood that the surface water is in fact "connected" to groundwater during these periods. Moreover, the fact that pumping represents up to 31% of the basin water budget in critical dry years raises the question of how these groundwater extractions impact surface flows and groundwater levels.

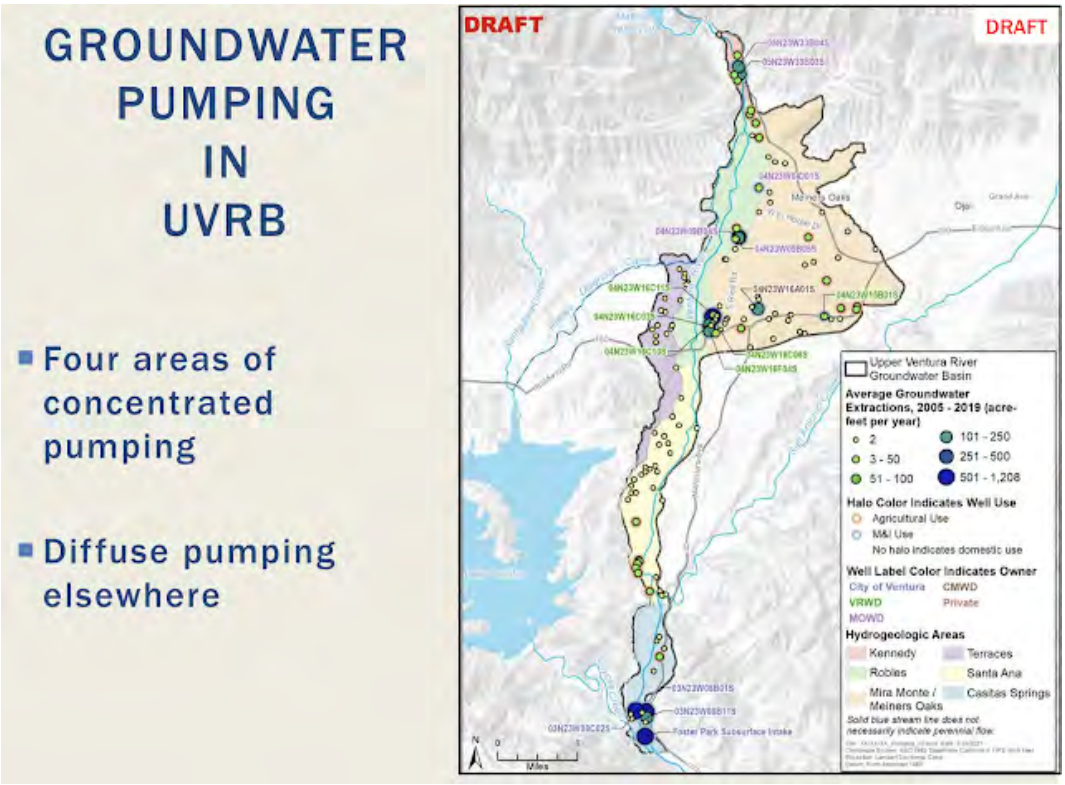

figure from Model Results and SMC Implications Presentation (March 25, 2021)

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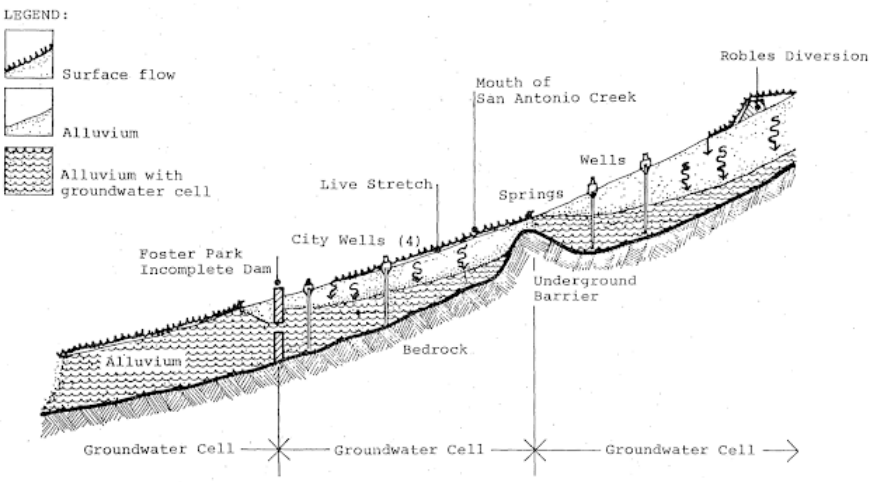

Ventura River at Casitas Springs

Schematic Diagram of Ventura River at Casitas Springs - Summer Condition

13

This relationship was established decades ago in the **Ventura River Conjunctive Use Report (1978)** which states that;

> *Flows in the live stretch are affected by both the rate of recharge of the upper part of the Ventura River groundwater basin and by the rate of groundwater extraction from wells in the river.*

Investigations published in the Conjunctive Use Report identified groundwater elevation thresholds in the upper basin at which flows in the live reach will cease;

> *when the water level in well 4N23Wl6C4 falls below Elevation 495, surface flow in much of the live stretch stops although some pools remain. A flow of 1 cfs or more in the live stretch corresponds with a water level in this well of greater than about Elevation 507.*

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> *Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary*

14

to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following:

(A) Flow conditions including surface water discharge, surface water head, and baseflow contribution.

(B) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable.

(C) Temporal change in conditions due to variations in stream discharge and regional groundwater extraction.

(D) Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water.

DWR guidance provides detailed information on developing a monitoring network to accurately assess these concerns.

Establishing Minimum Flow Thresholds

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As described above, the current GSP analysis incorrectly concludes that groundwater pumping has little to no effect on surface flows throughout the majority of the basin. But even for the identified groundwater dependent "Habitat Areas," the development of minimum flow thresholds is inadequate. For example;

For the Foster Park Habitat Area, while the City's low-flow thresholds are based on only one HSI score evaluated in the Padre study (average thalweg depth), we understand this currently provides the best available information to establish minimum thresholds for the depletion of interconnected surface water sustainability criteria.

This statement ignores best available science, including the recently published CDFW Draft Instream Flow Recommendations (2021) as well as the NMFS Draft Biological Opinion for Foster Park Wellfield (2005).

Implications for the UVR Groundwater Sustainability Plan

16

According to the Brownstein Water Group, the Cuyama Valley Basin and the Paso Robles Area Subbasin GSPs were recently deemed incomplete for deficiencies in their definitions of sustainable management criteria (SMC), including minimum thresholds and undesirable results. Some of the concerns cited by DWR are that the GSP;

- *provides insufficient detail for how it determined that the selected minimum thresholds . . . are consistent with avoiding undesirable results*
- *does not relate different minimum thresholds for different portions of the basin to conditions that could cause undesirable results*
- *does not sufficiently discuss expected impacts and therefore "precludes meaningful disclosure to, and participation by, interested parties and residents in the Basin.*

It is clear from these recent DWR determinations that much more work is needed to develop and present a clear understanding of the workings of the Upper Ventura River Groundwater Basin, the potential impacts from groundwater pumping, and a plan to better manage the limited resource to ensure future sustainability and a healthy ecosystem.

17

Recommendation:

The primary storage within the Upper Ventura River Groundwater Basin lies beneath the floodplain of the Robles reach of the Ventura River. Further analysis is needed to develop a meaningful assessment of the impact of groundwater pumping on surface flows in the Ventura River. This should include contour mapping as described in the TNC Guidance documents as well as a plan to install monitoring wells to better characterize the depth to groundwater and connectivity throughout the basin, especially through the Robles reach where the majority of pumping takes place. It is clear that this will be necessary to successfully develop the Groundwater Sustainability Plan to a level that satisfies the objectives of the Sustainable Groundwater Management Act (SGMA) in order to gain the support of local stakeholders and approval by the California Department of Water Resources.

Bryan Bondy

From: Upper Ventura River Groundwater Agency <sward@uvrgroundwater.org>
Sent: Saturday, September 4, 2021 6:15 PM
To: Summer Ward
Subject: GSP Comment/Question

Categories: Red Category

GSP Comment/Question Form

Last Name: Johnson

Edward Johnson Comments (9-4-2021)

First Name: Edward

Email Address: [redacted]

Confirm Email Address: [redacted]

Phone:

Mailing Address: [redacted]

GSP Section for Comment/Question: 1.0 Introduction

18

GSP Comment/Question: What are the short and long-term mitigation measures that will be applied, if any, to de minimus use(<2 Acre-Feet/Year) domestic well owners if/when a maximum or minimum impact standard is reached in the relevant aquifer zone(Santa Ana, Miramonte/Meiners Oaks, Casitas Springs, etc)

Would you like to join the UVRGA Official Interested Parties List?: Yes

Beneficial Uses:

19 General comments received from City of Ventura

Bryan Bondy

From: Jennifer Tribo <jtribo@cityofventura.ca.gov>
Sent: Friday, October 8, 2021 3:44 PM
To: Bryan Bondy
Cc: Susan Rungren
Subject: RE: -EXT- RE: City of Ventura Comments on Draft Upper Ventura River GSP

Bryan – We have reviewed the latest draft of the GSP and do not have any additional comments, but I did want to follow-up on our comments from July.

- 2-1 Agency Information – Decided to leave as is. It is accurate.
- 2.2.2.2 Existing Water Resources Management Programs – I checked the updated documents and the numbers you used for modeling. Updating the UWMP Reference to 2020 will not change anything and is more accurate. Updating the WSECP reference to 2020 will not change any numbers. However, I do suggest leaving the 2020 CWRR reference. That is the only document that still has the single year drought extraction of 1,573 AF. The 2021 CWRR uses 1,298 AF for all drought years. I know you cannot change the modeling now (and I don't think you need to), so just leave the 2020 CWRR reference. In future updates, we will have better information on our actual extractions under the settlement protocols.
- The only other comment I was going to make was to explain the limitations how our settlement agreement protocols are modeled, but I think the sentence at the top of p130 and footnote 9 are sufficient. However, if you get comments that suggest others may need more clarification/explanation, please let me know.

Overall, great job. Thanks for your hard work on this.

Jennifer

From: Bryan Bondy <bbondy@uvrgroundwater.org>
Sent: Thursday, July 22, 2021 7:03 PM
To: Jennifer Tribo <jtribo@cityofventura.ca.gov>
Cc: Susan Rungren <srungren@cityofventura.ca.gov>
Subject: -EXT- RE: City of Ventura Comments on Draft Upper Ventura River GSP

Thanks again Jenny. Regarding the third comment – do you know if changing the references as suggested would affect any of the numbers we included in the GSP or used for modeling?

From: Jennifer Tribo <jtribo@cityofventura.ca.gov>
Sent: Thursday, July 22, 2021 12:09 PM
To: Bryan Bondy <bbondy@uvrgroundwater.org>

Cc: Susan Rungren <srungren@cityofventura.ca.gov>
Subject: City of Ventura Comments on Draft Upper Ventura River GSP

Bryan – We have given the Draft GSP a preliminary review, and have the following comments:
Please note that we will be giving the Draft GSP a more thorough review during the public comment period and may have additional edits, but we do not expect these edits to be consequential to the conclusions of the GSP. Overall, we thought it was a well written comprehensive document and appreciate your hard work on its development.

- Executive Summary – *"Ventura River Watershed Adjudication (titled Santa Barbara Channelkeeper v. State Water Resources Control Board and the City of San Buenaventura (Los Angeles County Superior Court, Case No. 19STCP01176)"*
  - We agree with this text. Good summary of a dynamic process.
- 2-1 Agency Information –
  - Will submit suggested edits to City description during the public review process.
- 2.2.2.2 Existing Water Resource Management Programs –
  - Suggest updating References to City documents – The 2021 CWRR, 2020 UWMP, and 2020 Water Shortage Event Contingency Plan have all been completed and were approved by City Council in May/June 2021.
- 3.3.1.1 Historical Demands, Supplies, and Reliability of Surface Water Deliveries – Municipal and Industrial Groundwater Supplies –
  - Suggest the following edit on Page 76
    - Municipal and Industrial (M&I) Groundwater Supplies: VRWD, CMWD, and MOWD pump groundwater within the basin to meet M&I demands. Groundwater pumping for the water districts were compiled based on reported data (details on pumping estimates for UVRGB are in Appendix F). A fraction (based on the proportion of their respective service areas inside UVRGB) of VRWD and MOWD total groundwater extractions were estimated to be used for demands within the basin. All of CMWD's groundwater pumping was assumed to meet local demands (within the UVRGB). Note that the City of Ventura pumps groundwater from the UVRGB ~~but exports all this water to meet demands outside the UVRGB.~~ for use within the Ventura River watershed, but outside the boundaries of the Upper Ventura River groundwater basin. Hence, City of Ventura pumping was not included as part of UVRGB groundwater supplies to meet demands within the Basin. Historically, it is estimated that 19% of total M&I pumping is used to meet demands within the basin.
- 4.9.1 Undesirable Results
  - Proposed edit to Foster Park Habitat Area section on page 128 (third full paragraph):
    - The bottom chart of Figure 4.9-03 shows both total depletions (black line) and the direct depletions associated with the City of Ventura's Foster Park extraction facilities (cyan line) that are simulated to cause stream flow to be depleted below 2 cfs. The difference between black and cyan lines is the indirect depletion associated with pumping wells located upstream of Foster Park. When interpreting the results in Table 4.9-02 and Figure 4.9-03, it is important to recall that the model simulations assume decreased annual pumping from City of Ventura's Foster Park extraction facilities during dry years, with no pumping during August – January (Table 4.9-03). The City of Ventura Foster Park pumping schedule employed in the model simulation is intended to approximate, but not exactly replicate, the Foster Park Flow Protocols[9]. ~~Simulated City of Ventura depletions would have likely been larger if historical Foster Park extraction patterns had been used in the simulation.~~

Generally, groundwater flow is from a northern to southern direction, following the surface drainage and the slight but relatively consistent gradient of the basin (SWRCB, 1956; VRWC, 2015) (Figure ES-08). Groundwater levels in the UVRGB fluctuate seasonally with the highest water levels occurring in the winter to early spring and the lowest levels occurring in fall or winter (Figure ES-09). Groundwater levels do not display significant long-term temporal trends. Water level declines are seen during the droughts of the late 1980s and the 2010s (when historical lows were observed); however, the water levels rebound rapidly in the wet years that follow with complete basin refilling. The changes in groundwater storage from rapid cyclical draining and filling of most of the total basin storage is in stark contrast with most Basins in the State, in which the range of storage change is small compared to the total basin storage and storage changes are more gradual over time.

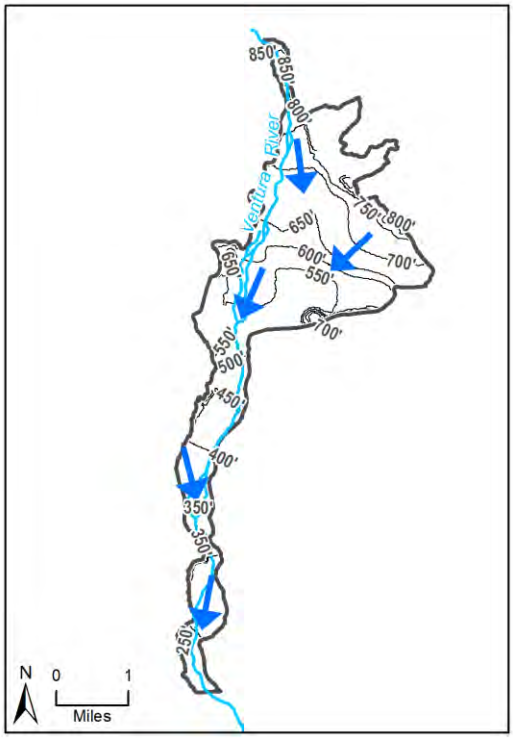

Figure ES-08: Groundwater Elevation Contours and Flow Directions

21

In general, due to the unconfined conditions of the groundwater, the quality of the groundwater in the UVRGB is heavily influenced by (a) the quality and quantity of surface water runoff that recharges the groundwater basin, (b) leaching of nutrients from fertilizers and manure, and (c) percolation of return flows from applied waters and septic system leachate. Nitrate is the primary groundwater quality concern in the UVRGB with some municipal wells exceeding the nitrate Maximum Contaminant Level in the Mira Monte area. Nitrate concentrations in groundwater within the gaining portions of the Ventura River (Casitas Springs Area and southern portion of the Santa Ana Area) are generally lower than the RWQCB Basin Plan water quality objective of 5 mg/L for surface water.

Possibly from Monterey formation as well?

22

Vent. Co. Environmental Health was testing nitrates to determine the source. Do they have results?

ES-5 Water Budget

The groundwater flow model was used to quantify water budgets for the historical, current, and projected conditions, including the evaluation of uncertainty due to climate change (Appendix H). As required by SGMA, potential effects of land use change and population growth were evaluated for the projected water budget. It was concluded that these factors are not anticipated to have a material impact on future water demand and the water budgets for the Basin because of land use policies and ordinances that greatly limit the potential for material growth in the Basin.

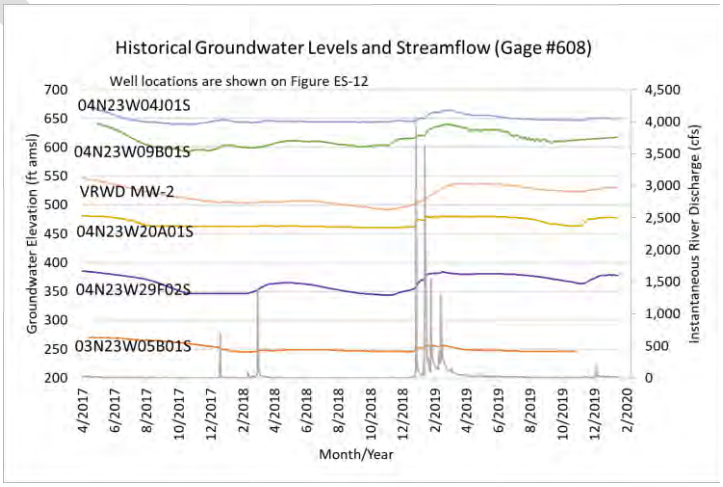

Figure ES-09: Groundwater Level Seasonal Fluctuations

SCM for ISW depletions were developed for the Foster Park Aquatic Habitat Area based on a 2012 field study that is considered to be the best available science for the Foster Park Aquatic Habitat Area (Hopkins 2013). This study established the potential for significant and unreasonable effects on steelhead when surface water flows decline below 2 cubic feet per second, as measured at Casitas Vistas Road Bridge (i.e., the southern basin boundary and location of USGS Stream Site 11118500). The minimum threshold is designed to prevent depletions of ISW that cause a degradation in habitat conditions that may be reasonably expected to lead to substantially stress steelhead and/or potential steelhead mortality (i.e., significant and unreasonable effects). The minimum threshold is ISW depletion that causes stream flow to decline to 2 or less cfs at Casitas Vistas Road bridge (USGS Stream Site 11118500, as shown in Table ES-04 below. The measurable objective is the same as the minimum threshold to minimize impacts on water supply for other beneficial users in the Basin.

Table ES-04: Minimum Thresholds and Measurable Objectives for ISW Depletion, Foster Park Habitat Area

Undepleted Flow (without groundwater pumping – derived from groundwater model)	Depletion Minimum Threshold and Measurable Objective	Goal
> 2 cfs	Undepleted flow minus 2 cfs	The minimum threshold and measurable objective seek to prevent depletions of surface water flow caused by groundwater pumping that would cause surface water flow to be less than 2 cfs when surface water flow would not be less than 2 cfs without pumping
< = 2 cfs	0 cfs	The minimum threshold and measurable objective seek to prevent depletions of surface water flow caused by groundwater pumping when surface water would already be 2 cfs or less without groundwater pumping

Significant and unreasonable effects on recreational beneficial uses are considered to be prevented if significant and unreasonable effects on GDEs are prevented because the presence of GDEs is a major reason for the recreational use of trails, preserves, etc. in the Basin.

ES-7 Monitoring Networks

The GSP Emergency Regulations require monitoring networks be developed to collect data of sufficient quality, frequency, and spatial distribution to characterize groundwater and related surface water conditions in the Basin, evaluate changing conditions that occur during implementation of the GSP, and for implementation of the SMC for the Basin. Monitoring networks should accomplish the following (§354.34(b)):

- **Demonstrate progress toward achieving measurable objectives described in the GSP**
- **Monitor impacts to the beneficial uses and users of groundwater**
- **Monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds**
- **Quantify annual changes in water budget components**

Biological monitoring in the Foster Park Aquatic Habitat Area will be performed to assess performance of the ISW depletions sustainable management criteria. A work plan will be developed during fiscal year 2022 to layout the proposed monitoring activities. It is anticipated that the work plan will include a greater degree of monitoring activities leading up to the first five-year GSP evaluation to establish baseline information, followed by a more limited and streamlined monitoring program for the remainder of the GSP implementation period. The initial four-year "baseline" program may include field monitoring activities (e.g., field observations of instream habitat and aquatic species) and continuous in-situ water quality monitoring. It is anticipated that collected data will be correlated with flow measurements made by USGS and the City of Ventura. The study plan will detail a specific schedule, monitoring parameters, field methods, and data interpretation/evaluation methodology. UVRGA will develop the monitoring plan in coordination with the Ventura Watershed Adjudication parties to seek consistent potential monitoring activities that may be envisioned post-judgment. This monitoring may eventually be performed by others as part of implementation of a judgment to the adjudication. A report will be prepared at the conclusion of the baseline monitoring phase to inform the first five-year GSP evaluation.

Pursuant to section §352.6, monitoring data will be stored in UVRGA's Data Management System (DMS). Data will be transmitted to DWR with the GSP, annual reports, and GSP updates electronically on the forms provided by DWR.

ES-8 Projects and Management Actions

Seawater intrusion and land subsidence are not applicable sustainability indicators for the Basin. Therefore, projects or management actions are not needed to address these sustainability indicators.

Historical data and the modeling projections indicate that the measurable objectives for the chronic lowering of groundwater levels, reduction of groundwater storage, and degraded water quality sustainability indicators will be met without the need projects or management actions. However, there is uncertainty concerning effects on domestic wells in the Basin. Therefore, a management action is included to collect more information about domestic wells. UVRGA will perform additional outreach to and survey domestic well owners in the Basin. The survey will be designed to collect information from the well owners about well status (active, backup, abandoned, destroyed), water uses (drinking water, fire protection, landscape, agricultural, etc.), historical well performance, groundwater levels, groundwater quality, well maintenance issues, and whether alternative sources of water are available. This information will be used to further evaluate potential effects on domestic wells relative to the groundwater level minimum thresholds. The first 5-year GSP evaluation will consider this information and the groundwater level minimum thresholds will be updated, if appropriate.

Projects and/or management actions are needed to meet the measurable objective for depletions of interconnected surface water. Two separate actions are needed to address direct and indirect depletions that could potentially cause undesirable results.

Direct ISW depletion by City of Ventura water extraction facilities in the Foster Park Aquatic Habitat Area will be addressed via the "Foster Park Protocols." The Foster Park Protocols consist of operational protocols for the City of Ventura extraction facilities in the Foster Park Aquatic Habitat Area that will address direct depletion of ISW. The Foster Park Protocols involve monitoring river gages and shutting down the City's extraction facilities when certain surface water flow thresholds are reached. The Foster Park Protocols are implemented pursuant to a settlement agreement between the City of Ventura and Santa Barbara Channelkeeper regarding the action titled Santa Barbara Channelkeeper v. State Water

Definitions of Key SGMA Terms

California Water Code

Sec. 10721

Unless the context otherwise requires, the following definitions govern the construction of this part:

(a) Adjudication action means an action filed in the superior or federal district court to determine the rights to extract groundwater from a basin or store water within a basin, including, but not limited to, actions to quiet title respecting rights to extract or store groundwater or an action brought to impose a physical solution on a basin.

(b) Basin means a groundwater basin or subbasin identified and defined in Bulletin 118 or as modified pursuant to Chapter 3 (commencing with Section 10722).

(c) Bulletin 118 means the department's report entitled California's Groundwater: Bulletin 118 updated in 2003, as it may be subsequently updated or revised in accordance with Section 12924.

(d) Coordination agreement means a legal agreement adopted between two or more groundwater sustainability agencies that provides the basis for coordinating multiple agencies or groundwater sustainability plans within a basin pursuant to this part.

(e) De minimis extractor means a person who extracts, for domestic purposes, two acrefeet or less per year.

(f) Governing body means the legislative body of a groundwater sustainability agency.

(g) Groundwater means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but does not include water that flows in known and definite channels.

(h) Groundwater extraction facility means a device or method for extracting groundwater from within a basin.

(i) Groundwater recharge or recharge means the augmentation of groundwater, by natural or artificial means.

(j) Groundwater sustainability agency means one or more local agencies that implement the provisions of this part. For purposes of imposing fees pursuant to Chapter 8 (commencing with Section 10730) or taking action to enforce a groundwater sustainability plan, groundwater sustainability agency also means each local agency comprising the groundwater sustainability agency if the plan authorizes separate agency action.

(k) Groundwater sustainability plan or plan means a plan of a groundwater sustainability agency proposed or adopted pursuant to this part.

(l) Groundwater sustainability program means a coordinated and ongoing activity undertaken to benefit a basin, pursuant to a groundwater sustainability plan.

(m) In-lieu use means the use of surface water by persons that could otherwise extract groundwater in order to leave groundwater in the basin.

(n) Local agency means a local public agency that has water supply, water management, or land use responsibilities within a groundwater basin.

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Ventura River Water District (VRWD)

VRWD is a small water district that supplies water to the area stretching from the southwestern edge of the City of Ojai down to the northern half of Oak View, and in the eastern half of Casitas Springs. VRWD serves a population of approximately 6,000 via approximately 2,150 service connections. Groundwater is VRWD's primary water supply source. VRWD also purchases surface water from CMWD, both as a backup source and as a regular source for customers in certain portions of the VRWD service area. VRWD was established in 1957 as a special district under State law, which gives authorization to exercise water supply and water management authority within its jurisdiction.

2.2 Description of Plan Area [§354.8]

This section provides a description of the plan area, including a summary of jurisdictional areas and existing water-resources monitoring and management programs in the Basin.

2.2.1 Summary of Jurisdictional Areas and Other Features [§354.8(a)(1),(a)(2),(a)(3),(a)(4),(a)(5), and (b)]

§354.8 Description of Plan Area. *Each Plan shall include a description of the geographic areas covered, including the following information:*

(a) One or more maps of the basin that depict the following, as applicable:

(1) The area covered by the Plan, delineating areas managed by the Agency as an exclusive Agency and any areas for which the Agency is not an exclusive Agency, and the name and location of any adjacent basins.

(2) Adjudicated areas, other Agencies within the basin, and areas covered by an Alternative.

(3) Jurisdictional boundaries of federal or state land (including the identity of the agency with jurisdiction over that land), tribal land, cities, counties, agencies with water management responsibilities, and areas covered by relevant general plans.

(4) Existing land use designations and the identification of water use sector and water source type.

(5) The density of wells per square mile, by dasymetric or similar mapping techniques, showing the general distribution of agricultural, industrial, and domestic water supply wells in the basin, including de minimis extractors, and the location and extent of communities dependent upon groundwater, utilizing data provided by the Department, as specified in Section 353.2, or the best available information.

(b) A written description of the Plan area, including a summary of the jurisdictional areas and other features depicted on the map.

The geographic area covered by this GSP and managed by UVRGA includes the entire UVRGB (Department of Water Resources Basin 4-3.01) as defined by DWR Bulletin No. 118, "California's Groundwater," Update 2020 (DWR, 2020). The extent of UVRGB is shown on Figure 2.1-01. The Basin is located in the central portion of the Ventura River Watershed along the Ventura River near the communities of Casitas Springs, Mira Monte, and Meiners Oaks. The UVRGB is bordered by the Ojai and Lower Ventura River Groundwater Basins to the east and south, respectively (DWR Basin Nos. 4-002 and 4-003.02). No groundwater basins exist immediately west and north of UVRGB. The Ojai Basin is managed by the Ojai Basin Groundwater Management Agency (OBGMA). OBGMA is developing a GSP for the Ojai Basin. The Lower Ventura River Basin is a very low priority basin and is therefore not subject SGMA requirements.

Jurisdictional boundaries of various agencies located within UVRGA are depicted on Figure 2.1-02 and

Ventura River Watershed Adjudication (titled Santa Barbara Channelkeeper v. State Water Resources Control Board and the City of San Buenaventura (Los Angeles County Superior Court, Case No. 19STCP01176)

In 2014, Santa Barbara Channelkeeper filed a lawsuit against the City of Ventura and the State of California related to the balance between human and non-human use of the Watershed (Appendix D). Specifically, Channelkeeper asserted that the City's use of water from the Foster Park area (located within the UVRGB) violated the Reasonable Use Doctrine because the City's municipal use was harming the Southern California Steelhead. Ultimately, the Court of Appeal held that the reasonableness of the City's use had to be measured against all other users of the Watershed, and therefore allowed the City to bring into the lawsuit everyone currently extracting or who could extract water from the system in the future (cross-complaint).

In 2019, the City of Ventura entered into a settlement agreement with Santa Barbara Channelkeeper that includes certain flow and non-flow measures. The settlement agreement was executed in September 2019 and amended in August 2020. The flow measures are known as the "Foster Park Protocols" and involve monitoring river gages and shutting down the City's extraction facilities when certain surface water flow thresholds are reached. The Foster Park Protocols are relevant to this GSP because they contribute to addressing one of the six SGMA sustainability indicators: depletions of interconnected surface water. The Foster Park Protocols address direct depletion of the Ventura River by the City of Ventura's Foster Park water extraction facilities.

In 2020, certain adjudication parties developed a proposed physical solution to settle the cross-complaint. The proposed physical solution seeks to address the habitat conditions for the Steelhead population in order to return the habitat to good condition, and then maintain it. The Foster Park Protocols are a component of the proposed physical solution. The proposed physical solution has not yet been considered by the Court.

A future judgment will likely include aspects relevant to implementation of the GSP. There is no definitive timeline for a judgment. UVRGA will monitor, and to the extent possible, coordinate with the adjudication process during GSP implementation. Note that UVRGA is not a party to the lawsuit.

2.2.2.3 Conjunctive Use Programs [§354.8(e)]

§354.8 Description of Plan Area. *Each Plan shall include a description of the geographic areas covered, including the following information:*
(e) A description of conjunctive use programs in the basin.

Conjunctive use is a term used to describe the coordinated use of both surface water and groundwater resources. There are no formal conjunctive use programs in the Basin, although it is noted that MOWD and VRWD ~~and~~ operate their wells conjunctively with Lake Casitas surface water supplies. MOWD and VRWD rely principally on groundwater from UVRGB and increasingly utilize surface water from CMWD during dry periods when well yields decline. Variable groundwater pumping rates for MOWD and VRWD were incorporated into the water budgets for this GSP.

Groundwater is MOWD's primary water supply source. Water from CMWD is used as backup, such as during extended drought periods. MOWD was formed in 1948 as a special district under State law, which authorizes it to exercise water supply and water management authority within its jurisdiction. MOWD is a signatory member to the JPA Agreement forming the Agency and is represented on the Agency's Board of Directors.

- Ventura River Water District (VRWD) is a small water district that supplies water to the area stretching from the southwestern edge of the City of Ojai down to the northern half of Oak View, and in the eastern half of Casitas Springs. VRWD serves a population of approximately 6,000 via approximately 2,150 service connections. Groundwater is VRWD's primary water supply source. CMWD water is also used, both as a backup source and as a regular source for customers in some locations. VRWD is a signatory member to the JPA Agreement forming the Agency and is represented on the Agency's Board of Directors.
- Ventura Water (City of San Buenaventura) does not operate a public water system within the Basin boundary but operates wells in the southern portion of the Basin that supply its public water system in the City, which is located approximately 4 miles south of the Basin. The City of San Buenaventura is a signatory member to the JPA Agreement forming the Agency and is represented on the Agency's Board of Directors.

- **Local Land Use Planning Agencies:**
  - The County of Ventura has land use planning authority on unincorporated land overlying the Basin (Figure 2.2-01). The County is a signatory member to the UVRGA JPA Agreement and is represented on the Agency's Board of Directors.
  - The City of Ojai has land use planning authority over a small area (0.75 square miles) in the eastern corner the Basin (Figure 2.2-01). Implementation of the City of Ojai General Plan is expected to have a negligible effect on GSP implementation in the UVRGB because of the limited area within the Basin and because the overlap area and is not considered a primary groundwater recharge area due to the presence of shallow bedrock of the Sespe Formation or Ojai Conglomerate (Figure 3.1-25).
  - The City of San Buenaventura has land use planning authority in a small area (0.13 square miles) of land owned by the City in the southern part of the Basin (Figure 2.2-01). The City is a signatory member to the UVRGA JPA Agreement and is represented on the Agency's Board of Directors.
- **Environmental Users of Groundwater:** Riparian and aquatic habitats in the Basin also rely on groundwater and are referred to as groundwater dependent ecosystems (GDEs) in SGMA.

Two riparian GDE units were identified in the Basin: (1) South Santa Ana GDE Unit and (2) Foster Park GDE Unit. The riparian GDE units consist primarily of mixed hardwood and wetland habitats that are federally designated critical habitat for multiple species and support a number of other special status species.

Five Aquatic GDE areas were identified in areas of the Basin, although only two were determined to be susceptible to potential significant and unreasonable effect related to depletion of interconnected surface water by groundwater extractions. These two areas are the (1) Confluence Aquatic Habitat Area and (2) Foster Park Aquatic Habitat Area. The Confluence Habitat Area occurs in the southern portion of the Basin near the confluence of the Ventura River with San Antonio Creek. This habitat area is characterized by upwelling groundwater and

surface water are intimately interconnected in the Basin. The groundwater budget and flow conditions in the alluvial aquifer are dominated by interaction with the Ventura River, which provides most of the recharge (inflows) to the Basin as stream flow percolation in the northern portion of the Basin and receives most of the discharge (outflows) from the Basin as down valley groundwater flow that feeds springs (i.e., groundwater discharge) in the Ventura River in the southern portion of the Basin (hence, the name of the community of Casitas *Springs*). Groundwater extractions are secondary to groundwater discharge to the Ventura River except during dry periods when the spring flows decrease substantially due to low Ventura River stream flow entering the northern end of the Basin.

The thinness of the aquifer, high permeability, large north-south topographic gradient, and intimate interconnection between groundwater and surface water causes UVRGB to behave materially different than most groundwater basins in the State. The Basin groundwater levels and storage trends closely mimic surface water flows, with groundwater levels and storage exhibiting large and rapid fluctuations relative to the total saturated thickness and total groundwater storage, more so than perhaps any other groundwater basin in the State. During non-drought periods, the Basin fills up on the order of two out of every three years and significant surface water base flow is sustained by rising groundwater in the southern part of the Basin. During droughts, much of the Basin groundwater storage drains out naturally to the Ventura River within the first few years causing a significant decrease in Ventura River base flow in the lower part of the Basin.

To facilitate discussion within the GSP, the Basin has been subdivided into six hydrogeologic areas based on the hydrogeology, stratigraphy, and primary recharge and discharge processes (Figure 3.1-01 and discussed in detail in Sections 3.1.1 and 3.1.3). For ease of discussion, the text will refer to these areas in the following sections. Four of the hydrogeologic areas– the Kennedy, Robles, Santa Ana and Casitas Springs Areas – run north to south along the Ventura River corridor and were delineated primarily based on groundwater-surface water interaction characteristics. The Mira Monte/Meiners Oaks Area located east of the Ventura River underlain by older alluvium that generally above the water table; many wells in this area are believed to extract groundwater from bedrock formations such as the Ojai Conglomerate that do not have significant hydraulic connectivity with the Ventura River. The groundwater-bearing formations in the Mira Monte/Meiners Oaks Area have much lower permeability compared to the younger deposits along the Ventura River. The Terraces Area west of the Ventura River consists of alluvial deposits that are elevated above and separated from the Ventura River floodplain by bedrock; therefore, groundwater in the Terraces Area has very limited hydraulic connection with the rest of the Basin.

3.1.1 Regional Hydrology

3.1.1.1 Precipitation, Topography and Watershed Boundary [§354.14(d)(1)]

§354.14 Hydrogeological Conceptual Model.
(d) Physical characteristics of the basin shall be represented on one or more maps that depict the following:
(1) Topographic information derived from the U.S. Geological Survey or another reliable source.

The UVRGB is located within the Ventura River Watershed and lies under and adjacent to the northern part of the Ventura River. The Ventura River Watershed encompasses about 227 miles in northwest Ventura County with a small portion of the watershed in the southeastern edge of Santa Barbara County (Figure 3.1-02). The Ventura River runs through the center of the watershed, draining numerous

water storage capacity to less than 500 AF (USBR, 2000; Entrix, 2001). The removal of the dam was authorized in 1998, but removal is still pending.

Casitas Reservoir is the largest reservoir within the watershed. The Casitas Dam was constructed in 1959 by the United States Bureau of Reclamation (USBR), providing a maximum storage capacity of ~~254,000~~ AF (Entrix, 2001) with a long-term average demand of 17,500 AF (VRWC, 2015). Water is diverted from the Ventura River via the Robles Diversion and delivered to the reservoir through the Robles Diversion Canal, a concrete-lined 5.4-mile canal (EDAW, 1978). The diversion works consist of a cutoff wall, forebay basin, spillway, fish passage structures, and diversion canal to Casitas Reservoir (CMWD, 2005). Typically, a little less than half of the reservoir supply comes from the Ventura River. Runoff from Coyote and Santa Ana sub-watersheds provides the remainder of its supply (Entrix, 2001). Diversions from Ventura River to Casitas Reservoir are typically from January to March when the river flows are sufficient to meet certain operational regulatory requirements designed to address upstream steelhead migration impediments between the diversion works and just north of the Santa Ana Boulevard bridge. The diversion system has a nominal capacity of 500 cfs (CMWD, 2021). Environmental considerations and physical operating conditions govern operation of the diversion structure under different hydrologic situations. The Biological Opinion (BO) from the National Marine Fisheries Service (adopted in 2004) modified previous requirements for passage of flows for fish habitat. This was further modified during the recent drought to allow increased diversions to the Lake when storage levels in the Lake are low (CMWD, 2021). Within the Migration Period (Jan. 1st to June 30th) outlined in the BO, available flows above 30 cfs up to 500 cfs can be diverted down the Robles Canal, with flows at or below 30 cfs, bypassing the diversion structure and flowing downstream. Additional diversion rules are applied to maintain flows during and after stormflow events within the fish migration season. Outside of the migration period (July 1 to December 31), available flows over 20 cfs up to 500 cfs can be diverted down the Robles Canal.

In addition to the Robles Diversion, there is a privately owned surface water diversion located north of the Robles Diversion (Figure 3.1-08) used for agricultural purposes.

Water from the Lake Casitas Reservoir is the primary water supply for many users in the Basin. Lake Casitas' water is also blended with poorer quality groundwater to improve water quality and extend supplies (VRWC, 2015). The reservoir is carefully managed to maintain supplies during a dry period equivalent to the historical 21-year dry period from 1945 to 1965, the longest dry period on record. While the lake has not yet been put to a "21-year dry period test," it has been a reliable source of water in many multi-year dry periods when numerous wells were dry and there was little flow in the Ventura River (VRWC, 2015).

The Foster Park Subsurface Dam, completed in 1908 by the Ventura County Light and Power Company, is a partial dam extending 973 ft across the Ventura River at a depth ranging between 5 ft to 65 ft with a 300-ft gap on the east side (URS, 2003; USACE, 2004). This partial dam is located just upstream of the boundary between the Upper and Lower Ventura River Groundwater basins. The City of Ventura formerly captured surface flows via a surface diversion. However, this facility has been closed since 2000, due to natural channeling of the Ventura River that has bypassed the structure (Entrix, 2001; VRWC, 2015). The City of Ventura currently extracts water via a subsurface collector consisting of two perforated pipes installed in the subsurface on the upstream side of the dam and several nearby wells (i.e., the "Nye Wells").

3.1.1.3 Imported Water [§354.14(d)(6)]

of the basin (e.g., published geologic maps such as Dibblee, 1987, 1988; and the USGS Earthquake Hazards Program (USGS, 2020). Faulting can offset bedrock and older (deeper) alluvium deposits, potentially form subsurface barriers to water flow, and force groundwater to daylight to ground surface and discharge into surface water channels.

Within this regional setting, the UVRGB extends from just downstream of the confluence of the Matilija Creek and the North Fork Matilija Creek (Ventura River Mile 16.2) to Foster Park (Ventura River Mile 5.9). In the north and west, the UVRGB is bounded by tertiary bedrock outcrops (Figure 3.1-10a). The boundary between the UVRGB and adjacent Ojai Basin is approximately situated between Camp Comfort to the south and Arbolada to the north. South of the Ojai Basin boundary, the UVRGB is bounded by the Arroyo Parida-Santa Ana Fault and bedrock outcrops. The UVRGB is bounded by the Lower Ventura River Groundwater Basin to the south.

Figures 3.1-10a and 3.1-10b show the surface geology and major fault systems within and surrounding the UVRGB (USGS, 2006, 2015). The UVRGB is filled with Quaternary-aged alluvium of largely fluvial origin, with sediment derived from the weathering and erosion of the surrounding mountains. These deposits consist of older late Pleistocene-aged, dissected sediments and younger Holocene-aged sediments. Active sedimentation occurs as stream-channel deposits of sand and gravel, such as along Ventura River and its tributary creeks; alluvial fan deposits of gravel; and floodplain alluvium of clay, silt, sand, and gravel (e.g., Dibblee, 1987, 1988).

The UVRGB extends as a north-south trending narrow and shallow erosional trough, filled with young alluvium deposited by the Ventura River between Camino Cielo Road in the north and the United States Geological Survey (USGS) gauging station at Casitas Vista Bridge in the south. The young alluvial deposits are highly permeable (hydraulic conductivity as high as approximately 3,500 feet per day) and have relatively high storage coefficients (specific yield as high as approximately 14%). North of approximately Highway 150, the young alluvial deposits are typically underlain by older alluvium that has significantly lower permeability and water storage capabilities. South of approximately Highway 150 the Ventura River ~~may~~ has eroded completely through the older alluvium deposits and the young alluvial deposits are in direct contact with the bedrock (as evidenced from the bedrock outcrops along the edges of the river floodplain).

The eastern portion of the UVRGB extends east from the Ventura River encompassing the communities of Meiners Oaks and Mira Monte and is underlain by older alluvium deposits that are generally above the water table and various bedrock formations which have limited hydraulic connectivity with the Ventura River. Many wells in the Mira Monte – Meiners Oaks Area may be screened in the Ojai Conglomerate, a bedrock formation that has low permeability and water storage capability (for example, the hydraulic conductivity at the new VRWD Well No. 6 was estimated to be ~3 ft/day compared to hydraulic conductivity along the Ventura River of >1,000 ft/day). The "Terrace" areas west of the Ventura River is also underlain by older alluvium that is uplifted above the regional water table and, hence, is largely hydraulically disconnected from the principal aquifer of the Basin. Wells in the Terrace Area appear to generally draw water from the underlying Sespe Formation.

The relatively young (Holocene- to late Pleistocene-aged) surficial sediments unconformably overlie older Pleistocene- and Tertiary-aged consolidated sedimentary rocks (discussed in more detail in Section 3.1.3.1 and shown on cross-sections in Figures 3.1-16 through 3.1-18). The older bedrock units consist of sedimentary rocks of dominantly marine deposition, which are exposed to ground surface in the mountainous regions that surround the basins (e.g., Dibblee, 1987; USGS, 2006, 2015).

indicating that these samples may have been collected from wells that produce groundwater from a bedrock formation. Groundwater from the well in the Terraces Area has a sodium-chloride type (and total dissolved solids [TDS] >5,000 milligrams per liter [mg/L]), which is representative of older groundwater. Given the relatively unique water type of this well in the Terraces Area, the geochemistry suggests this area has a low degree of hydraulically connectivity with the remainder of the UVRGB.

Groundwater Quality

The UVRGB has historically maintained generally good water quality. The Regional Water Quality Control Board's Basin Plan also establishes groundwater quality "objectives" as "the allowable limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area" (RWQCB-LA, 2019). The groundwater quality objectives are shown in the Table 3.1-02.

Figures 3.1-27 and 3.1-28 show median concentrations for nitrate (as N) calculated over data available from 1975 to 2019 (long-term) and data available from 2008 to 2019 (recent), respectively. Chemographs for select wells with good temporal data coverage are shown for each hydrogeologic area. Wells with median nitrate higher than the water quality objective (10 mg/L as N) are shown in red and labeled. Nitrate concentrations in the Mira Monte/Meiners Oaks Area tend to be the highest, with several wells showing historical and recent nitrates above the water quality objective. Some wells in the Robles Area also show elevated nitrate levels, though these have typically been below the water quality objective. Some of these wells (e.g., 04N23W16C08S) show higher nitrate concentrations during the recent drought (2012-2016), when there was less recharge from fresher quality surface water. Elevated nitrate concentrations in groundwater have been found in areas of Tico Road and Mira Monte, as well as the northern portion of the Robles Area, where several sources including equestrian facilities, fertilizing operations, and septic systems may contribute to the nutrient loading in these areas (DBSA, 2010b). Nitrate concentrations in the Kennedy, Santa Ana, and Casitas Springs areas tend to be low and well below the water quality objective. Note that there is sparse data available in recent years in the Santa Ana Area.

Previous investigations have reported that TDS concentrations from public supply wells within the Basin range from about from 500 to 1240 mg/L, with an average of about 700 mg/L (DWR, 2003). Figures 3.1-29 and 3.1-30 show median concentrations for TDS calculated for the long-term (s-2019) and recent (2008-2019) period of record, respectively. A few wells have median TDS concentrations above the water quality objective, with several wells showing concentrations just below to the water quality objective with a few exceedances in the past. TDS concentrations appear to increase during extended dry periods when there is less recharge of fresher quality surface water.

Figures 3.1-31 and 3.1-32 show median concentrations for sulfate calculated for the long-term (1969-2019) and recent (2008-2019) period of record, respectively. Most wells were below the water quality objective, though several wells had concentrations just below the water quality objective. In general, the lowest observed concentrations are in the Mira Monte/Meiners Oaks Area. Since bedrock contributions are the primary source of sulfates in the water, the relatively lower concentrations in the Mira Monte/Meiners Oaks Area are indicative of older water that has not flowed over or through (fractured) bedrock.

Figures 3.1-33 and 3.1-34 show median concentrations for chloride calculated for the long-term (1975-2019) and recent (2008–2019) period of record, respectively. With one exception, chloride concentrations

Ventura River would improve the understanding and refine the modeling of streamflows and surface-water/groundwater interactions within the UVRGB.

Imported Water [§354.14(d)(6)]

No data gaps or significant uncertainties were identified.

Regional Geology and Structural Setting [§354.14(b)(1), (d)(2)]

No data gaps or significant uncertainties were identified.

Soil Characteristics [§354.14(d)(3)]

No data gaps or significant uncertainties were identified.

Vertical and Lateral Extent [§354.14(b)(2),(b)(3), (c)]

No significant data gaps or uncertainties were identified with respect to the lateral or vertical extent of the Basin.

Groundwater Flow Barriers [§354.14(b)(4)(C) and (c)]

No significant data gaps or uncertainties were identified with respect to lateral groundwater flow barriers in the Basin.

Formation Names and Hydraulic Properties [§354.14(b)(4)(A), (b)(4)(B)]

As noted in Section 3.1.3.1, a few aquifer tests have been reported in the literature. The best available information for aquifer and aquitard hydraulic properties in the UVRGB is from the calibrated numerical flow model (Appendix H). Use of model-derived hydraulic properties values is considered appropriate and, therefore, the lack of aquifer tests results is not considered a significant data gap or uncertainty at this time. Going forward, UVRGA will work with well owners in the Basin to conduct aquifer tests when such opportunities arise, such as when new or replacement wells are constructed. Additional wells and aquifer tests closer to the Ventura River will help refine the estimates of hydraulic properties within the Ventura River floodplain.

Groundwater Recharge and Discharge Areas [§354.14(d)(4)]

The primary locations of groundwater recharge and discharge are adequately identified in the GSP and are not a data gap. It is acknowledged that there is considerable variability in the extents of the recharge and discharge areas over time.

Water Quality [§354.14(b)(4)(D)]

The northern ⅔ of the Mira Monte/Meiners Oaks Area has sparse groundwater quality data. However, there is very little groundwater production in this Area (and much of the area has shallow our outcropping bedrock), so this is not considered to be a significant data gap or uncertainty in the HCM.

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GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

October 5, 2021

Via Electronic Mail and Online Submission

Mr. Bryan Bondy, PG, CHG
Executive Director
Upper Ventura River Groundwater Agency
c/o Meiners Oaks Water District
202 W. El Roblar Dr.
Ojai, CA 93023
BBondy@uvrgroundwater.org

Subject: Comments on the Upper Ventura River Groundwater Agency Draft Groundwater Sustainability Plan

Dear Mr. Bondy:

The California Department of Fish and Wildlife (CDFW) appreciates the opportunity to provide comments on the Upper Ventura River Groundwater Agency's (UVRGA) Draft Groundwater Sustainability Plan (Draft GSP) prepared pursuant to the Sustainable Groundwater Management Act (SGMA).

As trustee agency for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species. (Fish & Game Code §§ 711.7 and 1802.)

Development and implementation of groundwater sustainability plans (GSPs) under SGMA represents a new era of California groundwater management. CDFW has an interest in the sustainable management of groundwater, as many sensitive ecosystems, species, and public trust resources depend on groundwater and interconnected surface waters (ISWs), including ecosystems on CDFW-owned and managed lands within SGMA-regulated basins.

SGMA and its implementing regulations afford ecosystems and species specific statutory and regulatory consideration, including the following as pertinent to GSPs:

- GSPs must **consider impacts to groundwater dependent ecosystems** (GDEs) (Water Code § 10727.4(l); see also 23 CCR § 354.16(g));
- GSPs must consider the interests of all beneficial uses and users of groundwater, including environmental users of groundwater (Water Code § 10723.2) and GSPs must **identify and consider potential effects on all beneficial uses and users of groundwater** (23 CCR §§ 354.10(a), 354.26(b)(3), 354.28(b)(4), 354.34(b)(2), and 354.34(f)(3));
- GSPs must **establish sustainable management criteria that avoid undesirable results** within 20 years of the applicable statutory deadline, including **depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water** (23 CCR § 354.22 *et seq*. and Water

Code §§ 10721(x)(6) and 10727.2(b)) and describe monitoring networks that can identify adverse impacts to beneficial uses of interconnected surface waters (23 CCR § 354.34(c)(6)(D)); and

- GSPs must **account for groundwater extraction for all water use sectors,** including managed wetlands, managed recharge, and native vegetation (23 CCR §§ 351(al) and 354.18(b)(3)).

Furthermore, the Public Trust Doctrine imposes a related but distinct obligation to consider how groundwater management affects public trust resources, including navigable surface waters and fisheries. Groundwater hydrologically connected to surface waters is also subject to the Public Trust Doctrine to the extent that groundwater extractions or diversions affect or may affect public trust uses. (*Environmental Law Foundation v. State Water Resources Control Board* (2018), 26 Cal. App. 5th 844; *National Audubon Society v. Superior Court* (1983), 33 Cal. 3d 419.) The groundwater sustainability agency (GSA) has "an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible." (*National Audubon Society*, *supra*, 33 Cal. 3d at 446.) Accordingly, groundwater plans should consider potential impacts to and appropriate protections for ISWs and their tributaries, and ISWs that support fisheries, including the level of groundwater contribution to those waters.

Individually and collectively, the SGMA statutes and regulations, and Public Trust Doctrine considerations, necessitate that groundwater planning carefully consider and protect environmental beneficial uses and users of groundwater, including fish and wildlife and their habitats, GDEs, and ISWs.

COMMENT OVERVIEW

CDFW supports ecosystem preservation and enhancement in compliance with SGMA and its implementing regulations based on CDFW expertise and best available information and science. The Upper Ventura River Valley Basin (Basin) is rated as a medium priority basin under SGMA with 18.5 priority points. The Basin is adjacent to the Ojai Valley basin, which is rated as high priority with 22.5 priority points. The Basin is upstream of the Lower Ventura River Basin, which is rated as very low priority with zero priority points. These three basins are located within the larger Ventura River watershed. CDFW offers the following comments and recommendations below to assist the Upper Ventura River Groundwater Agency (UVRGA) in identifying and evaluating impacts on biological resources, including GDEs within the adjacent groundwater basins. Additional suggestions are included for UVRGA's consideration during revisions of the Draft GSP.

COMMENTS AND RECOMMENDATIONS

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Comment #1: Data Gaps Exist in the Hydrologic Conceptual Model (HCM) (Introduction to Sustainable Management Criteria of the UVRGA-Draft GSP, Section 4.1, starting on p. 92)

Issue: CDFW appreciates the efforts the UVRGA undertook to analyze the Basin's geologic and hydrogeologic characteristics. CDFW also appreciates UVRGA's proposed plans to utilize the updated HCM to fill in the data gaps and deficiencies identified in the Draft GSP. However, CDFW's understanding is that the Draft GSP does not account for the wide range of hydraulic connectivity and transmissivity values across the Basin, nor does it set forth a reasonable pathway to address gaps in the data sets for these values. For example, the draft plans of the

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HCM for Sections 3.1 and 3.2 stated that some of the aquifer information was obtained from available driller logs and short-term pumping tests, which are not likely to provide a complete and accurate data set for assessing aquifer parameters.

Recommendation #1: Accurate hydrogeologic modeling requires an accurate and complete data set. CDFW recommends that the GSA expand the area in which it is assessing hydraulic connectivity and transmissivity values to ensure the model contains representative conditions across the Basin. Furthermore, the GSA should consider well data with adequate construction and accurate aquifer testing information in its analysis to ensure accurate characterization of hydrogeologic conditions. The Draft GSP should also provide specific model details such as hydraulic connectivity and transmissivity values across the Basin to evaluate the accuracy of the results.

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Comment #2: The GSP Does Not Consider All Riparian Groundwater Dependent Ecosystems in the Basin (Riparian Groundwater Dependent Ecosystems, Section 3.2.7.2.1 of the UVRGA-Draft GSP, starting on p. 66 and Appendix O)

Issue: Page 66 of the Draft GSP states, *"As summarized in the Riparian GDE Assessment Memo (Appendix O), the basin was subdivided into eight areas to screen and evaluate potential riparian GDEs."* The Draft GSP then provides a summary of the areas screened out in Appendix O. This portion of the Draft GSP contains a thorough identification of ecosystems that potentially rely on groundwater, also known as "indicators of groundwater dependent ecosystems" (iGDEs), identifying eight areas within the Basin that were mapped as containing iGDEs. However, the Draft GSP concludes that only two of these mapped areas are GDEs subject to SGMA requirements and only provides for monitoring of groundwater levels and vegetative health in these two areas. Regarding the excluded areas, the biologists on the UVRGA GSP Development Team concluded that *"…dominant species are unlikely to be groundwater dependent based on their plant biology, known locations of occurrence in other regions, and comparison of rooting depth with groundwater level data and model generated water table contours"* (p. 66). The GSA concludes that iGDEs containing coast live oaks in the Mira Monte/Meiners Oaks and Terrace Areas do not qualify as GDEs *"…due to the lack of alluvial groundwater where trees are located. The Coast Live Oaks in these areas are sustained by shallow perched groundwater, bedrock groundwater, or surface water in the associated drainages. In other words, pumping in the UVRGB cannot impact these trees"* (p. 67).

Hydrologic connectivity considerations include connected surface waters, disconnected surface waters, and transition surface waters. CDFW believes that shallow perched groundwater, bedrock groundwater, and surface water can still be connected to groundwater and hydrologic connectivity cannot be ruled out without further analysis. A recent publication by The Nature Conservancy notes that, *"If pumping is concentrated in deeper aquifers, SGMA still requires GSAs to sustainably manage groundwater resources in shallow aquifers, such as perched aquifers, that support springs, surface water, domestic wells, and GDEs…This is because vertical groundwater gradients across aquifers may result in pumping from deeper aquifers to cause adverse impacts onto beneficial users reliant on shallow aquifers or interconnected surface water."* (TNC 2019.)

If hydrologic connectivity exists between a terrestrial or aquatic ecosystem and groundwater, then that ecosystem is a potential GDE and must be identified in a GSP. (23 CCR § 354.16 (g).) Therefore, hydrologic connectivity between surface water and groundwater, as well as groundwater accessibility to terrestrial vegetation, must be evaluated carefully. Accurate

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identification and consideration of GDEs is also essential to assess whether the GSA has complied with the requirement to avoid significant and unreasonable adverse impacts to beneficial uses of surface water, including aquatic ecosystems reliant on interconnected surface water. (Water Code § 10721(x)(6).)

Recommendation #2(a): CDFW recommends the final GSP provide a more detailed assessment of the eight areas within the Basin that were mapped as iGDEs to determine whether they qualify as GDEs. Conclusions regarding the presence of GDEs needs to be well-supported. CDFW also recommends considering best available GDEs-related data and information when conducting this analysis. Specifically, the GSA should consider the best scientific data on depth to groundwater in its analysis of ISWs, USGS data on mapped springs/seeps, and a comparison of recent groundwater level contours to vegetation root zones. CDFW believes the shallow perched aquifer and shallow alluvial aquifer, although rarely used for water supply, likely support GDEs and should be analyzed further in the Draft GSP. Groundwater within the shallow perched and alluvial aquifers is likely critical to supporting "ecological communities or species" within the Basin. (23 CCR § 351(m).) CDFW recommends using Normalized Difference Vegetation Index (NDVI) and Normalized Difference Moisture Index (NDMI) to assess habitat health for all eight iGDE areas on an annual basis.

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Recommendation #2(b): If the GSA's revised analysis indicates that additional iGDEs qualify as GDEs under SGMA, the Draft GSP's sustainable management criteria should be revised to facilitate appropriate and timely monitoring and management response actions for all beneficial users within or supported by these GDEs. These GDEs should be monitored for groundwater levels and vegetative health to account for and mitigate potential adverse impacts to these GDEs from new production wells or expanded production from existing wells. The Draft GSP states that in non-drought periods, the Basin can fill up on the *"order of two out of every three years and significant surface water base flow is sustained by rising groundwater in the southern part of the basin"* (p. 31). This "flashy" behavior can provide recharge for the shallow alluvial aquifer and perched zones that may support GDEs. Considering this interconnection, GDEs should be carefully monitored, and groundwater pumping should be responsibly managed to avoid damaging consequences to GDEs.

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Recommendation #2(c): CDFW does not recommend relying solely on soils information to assess the presence of GDEs. For example, the presence of sandy, dry, and friable soils does not mean that existing plant species do not rely on groundwater for some portion of their life cycle. Capillary fringe associated with root networks from native plants could be accessing groundwater from deeper depths.

Recommendation #2(d): CDFW recommends the final GSP develop sustainable management criteria for all areas of ISWs and GDEs within the Upper Ventura River Basin GSP.

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Comment #4: The GSP Minimum Thresholds and Measurable Objectives for Interconnected Surface Waters Depletion Do Not Account for the Best Available Science

Issue: The Draft GSP relies on the Hopkins Study (2013) and Padre Study (2012) to establish minimum thresholds and measurable objectives for the depletion of ISWs in the Foster Park Habitat Area (Page – ES-xiv, Draft GSP.) The Draft GSP indicates these two studies represent the *"best available science for establishing significant and unreasonable interconnected surface water depletion effects in the Foster Park Habitat Area"* because they *"identify flow conditions that may indicate the onset of potential significant and unreasonable effects applicable under*

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SGMA" and are *"based on direct observations of site-specific flow and habitat conditions in the Foster Park area.*" The Draft GSP indicates that CDFW's Draft Instream Flow Recommendations (2021) (Draft Recommendations) and National Marine Fisheries Service (NMFS) Draft Biological Opinion for Foster Park Wellfield (2007) (Foster Park Draft BO) are not on point for this analysis because they do not identify a threshold for significant and unreasonable effects based on groundwater pumping, but rather contain "*surface flow recommendations or requirements to maintain optimal habitat conditions for steelhead*." (p. 129.)

CDFW believes that the Draft GSP mischaracterizes CDFW's Draft Recommendations and the Foster Park Draft BO as protecting only "optimal" conditions for steelhead. CDFW also disagrees that the Draft Recommendations and Foster Park Draft BO are not relevant to determining appropriate sustainability criteria to avoid unreasonable adverse impacts to beneficial users of ISWs. The CDFW Draft Recommendations were designed to protect the federal Endangered Species Act (FESA) listed Southern California steelhead (*Oncorhynchus mykiss;* Steelhead) passage and habitat for spawning and rearing, as well as supporting ecological function in the lower Ventura River. CDFW's Lower Ventura Draft Recommendations were largely based on direct measurements and modeling of site-specific flow and habitat conditions, particularly in the summer months. Groundwater pumping has the potential to draw down surface flows, which may lead to inadequate depths for Steelhead passage or reduced habitat for steelhead spawning and rearing. This draw-down may constitute a significant and unreasonable effect on beneficial users, including Steelhead.

Recommendation #4(a): CDFW recommends that the Draft GSP utilize the best available information and science to develop appropriate minimum thresholds and measurable objectives for ISW depletion. Specifically, CDFW recommends that the UVRGA account for CDFW's Draft Recommendations and any subsequent updates to this document. CDFW's Draft Recommendations encompass the areas identified in the Draft GSP as Casitas Springs Area (known as Ventura Reaches 3 & 4 in CDFW's Draft Recommendations). CDFW's Draft Recommendations represent the best available science regarding flows needed to support a range of life stage needs for Steelhead, including the following:

- Passage and habitat during the spawning season from December to May
- Low-flow habitat from June to October
- Fall pulse flows in October through December and varying peak flows from January through May.

Thus, the Draft Recommendations should be used to inform the development of sustainable management criteria needed to avoid ISW depletions that may have significant and unreasonable effects on Steelhead and other beneficial users, as required under SGMA.

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Recommendation #4(b): The Foster Park Draft BO recommends a minimum maintenance flow of 11-12 cfs at the Foster Park gage (USGS 1118500) to allow for improved growth and survival of juvenile Steelhead. Although the Foster Park Draft BO has not yet been imposed as a binding regulatory requirement in the Ventura River, its scientific information can still be relevant to understanding current environmental circumstances and conditions. CDFW recommends that the final GSP consider NMFS's recommended minimum maintenance flow of 11-12 cfs at the Foster Park gage when establishing thresholds to avoid significant and unreasonable ISW depletions.

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Comment #5: Evaluation of Multiple Minimum Thresholds

Issue: According to UVRGA, the Evaluation of Multiple Minimum Thresholds (23 CCR §354.26(c)) is not applicable because only one minimum threshold is established for the ISW depletions sustainability indicator. CDFW disagrees with this conclusion. Because multiple areas within the Basin have ISWs, it is appropriate to have more than one minimum threshold for the ISW sustainability indicator. Areas of ISWs that overlap with GDEs support various fish and wildlife resources. The Upper Ventura River is designated critical habitat for Steelhead and contains important Steelhead spawning and rearing habitat in Southern California. Species including Steelhead, the FESA-listed and California Endangered Species Act (CESA) listed least Bell's vireo (*Vireo bellii pusillus*), and the FESA- and CESA-listed southwestern willow flycatcher (*Empidonax traillii extimus*) utilize the various habitats identified in the draft GSP as wetland and riverine features.

Steelhead have a range of life cycle needs that require multiple minimum thresholds. Excessively high-water temperatures in the spring, summer, and early fall reduce available juvenile Steelhead rearing habitat. Low flows in the fall and winter can delay adult Steelhead passage to critical spawning areas. Steelhead also need passage flows during the spawning season of December-May, ecological baseflows for the low flow months of June-October, and Steelhead habitat optimum flows for the transition month of November. Multiple minimums thresholds throughout the year are needed to provide monthly flows to support Steelhead.

Recommendation #5(a): CDFW proposes that the final GSP incorporate Recommendations #4(a) and #4(b).

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Recommendation #5(b): The NMFS 2007 BO for the Robles Diversion Fish Passage Facility (Robles Diversion BO) states that during the fish passage augmentation season (January 1-June 30), bypass flows of at least 30 cfs are required at the Robles Diversion. The Robles Diversion BO also states that "the minimum flow rate providing successful steelhead migration through the lower river is 50 cfs. Therefore, downstream released flows at the diversion must be maintained at or above 50 cfs during the first 10 days of each migratory storm event (i.e., storms generating flows 150 cfs or greater, as measured at the Robles Diversion)" (p. 7). To augment these stream flows, "storm events during the months of January through June are considered potential migration events if the resulting peak discharge rate (a) exceeds 149 cfs as measured at the Robles Diversion, and (b) results in at least double the flow of any of the three days preceding the storm peak" (p. 6). Steelhead take is not anticipated with the minimum 30-50 cfs recommended by NMFS. CDFW recommends the GSA consider NMFS's recommendation of minimum flows of 30-50 cfs at the Robles Diversion Facility when developing minimum thresholds and measurable objectives to avoid ISW depletions that would have significant and unreasonable adverse impacts on Steelhead and other beneficial users of surface water.

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Recommendation #5(c): On August 31, 2021, the State Water Resources Control Board (SWRCB) released a Preliminary Draft version of the Groundwater-Surface Water Model of the Ventura River Watershed. This integrated groundwater-surface water model quantifies the relationship between surface flow, subsurface flow, and instream flow requirements in the Ventura River, including areas within the Basin. CDFW recommends incorporating the model's data and simulation results into the final GSP.

ADDITIONAL COMMENTS AND RECOMMENDATIONS

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Comment #6: Additional Sensitive Species and Habitats: Southwestern pond turtle (*Actinemys pallida*) was designated as a California Species of Special Concern (SSC) in 1994 and is known to occur throughout the Ventura River watershed, especially in the Casitas Springs area. Southwestern pond turtle's preferred habitat is permanent ponds, lakes, streams, or permanent pools along intermittent streams associated with standing and slow-moving water. A potentially important limiting factor for the southwestern pond turtle is the relationship between water level and flow in off-channel water bodies, which can both be affected by groundwater pumping.

California red legged frog (*Rana draytonii*) is FESA-listed and is considered a California SSC. It is rarely encountered far from permanent water. Tadpoles require water for at least three or four months while completing their aquatic development. Adults eat both aquatic and terrestrial invertebrates, and the tadpoles graze along rocky stream bottoms. Groundwater pumping that impairs streamflow could have negative impacts on California red-legged frog populations in the Confluence Aquatic Habitat Area and the northernmost portion of the Kennedy Area in the Draft GSP.

Other wildlife resources designated as SSCs that could be substantially adversely affected by declining water levels include: coast horned lizard (*Phrynosoma blainvillii*); coast patch-nosed snake (*Salvadora hexalepis virgultea*); California legless lizard (*Anniella spp.*); two-striped gartersnake (*Thamnophis hammondii*); burrowing owl (*Athene cunicularia*).

Proper management of both shallow and deep groundwater pumping combined with reduced surface water pumping and diverting would ensure that beneficial users in the Basin are not negatively impacted. Unsustainable use of groundwater can impact the shallow aquifers and ISWs on which species and GDEs rely, potentially resulting in adverse impacts to fish and wildlife. Determining the relationship between groundwater levels and surface water flows in the Basin will inform how the groundwater levels may be associated with the health and abundance of riparian vegetation. Poorly managed groundwater pumping and ISW flows have the potential to reduce the abundance and quality of riparian vegetation, reducing the amount of shade provided by the vegetation, and ultimately leading to increased water temperatures in the Basin.

Additionally, shallow groundwater levels near interconnected surface waters should be monitored to ensure that groundwater use is not depleting ISWs and adversely affecting fish and wildlife resources in the Basin.

Recommendation #6(a): CDFW proposes that the final GSP incorporate Recommendation 2(a), 2(b), 2(c), and 2(d) to ensure these species would have their habitats protected into the future. CDFW believes shallow perched aquifers, intermittent surface flows and shallow alluvial aquifers, although rarely used for consumptive water supply, are extremely important to the ecological communities or species that depend on groundwater emerging from all aquifers or from groundwater occurring near the surface within the Basin.

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Recommendation #6(b): CDFW recommends that the UVRGA commit to Arundo *(Arundo donax)* removal in the Upper Ventura River within the Basin to improve groundwater supply and enhance habitat quality for nesting birds. Arundo removal is one example of a project and management action to minimize groundwater overdraft. If groundwater depletion results in reduced streamflow due to ISWs, the nesting and foraging success of the SSC yellow warbler

32 (*Dendroica petechia*), the SSC yellow breasted chat (*Icteria virens*), least Bell's vireo, southwestern willow flycatcher, and other bird species may be diminished due to reduced nesting habitat and food availability.

CONCLUSION

33 CDFW appreciates the opportunity to provide input on the Draft GSP for you to consider as it continues to revise the document. As set forth above, the Draft GSP does not yet comply with the aspects of SGMA statutes and regulations related to fish and wildlife beneficial uses and users of groundwater and interconnected surface waters. CDFW has concerns about data gaps in the HCM, identification and consideration of riparian GDEs, and consideration of CDFW's draft flow recommendations released in February 2021 for the Lower Ventura River. CDFW recommends the UVRGA plan for and engage in responsible groundwater management that minimizes or avoids these impacts to the maximum extent feasible as required under applicable provisions of SGMA and the Public Trust Doctrine, and that the UVRGA address the above comments to avoid a potential 'incomplete' or 'inadequate' GSP determination, as assessed by the Department of Water Resources, for the following reasons derived from regulatory criteria for GSP evaluation:

1. The assumptions, criteria, findings, and objectives, including the sustainability goal, undesirable results, minimum thresholds, measurable objectives, and interim milestones are not reasonable and/or not supported by the best available information and best available science. (CCR § 355.4(b)(1).) (See Comments # 1, 2, 3, 4, and 5);

2. The Draft GSP does not identify reasonable measures and schedules to eliminate data gaps (CCR § 355.4(b)(2).) (See Comments # 1, 2, and 3);

3. The sustainable management criteria and projects and management actions are not commensurate with the level of understanding of the basin setting, based on the level of uncertainty, as reflected in the Draft GSP. (CCR § 355.4(b)(3).) (See Comments # 3, 4 and 5); and,

4. The interests of the beneficial uses that are potentially affected by the use of groundwater in the basin, have not been considered. (CCR § 355.4(b)(4).) (See all comments);

CDFW appreciates the opportunity to provide comments. Additionally, CDFW appreciates UVRGA's continued coordination while UVRGA develops a final GSP. If you have any questions or comments regarding this letter, please contact Steve Slack, Environmental Scientist, at Steven.Slack@wildlife.ca.gov.

Sincerely,

DocuSigned by:
B6E58CFE24724F5...

Erinn Wilson-Olgin
Environmental Program Manager I
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Enclosures (Literature Cited)

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Literature Cited

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October 8, 2021

Upper Ventura River Groundwater Agency
Meiners Oaks Water District
202 W. El Roblar Dr.
Ojai, CA 93023

Submitted via email: bbondy@uvrgroundwater.org

Re: Public Comment Letter for Upper Ventura River Valley Basin Draft GSP

Dear Bryan Bondy,

On behalf of the above-listed organizations, we appreciate the opportunity to comment on the Draft Groundwater Sustainability Plan (GSP) for the Upper Ventura River Valley Basin being prepared under the Sustainable Groundwater Management Act (SGMA). Our organizations are deeply engaged in and committed to the successful implementation of SGMA because we understand that groundwater is critical for the resilience of California's water portfolio, particularly in light of changing climate. Under the requirements of SGMA, Groundwater Sustainability Agencies (GSAs) must consider the interests of all beneficial uses and users of groundwater, such as domestic well owners, environmental users, surface water users, federal government, California Native American tribes and disadvantaged communities (Water Code 10723.2).

As stakeholder representatives for beneficial users of groundwater, our GSP review focuses on how well disadvantaged communities, drinking water users, tribes, climate change, and the environment were addressed in the GSP. While we appreciate that some basins have consulted us directly via focus groups, workshops, and working groups, we are providing public comment letters to all GSAs as a means to engage in the development of 2022 GSPs across the state. Recognizing that GSPs are complicated and resource intensive to develop, the intention of this letter is to provide constructive stakeholder feedback that can improve the GSP prior to submission to the State.

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Based on our review, we have significant concerns regarding the treatment of key beneficial users in the Draft GSP and consider the GSP to be **insufficient** under SGMA. We highlight the following findings:

1. Beneficial uses and users **are not sufficiently** considered in GSP development.
    a. Human Right to Water considerations **are not sufficiently** incorporated.
    b. Public trust resources **are not sufficiently** considered.
    c. Impacts of Minimum Thresholds, Measurable Objectives and Undesirable Results on beneficial uses and users **are not sufficiently** analyzed.

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2. Climate change **is not sufficiently** considered.
3. Data gaps **are not sufficiently** identified and the GSP **needs additional plans** to eliminate them.
4. Projects and Management Actions **do not sufficiently consider** potential impacts or benefits to beneficial uses and users.

Our specific comments related to the deficiencies of the Upper Ventura River Valley Basin Draft GSP along with recommendations on how to reconcile them, are provided in detail in **Attachment A.**

Please refer to the enclosed list of attachments for additional technical recommendations:

Attachment A	GSP Specific Comments
Attachment B	SGMA Tools to address DAC, drinking water, and environmental beneficial uses and users
Attachment C	Freshwater species located in the basin
Attachment D	The Nature Conservancy's "Identifying GDEs under SGMA: Best Practices for using the NC Dataset"
Attachment E	Maps of representative monitoring points in relation to key beneficial users

Thank you for fully considering our comments as you finalize your GSP.

Best Regards,

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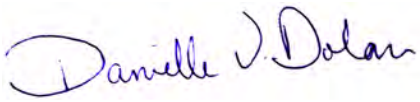

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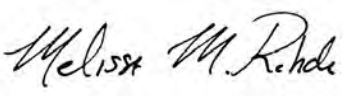

Melissa M. Rohde
Groundwater Scientist
The Nature Conservancy

Attachment A

Specific Comments on the Upper Ventura River Valley Basin Groundwater Sustainability Plan

1. Consideration of Beneficial Uses and Users in GSP development

Consideration of beneficial uses and users in GSP development is contingent upon adequate identification and engagement of the appropriate stakeholders. The (A) identification, (B) engagement, and (C) consideration of disadvantaged communities, drinking water users, tribes, groundwater dependent ecosystems, streams, wetlands, and freshwater species are essential for ensuring the GSP integrates existing state policies on the Human Right to Water and the Public Trust Doctrine.

A. Identification of Key Beneficial Uses and Users

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Disadvantaged Communities and Drinking Water Users

The identification of Disadvantaged Communities (DACs) and drinking water users is **insufficient**. We note the following deficiencies with the identification of these key beneficial users.

- The GSP identifies the community of Casitas Springs as a DAC. The GSP, however, does not show the DAC boundaries on a map or provide the population of the DAC area.
- Appendix E includes the Barbareño-Ventureño Band of Mission Indians as part of the GSA's interested parties list and states that "portions of the Barbareño-Ventureño Band of Mission Indians are located within the UVR Basin." A map of these lands, however, is not provided.
- The GSP fails to provide a density map or location map of domestic wells and their depths (such as minimum well depth, average well depth, or depth range) within the basin.
- The GSP fails to identify the population dependent on groundwater as their source of drinking water in the basin. Specifics are not provided on how much the DAC community relies on a particular water supply (e.g., what percentage is supplied by groundwater).

These missing elements are required for the GSA to fully understand the specific interests and water demands of these beneficial users, and to support the development of sustainable management criteria and projects and management actions that are protective of these users.

RECOMMENDATIONS

- Provide a map of the boundaries of the recognized DAC in the basin. Provide the population of the DAC.
- Provide a map of tribal lands within the basin.
- Include a map showing domestic well locations and average well depth across the basin.
- Identify the sources of drinking water for DAC members, including an estimate of how many people rely on groundwater (e.g., domestic wells, state small water systems, and public water systems).

36

Interconnected Surface Waters

The identification of Interconnected Surface Waters (ISWs) is **insufficient**, due to lack of supporting information provided for the ISW analysis. Based on the ISW section of the GSP (Section 3.2.6) and UVRGB Numerical Model documentation (Appendix H), it appears that a comprehensive analysis of ISWs in the basin was performed. The ISW section of the GSP lacked a clear summary of the locations of groundwater wells and their screen depths used in the analysis, and description of temporal (seasonal and interannual) variability of the data used to calibrate the model. This information should be provided in the GSP to support the conclusions presented.

Figure 3.2-11 (Surface Water Bodies – Hydrologic Conditions) labels sections of the Ventura River as: (1) Losing Reach with Intermittent Groundwater- Surface Water Interconnection, (2) Losing Reach with Generally Disconnected Groundwater- Surface Water, (3) Variably Losing or Gaining Reach with Intermittent Groundwater- Surface Water Interconnection, and (4) Gaining Reach with Generally Interconnected Groundwater - Surface Water. We recommend that these labels are clarified in the text so it is more clear which stream segments are retained as ISWs or potential ISWs in the GSP.

RECOMMENDATIONS

- Describe the legend labels used on Figure 3.2-11 in the GSP text to make clear which stream segments are retained as ISWs or potential ISWs in the GSP.
- Further describe the groundwater elevation data and stream flow data used in the ISW analysis. Ensure depth-to-groundwater data from multiple seasons and water year types (e.g., wet, dry, average, drought) are used to determine the range of depth and capture the variability in environmental conditions inherent in California's climate.
- Overlay the stream reaches shown on Figure 3.2-11 with depth-to-groundwater contour maps to illustrate groundwater depths and the groundwater gradient near the stream reaches. Show the location of groundwater wells used in the analysis.
- For the depth-to-groundwater contour maps, use the best practices presented in Attachment D. Specifically, ensure that the first step is contouring groundwater elevations, and then subtracting this layer from land surface elevations from a Digital Elevation Model (DEM) to estimate depth-to-groundwater contours across the landscape. This will provide accurate contours of depth to groundwater along streams and other land surface depressions where GDEs are commonly found.
- Describe data gaps for the ISW analysis in the ISW section, in addition to the discussion in Sections 3.1.4 (Data Gaps and Uncertainty). On Figure 3.2-11, include reaches with data gaps as potential ISWs.

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Groundwater Dependent Ecosystems

The identification of Groundwater Dependent Ecosystems (GDEs) is **insufficient**. The GSP took initial steps to identify and map GDEs using the Natural Communities Commonly Associated with Groundwater dataset (NC dataset) and other sources. However, we found that mapped features in the NC dataset were improperly disregarded, as described below.

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- NC dataset polygons were incorrectly removed based on the assumption that they are supported by the shallow, perched water table. However, shallow aquifers that have the potential to support well development, support ecosystems, or provide baseflow to streams are principal aquifers[1], even if the majority of the basin's pumping is occurring in deeper principal aquifers. If there are no data to characterize groundwater conditions in the shallow principal aquifer, then the GDE should be retained as a potential GDE and data gaps reconciled in the Monitoring Network section of the GSP.
- NC dataset polygons were incorrectly removed in areas adjacent to irrigated fields due to the presence of surface water. However, this removal criteria is flawed since GDEs, in addition to groundwater, can rely on multiple water sources – including shallow groundwater receiving inputs from irrigation return flow from nearby irrigated fields – simultaneously and at different temporal/spatial scales. NC dataset polygons adjacent to irrigated land can still potentially be reliant on shallow groundwater aquifers, and therefore should not be removed solely based on their proximity to irrigated fields.

We commend the GSA for using depth-to-groundwater data from multiple seasons and water year types to determine the range of depth to groundwater for the GDE analysis. The GSP states that water years 2005, 2010, and 2015 were selected to represent wet, average, and dry precipitation conditions, respectively. We also commend the GSA for including the complete inventory of flora and fauna species and habitat types in the basin's GDEs. Appendices O and P include figures, tables, and descriptions of flora and fauna and a list of special status species with potential to occur in the Upper Ventura River Valley Basin.

RECOMMENDATIONS

- Describe a systematic approach for analyzing the basin's GDEs. For example, provide a map of the NC Dataset. On the map, label polygons retained, removed, or added to/from the NC dataset (include the removal reason if polygons are not considered potential GDEs, or include the data source if polygons are added). Discuss how local groundwater data was used to verify whether polygons in the NC Dataset are supported by groundwater in an aquifer. Refer to Attachment D of this letter for best practices for using local groundwater data to verify whether polygons in the NC Dataset are supported by groundwater in an aquifer.

- Refer to Attachment B for more information on TNC's plant rooting depth database. Deeper thresholds are necessary for plants that have reported maximum root depths that exceed the averaged 30-ft threshold, such as valley oak (*Quercus lobata*). We recommend that the reported max rooting depth for these deeper-rooted plants be used. For example, a depth-to-groundwater threshold of 80 feet should be used instead of the 30-ft threshold, when verifying whether valley oak polygons from the NC Dataset are connected to groundwater. It is important to re-emphasize that actual rooting depth data are limited and will depend on the plant species and site-specific conditions such as soil and aquifer types, and availability to other water sources.

- Provide depth-to-groundwater contour maps, noting the best practices presented in Attachment D. Specifically, ensure that the first step is contouring groundwater elevations, and then subtracting this layer from land surface elevations from a digital elevation model (DEM) to estimate depth-to-groundwater contours across the landscape.

[1] "'Principal aquifers' refer to aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to wells, springs, or surface water systems." [23 CCR §351(aa)]

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- If insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons as "Potential GDEs" in the GSP until data gaps are reconciled in the monitoring network.

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Native Vegetation and Managed Wetlands

Native vegetation and managed wetlands are water use sectors that are required[2,3] to be included in the water budget. The integration of native vegetation into the water budget is **sufficient**. We commend the GSA for including the groundwater demands of this ecosystem in the historical, current and projected water budgets. Managed wetlands are not mentioned in the GSP, so it is not known whether or not they are present in the basin.

RECOMMENDATION

- State whether or not there are managed wetlands in the basin. If there are, ensure that their groundwater demands are included as separate line items in the historical, current, and projected water budgets.

B. Engaging Stakeholders

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Stakeholder Engagement during GSP development

Stakeholder engagement during GSP development is **insufficient**. SGMA's requirement for public notice and engagement of stakeholders is not fully met by the description in the Stakeholder Engagement Plan of the GSP (Appendix E).

The GSP describes outreach to DAC members and environmental stakeholders in the basin. Outreach to these members includes representation of DAC and environmental stakeholders on the GSA's Board of Directors, reserving seats on the Stakeholder Advisory Committee for domestic well owners, newsletters and emails to the interested parties list, social media posts, telephone communications with stakeholders, updates given to the Ventura River Watershed Council, public notices, newspaper articles, and direct outreach to DAC members of the Casitas Springs community. An Ad Hoc Stakeholder Engagement Committee was also formed throughout the GSP process to actively seek input across stakeholders. However, we note the following deficiency with the overall stakeholder engagement process. While tribal stakeholders are mentioned, there is no documentation of tribal consultation to ensure participation in GSP development and implementation processes.

[2] "'Water use sector' refers to categories of water demand based on the general land uses to which the water is applied, including urban, industrial, agricultural, managed wetlands, managed recharge, and native vegetation." [23 CCR §351(al)]

[3] "The water budget shall quantify the following, either through direct measurements or estimates based on data: (3) Outflows from the groundwater system by water use sector, including evapotranspiration, groundwater extraction, groundwater discharge to surface water sources, and subsurface groundwater outflow." [23 CCR §354.18]

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RECOMMENDATION

- In the Stakeholder Engagement Plan, describe active and targeted consultation with tribal governments within the basin during the remainder of the GSP development process and throughout the GSP implementation phase. Refer to Attachment B for guidance on how to consult with tribal governments.

C. Considering Beneficial Uses and Users When Establishing Sustainable Management Criteria and Analyzing Impacts on Beneficial Uses and Users

40

The consideration of beneficial uses and users when establishing sustainable management criteria (SMC) is **insufficient**. The consideration of potential impacts on all beneficial users of groundwater in the basin are required when defining undesirable results[4] and establishing minimum thresholds[5,6]

Disadvantaged Communities and Drinking Water Users

For chronic lowering of groundwater levels, the GSP mentions impacts to drinking water users when defining undesirable results. The GSP does not, however, analyze direct and indirect impacts on DACs or tribes when defining undesirable results, or evaluate the cumulative or indirect impacts of proposed minimum thresholds on these stakeholders.

The GSP starts the degraded water quality SMC section of the GSP with the statement (p. 112): "Significant changes to the degraded water quality SMC are expected before GSP Adoption." The GSP identifies constituents of concern (COCs) in the basin as the following: nitrate, TDS, sulfate, chloride, and boron. The GSP states (p. 116): "The minimum thresholds [Table 4.7-01] were selected be consistent with protection of human health (MCL for nitrate), the Upper Consumer Acceptance Levels (TDS and sulfate), and concentrations that are considered to represent toxicity thresholds for agricultural beneficial uses (chloride and boron)."

The GSP only includes a very general discussion of impacts to drinking water users when defining undesirable results and evaluating the cumulative or indirect impacts of proposed minimum thresholds. The GSP does not, however, mention or discuss direct and indirect impacts on DACs or tribes when defining undesirable results for degraded water quality, nor does it evaluate the cumulative or indirect impacts of proposed minimum thresholds on these stakeholders.

[4] "The description of undesirable results shall include [...] potential effects on the beneficial uses and users of groundwater, on land uses and property interests, and other potential effects that may occur or are occurring from undesirable results." [23 CCR §354.26(b)(3)]
[5] "The description of minimum thresholds shall include [...] how minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests." [23 CCR §354.28(b)(4)]
[6] "The description of minimum thresholds shall include [...] how state, federal, or local standards relate to the relevant sustainability indicator. If the minimum threshold differs from other regulatory standards, the agency shall explain the nature of and the basis for the difference." [23 CCR §354.28(b)(5)]

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RECOMMENDATIONS

Chronic Lowering of Groundwater Levels

- Describe direct and indirect impacts on DACs, drinking water users, and tribes when describing undesirable results for chronic lowering of groundwater levels.
- Consider and evaluate the impacts of selected minimum thresholds and measurable objectives on DACs, drinking water users, and tribes within the basin. Further describe the impact of passing the minimum threshold for these users. For example, provide the number of domestic wells that would be de-watered at the minimum threshold.

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Degraded Water Quality

- Provide an updated Section 4.7 (Degraded Water Quality) for public comment before GSP adoption.
- Describe direct and indirect impacts on DACs, drinking water users, and tribes when defining undesirable results for degraded water quality. For specific guidance on how to consider these users, refer to "Guide to Protecting Water Quality Under the Sustainable Groundwater Management Act."[7]
- Evaluate the cumulative or indirect impacts of proposed minimum thresholds for degraded water quality on DACs, drinking water users, and tribes.

Groundwater Dependent Ecosystems and Interconnected Surface Waters

For the chronic lowering of groundwater level SMC, the GSP states (p. 99): "Details concerning the analysis are provided in the Draft Riparian GDE Assessment Memo (Appendix O). In summary, it was concluded that riparian plant communities have experienced stress during periods of low groundwater levels historically, such as the 2012-2016 drought. However, the available data show that the riparian GDEs rebound following drought periods without a noticeable change in the predominant plant species. It was concluded that if groundwater levels were to remain chronically low for an extended period (beyond that seen in the historic dataset), pumping within the basin could exacerbate the stress on these communities and could potentially cause permanent or prolonged impacts to the riparian GDEs, which may be significant and unreasonable." The GSP sets the minimum thresholds to the historical low groundwater levels at the representative groundwater level monitoring sites. The GSP states (p. 102): "Modeling projections for the GSP suggest that the proposed minimum thresholds may be occasionally exceeded at some monitoring locations (Appendix Q). However, the criterion for undesirable

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results is not predicted to be triggered during the 50-year GSP implementation period." Despite acknowledging the impacts of drought-level groundwater elevations on GDEs, the GSP appears to disregard these impacts when setting the minimum thresholds to the historical low groundwater levels at the representative monitoring sites.

44

Two aquatic habitat areas were identified for consideration in the development of depletion of interconnected surface water SMC, Confluence Aquatic Habitat Area and Foster Park Aquatic Habitat Area. The GSP states (p. 131): "[T]here is insufficient information to assess whether depletion effects in the Confluence Aquatic Habitat Area are significant and unreasonable. SMC for the Confluence Aquatic Habitat Area cannot not be evaluated until these data gaps have been

[7] Guide to Protecting Water Quality under the Sustainable Groundwater Management Act https://d3n8a8pro7vhmx.cloudfront.net/communitywatercenter/pages/293/attachments/original/1559328858/Guide_to_Protecting_Drinking_Water_Quality_Under_the_Sustainable_Groundwater_Management_Act.pdf?1559328858.

44

addressed. The Confluence Aquatic Habitat Area will be revisited prior to the first five-year GSP assessment after addressing the data gaps." However, preliminary SMC should be established now (instead of at the five-year update) using the best available science to avoid significant and unreasonable effects on surface water beneficial users in the basin.

RECOMMENDATIONS

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- Reevaluate the minimum thresholds for impacts to GDEs for the chronic lowering of groundwater level SMC. Set minimum thresholds to levels that avoid 'significant and unreasonable' effects on beneficial users. Potential impacts on environmental beneficial uses and users need to be considered when defining undesirable results[8] in the basin. Defining undesirable results is the crucial first step before the minimum thresholds[9] can be determined.

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- Establish preliminary SMC for depletion of interconnected surface water for the Confluence Aquatic Habitat Area, instead of waiting for the five-year GSP update.

2. Climate Change

45

The SGMA statute identifies climate change as a significant threat to groundwater resources and one that must be examined and incorporated in the GSPs. The GSP Regulations[10] require integration of climate change into the projected water budget to ensure that projects and management actions sufficiently account for the range of potential climate futures.

The integration of climate change into the projected water budget is **insufficient**. The GSP does incorporate climate change into the projected water budget using DWR change factors for 2030 and 2070. However, the GSP does not consider multiple climate scenarios (e.g., the 2070 extremely wet and extremely dry climate scenarios) in the projected water budget. The GSP should clearly and transparently incorporate the extremely wet and dry scenarios provided by DWR into projected water budgets or select more appropriate extreme scenarios for their basins. While these extreme scenarios may have a lower likelihood of occurring, their consequences could be significant, therefore they should be included in groundwater planning.

We acknowledge and commend the inclusion of climate change into key inputs (e.g., precipitation, evaporation, and surface water flow) of the projected water budget. The sustainable yield is calculated based on the projected pumping with climate change incorporated. However, If the water budgets are incomplete, including the omission of extremely wet and dry scenarios, then there is increased uncertainty in virtually every subsequent calculation used to plan for projects, derive measurable objectives, and set minimum thresholds. Plans that do not adequately include climate change projections may underestimate future impacts on vulnerable beneficial users of groundwater such as ecosystems, DACs, and domestic well owners.

[8] "The description of undesirable results shall include [...] potential effects on the beneficial uses and users of groundwater, on land uses and property interests, and other potential effects that may occur or are occurring from undesirable results". [23 CCR §354.26(b)(3)]

[9] The description of minimum thresholds shall include [...] how minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests." [23 CCR §354.28(b)(4)]

[10] "Each Plan shall rely on the best available information and best available science to quantify the water budget for the basin in order to provide an understanding of historical and projected hydrology, water demand, water supply, land use, population, climate change, sea level rise, groundwater and surface water interaction, and subsurface groundwater flow." [23 CCR §354.18(e)]

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RECOMMENDATIONS

- Integrate climate change, including extremely wet and dry scenarios, into all elements of the projected water budget to form the basis for development of sustainable management criteria and projects and management actions.
- Incorporate climate change scenarios into projects and management actions.

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3. Data Gaps

The consideration of beneficial users when establishing monitoring networks is **insufficient**, due to lack of specific plans to increase the Representative Monitoring Sites (RMSs) in the monitoring network that represent groundwater quality around DACs and domestic wells in the basin.

The GSP states (p. 161): "No representative monitoring sites have been identified for the degraded water quality sustainability indicator. However, it is noted for clarification that four well groups have been established to address the four sets of closely spaced wells in the groundwater quality monitoring network (Table 5.6-01 and Figure 5.6-01). These sets of closely spaced wells are grouped (i.e., treated as a single well) for the purposes of implementing the measurable objectives and minimum thresholds for the degraded water quality sustainability indicator, as discussed in Section 4.7.1." The GSP does not explain how the use of a well group to represent a RMS will satisfy the reporting requirements of SGMA, however.

Figure 5.6-01 (Existing and Planned Water Quality Monitoring Network) shows that no monitoring wells are located across portions of the basin near DACs and domestic wells (see maps provided in Attachment E). Beneficial users of groundwater may remain unprotected by the GSP without adequate monitoring and identification of data gaps in the shallow aquifer. The Plan therefore fails to meet SGMA's requirements for the monitoring network[11].

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The GSP provides discussion of data gaps for GDEs and ISWs in Section 5.3.4 of the GSP (Assessment and Improvement of Monitoring Network) and provides planned monitoring well locations on Figure 5.3-01 (Existing and Planned Groundwater Level Monitoring Wells). The GSP could be improved by describing the aquatic GDE monitoring programs for the Foster Park and Confluence Aquatic Habitat Areas (p. 159) and how they will be used to assess the potential for significant and unreasonable impacts to GDEs and ISWs due to groundwater conditions in the basin.

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RECOMMENDATIONS

- Provide maps that overlay monitoring well locations with the locations of DACs and domestic wells to clearly identify potentially impacted areas. Increase the number of representative monitoring sites (RMSs) in the shallow aquifer across the basin for the groundwater quality condition indicator. Prioritize proximity to DACs and drinking water users when identifying new RMSs.
- Choose single wells for water quality RMSs, instead of using well groups. If well groups are used, explain how the reporting requirements of SGMA will be met.

[11] "The monitoring network objectives shall be implemented to accomplish the following: [...] (2) Monitor impacts to the beneficial uses or users of groundwater." [23 CCR §354.34(b)(2)]

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- Further describe the biological monitoring that can be used to assess the potential for significant and unreasonable impacts to GDEs or ISWs due to groundwater conditions in the basin. The aquatic GDE monitoring programs for the Foster Park and Confluence Aquatic Habitat Areas are mentioned on p. 159 but no further details are provided.

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4. Addressing Beneficial Users in Projects and Management Actions

The consideration of beneficial users when developing projects and management actions is **insufficient**, due to the failure to identify benefits or impacts of identified projects and management actions to beneficial users of groundwater such as DACs and tribes.

The GSP includes two projects and management actions with explicit benefits to the environment (Foster Park Protocols to Address Direct Depletion of Interconnected Surface Water and Actions to Address Indirect Depletion of Interconnected Surface Water). The only other project included in the GSP is a Domestic Well Survey to collect more information about domestic wells in the basin. The GSP does not discuss the manner in which DACs and tribes may be benefitted or impacted by projects and management actions identified in the GSP, nor does the GSP discuss the potential water quality impacts from groundwater management in the basin. Potential project and management actions may not protect these beneficial users. Groundwater sustainability under SGMA is defined not just by sustainable yield, but by the avoidance of undesirable results for *all* beneficial users.

RECOMMENDATIONS

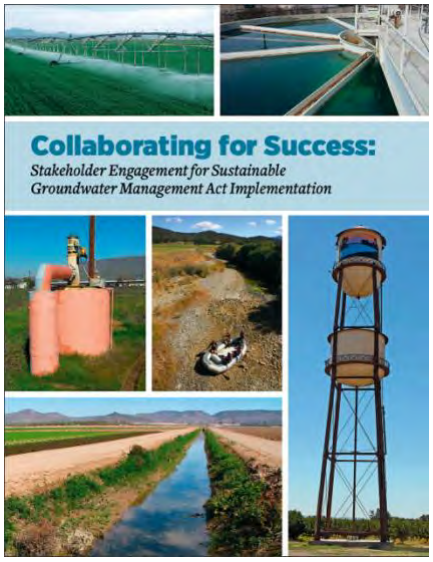
- For DACs and domestic well owners, include a drinking water well impact mitigation program to proactively monitor and protect drinking water wells through GSP implementation. Refer to Attachment B for specific recommendations on how to implement a drinking water well mitigation program.
- For DACs, domestic well owners, and tribes, include a discussion of whether potential impacts to water quality from projects and management actions could occur and how the GSA plans to mitigate such impacts.
- Recharge ponds, reservoirs, and facilities for managed stormwater recharge can be designed as multiple-benefit projects to include elements that act functionally as wetlands and provide a benefit for wildlife and aquatic species. For guidance on how to integrate multi-benefit recharge projects into your GSP, refer to the "Multi-Benefit Recharge Project Methodology Guidance Document"[12].
- Develop management actions that incorporate climate and water delivery uncertainties to address future water demand and prevent future undesirable results.

[12] The Nature Conservancy. 2021. Multi-Benefit Recharge Project Methodology for Inclusion in Groundwater Sustainability Plans. Sacramento. Available at: https://groundwaterresourcehub.org/sgma-tools/multi-benefit-recharge-project-methodology-guidance/

Attachment B

SGMA Tools to address DAC, drinking water, and environmental beneficial uses and users

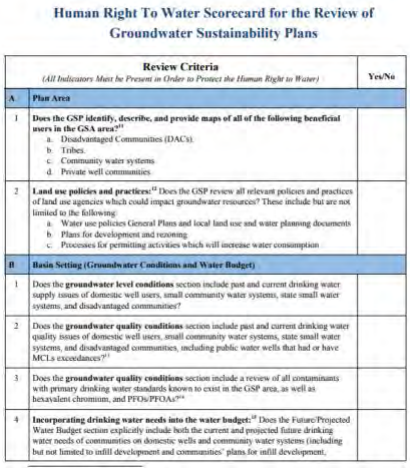
Stakeholder Engagement and Outreach



Clean Water Action, Community Water Center and Union of Concerned Scientists developed a guidance document called Collaborating for success: Stakeholder engagement for Sustainable Groundwater Management Act Implementation. It provides details on how to conduct targeted and broad outreach and engagement during Groundwater Sustainability Plan (GSP) development and implementation. Conducting a targeted outreach involves:

- Developing a robust Stakeholder Communication and Engagement plan that includes outreach at frequented locations (schools, farmers markets, religious settings, events) across the plan area to increase the involvement and participation of disadvantaged communities, drinking water users and the environmental stakeholders.
- Providing translation services during meetings and technical assistance to enable easy participation for non-English speaking stakeholders.
- GSP should adequately describe the process for requesting input from beneficial users and provide details on how input is incorporated into the GSP.

The Human Right to Water

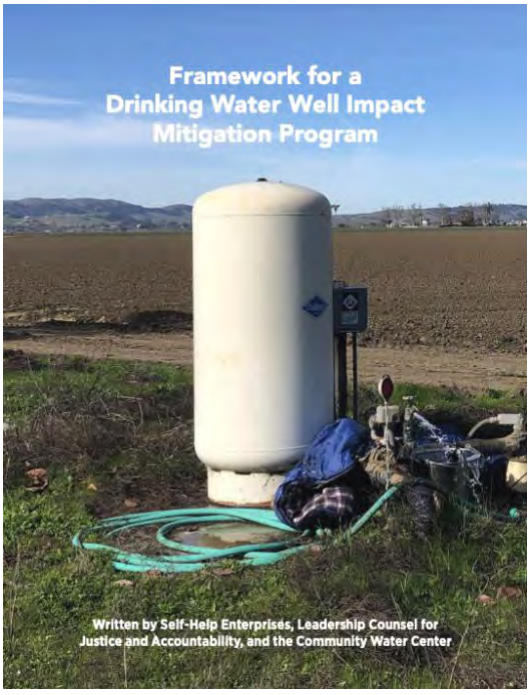


Human Right To Water Scorecard for the Review of Groundwater Sustainability Plans

	Review Criteria *(All Indicators Must be Present in Order to Protect the Human Right to Water)*	Yes/No
A	**Plan Area**	
1	**Does the GSP identify, describe, and provide maps of all of the following beneficial users in the GSA area?**[43] a. Disadvantaged Communities (DACs). b. Tribes. c. Community water systems. d. Private well communities.	
2	**Land use policies and practices:**[44] Does the GSP review all relevant policies and practices of land use agencies which could impact groundwater resources? These include but are not limited to the following: a. Water use policies General Plans and local land use and water planning documents b. Plans for development and rezoning. c. Processes for permitting activities which will increase water consumption.	
B	**Basin Setting (Groundwater Conditions and Water Budget)**	
1	Does the **groundwater level conditions** section include past and current drinking water supply issues of domestic well users, small community water systems, state small water systems, and disadvantaged communities?	
2	Does the **groundwater quality conditions** section include past and current drinking water quality issues of domestic well users, small community water systems, state small water systems, and disadvantaged communities, including public water wells that had or have MCLs exceedances?[45]	
3	Does the **groundwater quality conditions** section include a review of all contaminants with primary drinking water standards known to exist in the GSP area, as well as hexavalent chromium, and PFOs/PFOAs?[46]	
4	**Incorporating drinking water needs into the water budget:**[47] Does the Future/Projected Water Budget section explicitly include both the current and projected future drinking water needs of communities on domestic wells and community water systems (including but not limited to infill development and communities' plans for infill development,	

The Human Right to Water Scorecard was developed by Community Water Center, Leadership Counsel for Justice and Accountability and Self Help Enterprises to aid Groundwater Sustainability Agencies (GSAs) in prioritizing drinking water needs in SGMA. The scorecard identifies elements that must exist in GSPs to adequately protect the Human Right to Drinking water.

Drinking Water Well Impact Mitigation Framework



The Drinking Water Well Impact Mitigation Framework was developed by Community Water Center, Leadership Counsel for Justice and Accountability and Self Help Enterprises to aid GSAs in the development and implementation of their GSPs. The framework provides a clear roadmap for how a GSA can best structure its data gathering, monitoring network and management actions to proactively monitor and protect drinking water wells and mitigate impacts should they occur.

Groundwater Resource Hub

The Nature Conservancy has developed a suite of tools based on best available science to help GSAs, consultants, and stakeholders efficiently incorporate nature into GSPs. These tools and resources are available online at GroundwaterResourceHub.org. The Nature Conservancy's tools and resources are intended to reduce costs, shorten timelines, and increase benefits for both people and nature.

Rooting Depth Database

The Plant Rooting Depth Database provides information that can help assess whether groundwater-dependent vegetation are accessing groundwater. Actual rooting depths will depend on the plant species and site-specific conditions, such as soil type and

availability of other water sources. Site-specific knowledge of depth to groundwater combined with rooting depths will help provide an understanding of the potential groundwater levels are needed to sustain GDEs.

How to use the database

The maximum rooting depth information in the Plant Rooting Depth Database is useful when verifying whether vegetation in the Natural Communities Commonly Associated with Groundwater (NC Dataset) are connected to groundwater. A 30 ft depth-to-groundwater threshold, which is based on averaged global rooting depth data for phreatophytes[1], is relevant for most plants identified in the NC Dataset since most plants have a max rooting depth of less than 30 feet. However, it is important to note that deeper thresholds are necessary for other plants that have reported maximum root depths that exceed the averaged 30 feet threshold, such as valley oak (*Quercus lobata*), Euphrates poplar (*Populus euphratica*), salt cedar (*Tamarix spp.*), and shadescale (*Atriplex confertifolia*). The Nature Conservancy advises that the reported max rooting depth for these deeper-rooted plants be used. For example, a depth-to groundwater threshold of 80 feet should be used instead of the 30 ft threshold, when verifying whether valley oak polygons from the NC Dataset are connected to groundwater. It is important to re-emphasize that actual rooting depth data are limited and will depend on the plant species and site-specific conditions such as soil and aquifer types, and availability to other water sources.

The Plant Rooting Depth Database is an Excel workbook composed of four worksheets:

1. California phreatophyte rooting depth data (included in the NC Dataset)
2. Global phreatophyte rooting depth data
3. Metadata
4. References

How the database was compiled

The Plant Rooting Depth Database is a compilation of rooting depth information for the groundwater-dependent plant species identified in the NC Dataset. Rooting depth data were compiled from published scientific literature and expert opinion through a crowdsourcing campaign. As more information becomes available, the database of rooting depths will be updated. Please Contact Us if you have additional rooting depth data for California phreatophytes.

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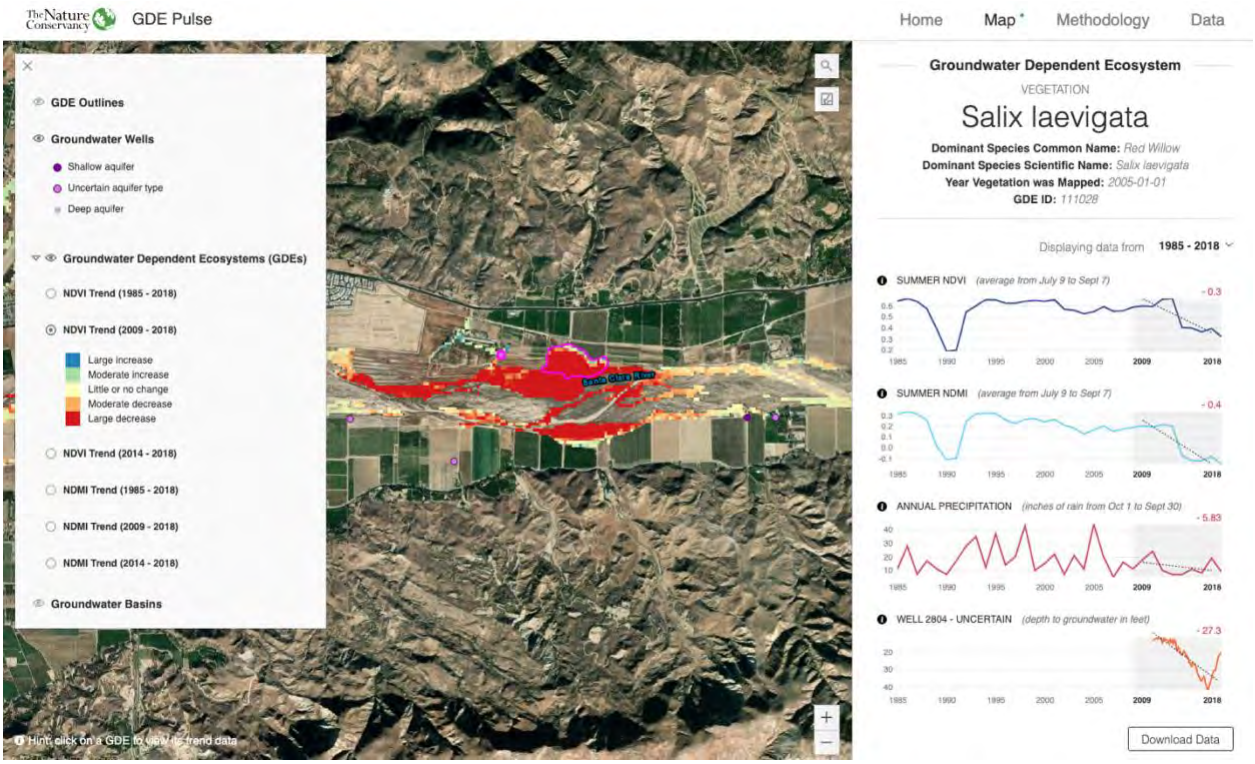
[1] Canadell, J., Jackson, R.B., Ehleringer, J.B. et al. 1996. Maximum rooting depth of vegetation types at the global scale. Oecologia 108, 583–595. https://doi.org/10.1007/BF00329030

GDE Pulse



GDE Pulse is a free online tool that allows Groundwater Sustainability Agencies to assess changes in groundwater dependent ecosystem (GDE) health using satellite, rainfall, and groundwater data. Remote sensing data from satellites has been used to monitor the health of vegetation all over the planet. GDE pulse has compiled 35 years of satellite imagery from NASA's Landsat mission for every polygon in the Natural Communities Commonly Associated with Groundwater Dataset. The following datasets are available for downloading:

Normalized Difference Vegetation Index (NDVI) is a satellite-derived index that represents the greenness of vegetation. Healthy green vegetation tends to have a higher NDVI, while dead leaves have a lower NDVI. We calculated the average NDVI during the driest part of the year (July - Sept) to estimate vegetation health when the plants are most likely dependent on groundwater.

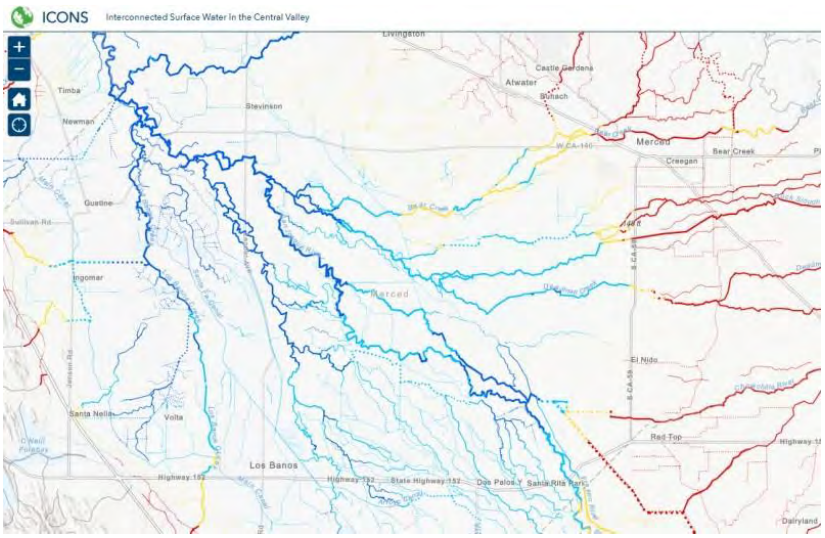
Normalized Difference Moisture Index (NDMI) is a satellite-derived index that represents water content in vegetation. NDMI is derived from the Near-Infrared (NIR) and Short-Wave Infrared (SWIR) channels. Vegetation with adequate access to water tends to have higher NDMI, while vegetation that is water stressed tends to have lower NDMI. We calculated the average NDVI during the driest part of the year (July–September) to estimate vegetation health when the plants are most likely dependent on groundwater.

Annual Precipitation is the total precipitation for the water year (October 1st – September 30th) from the PRISM dataset. The amount of local precipitation can affect vegetation with more precipitation generally leading to higher NDVI and NDMI.

Depth to Groundwater measurements provide an indication of the groundwater levels and changes over time for the surrounding area. We used groundwater well measurements from nearby (<1km) wells to estimate the depth to groundwater below the GDE based on the average elevation of the GDE (using a digital elevation model) minus the measured groundwater surface elevation.

ICONOS Mapper

Interconnected Surface Water in the Central Valley



ICONS maps the likely presence of interconnected surface water (ISW) in the Central Valley using depth to groundwater data. Using data from 2011-2018, the ISW dataset represents the likely connection between surface water and groundwater for rivers and streams in California's Central Valley. It includes information on the mean, maximum, and minimum depth to groundwater for each stream segment over the years with available data, as well as the likely presence of ISW based on the minimum depth to groundwater. The Nature Conservancy developed this database, with guidance and input from expert academics, consultants, and state agencies.

We developed this dataset using groundwater elevation data available online from the California Department of Water Resources (DWR). DWR only provides this data for the Central Valley. For GSAs outside of the valley, who have groundwater well measurements, we recommend following our methods to determine likely ISW in your region. The Nature Conservancy's ISW dataset should be used as a first step in reviewing ISW and should be supplemented with local or more recent groundwater depth data.

Attachment C

Freshwater Species Located in the Ventura River Valley - Upper Ventura River Subbasin

To assist in identifying the beneficial users of surface water necessary to assess the undesirable result "depletion of interconnected surface waters", Attachment C provides a list of freshwater species located in the Ventura River Valley - Upper Ventura River Subbasin. To produce the freshwater species list, we used ArcGIS to select features within the California Freshwater Species Database version 2.0.9 within the basin boundary. This database contains information on ~4,000 vertebrates, macroinvertebrates and vascular plants that depend on fresh water for at least one stage of their life cycle. The methods used to compile the California Freshwater Species Database can be found in Howard et al. 2015. The spatial database contains locality observations and/or distribution information from ~400 data sources. The database is housed in the California Department of Fish and Wildlife's BIOS as well as on The Nature Conservancy's science website.

Scientific Name	Common Name	Legal Protected Status		
		Federal	State	Other
BIRDS				
Actitis macularius	Spotted Sandpiper			
Agelaius tricolor	Tricolored Blackbird	Bird of Conservation Concern	Special Concern	BSSC - First priority
Anas acuta	Northern Pintail			
Anas americana	American Wigeon			
Anas crecca	Green-winged Teal			
Anas cyanoptera	Cinnamon Teal			
Anas discors	Blue-winged Teal			
Anas platyrhynchos	Mallard			
Anas strepera	Gadwall			
Anser albifrons	Greater White-fronted Goose			
Ardea alba	Great Egret			
Ardea herodias	Great Blue Heron			
Aythya collaris	Ring-necked Duck			
Botaurus lentiginosus	American Bittern			
Bucephala albeola	Bufflehead			
Butorides virescens	Green Heron			
Calidris minutilla	Least Sandpiper			
Cistothorus palustris palustris	Marsh Wren			
Egretta thula	Snowy Egret			
Empidonax traillii	Willow Flycatcher	Bird of Conservation Concern	Endangered	
Fulica americana	American Coot			
Gallinago delicata	Wilson's Snipe			
Haliaeetus leucocephalus	Bald Eagle	Bird of Conservation Concern	Endangered	
Himantopus mexicanus	Black-necked Stilt			
Ixobrychus exilis hesperis	Western Least Bittern		Special Concern	BSSC - Second priority

Limnodromus scolopaceus	Long-billed Dowitcher			
Lophodytes cucullatus	Hooded Merganser			
Megaceryle alcyon	Belted Kingfisher			
Mergus merganser	Common Merganser			
Mergus serrator	Red-breasted Merganser			
Numenius phaeopus	Whimbrel			
Nycticorax nycticorax	Black-crowned Night-Heron			
Oxyura jamaicensis	Ruddy Duck			
Piranga rubra	Summer Tanager		Special Concern	BSSC - First priority
Plegadis chihi	White-faced Ibis		Watch list	
Podiceps nigricollis	Eared Grebe			
Podilymbus podiceps	Pied-billed Grebe			
Porzana carolina	Sora			
Rallus limicola	Virginia Rail			
Setophaga petechia	Yellow Warbler			BSSC - Second priority
Tachycineta bicolor	Tree Swallow			
Tringa melanoleuca	Greater Yellowlegs			
Tringa solitaria	Solitary Sandpiper			
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		Special Concern	BSSC - Third priority
CRUSTACEANS				
Gammarus spp.	Gammarus spp.			
Hyalella spp.	Hyalella spp.			
FISHES				
Oncorhynchus mykiss irideus	Coastal rainbow trout			Least Concern - Moyle 2013
Oncorhynchus mykiss - Southern CA	Southern California steelhead	Endangered	Special Concern	Endangered - Moyle 2013
HERPS				
Actinemys marmorata marmorata	Western Pond Turtle		Special Concern	ARSSC
Anaxyrus boreas boreas	Boreal Toad			
Pseudacris cadaverina	California Treefrog			ARSSC
Rana boylii	Foothill Yellow-legged Frog	Under Review in the Candidate or Petition Process	Special Concern	ARSSC
Rana draytonii	California Red-legged Frog	Threatened	Special Concern	ARSSC
Spea hammondii	Western Spadefoot	Under Review in the Candidate or Petition Process	Special Concern	ARSSC

Thamnophis hammondii hammondii	Two-striped Gartersnake		Special Concern	ARSSC
Thamnophis sirtalis sirtalis	Common Gartersnake			
Pseudacris regilla	Northern Pacific Chorus Frog			
INSECTS AND OTHER INVERTS				
Ablabesmyia spp.	Ablabesmyia spp.			
Ambrysus spp.	Ambrysus spp.			
Apedilum spp.	Apedilum spp.			
Argia lugens	Sooty Dancer			
Argia spp.	Argia spp.			
Argia vivida	Vivid Dancer			
Baetidae fam.	Baetidae fam.			
Baetis adonis	A Mayfly			
Baetis spp.	Baetis spp.			
Brechmorhoga mendax	Pale-faced Clubskimmer			
Caenis bajaensis	A Mayfly			
Caenis spp.	Caenis spp.			
Callibaetis spp.	Callibaetis spp.			
Centroptilum spp.	Centroptilum spp.			
Cheumatopsyche spp.	Cheumatopsyche spp.			
Chironomidae fam.	Chironomidae fam.			
Chironomus spp.	Chironomus spp.			
Cloeodes spp.	Cloeodes spp.			
Coenagrionidae fam.	Coenagrionidae fam.			
Corisella decolor				Not on any status lists
Corixidae fam.	Corixidae fam.			
Cricotopus bicinctus				Not on any status lists
Cricotopus spp.	Cricotopus spp.			
Cricotopus trifascia				Not on any status lists
Cryptochironomus spp.	Cryptochironomus spp.			
Dicrotendipes spp.	Dicrotendipes spp.			
Dytiscidae fam.	Dytiscidae fam.			
Endochironomus spp.	Endochironomus spp.			
Ephemerellidae fam.	Ephemerellidae fam.			
Eukiefferiella spp.	Eukiefferiella spp.			
Fallceon quilleri	A Mayfly			
Fallceon spp.	Fallceon spp.			
Gomphidae fam.	Gomphidae fam.			

Hetaerina americana	American Rubyspot			
Hydrobius spp.	Hydrobius spp.			
Hydropsyche spp.	Hydropsyche spp.			
Hydroptila spp.	Hydroptila spp.			
Hydroptilidae fam.	Hydroptilidae fam.			
Labrundinia spp.	Labrundinia spp.			
Laccobius spp.	Laccobius spp.			
Larsia spp.	Larsia spp.			
Micrasema spp.	Micrasema spp.			
Microcylloepus spp.	Microcylloepus spp.			
Micropsectra spp.	Micropsectra spp.			
Microtendipes pedellus				Not on any status lists
Microtendipes spp.	Microtendipes spp.			
Microvelia spp.	Microvelia spp.			
Mideopsis spp.	Mideopsis spp.			
Nanocladius spp.	Nanocladius spp.			
Naucoridae fam.	Naucoridae fam.			
Nectopsyche spp.	Nectopsyche spp.			
Neoclypeodytes spp.	Neoclypeodytes spp.			
Nilothauma spp.	Nilothauma spp.			
Ochrotrichia spp.	Ochrotrichia spp.			
Ochthebius spp.	Ochthebius spp.			
Oecetis spp.	Oecetis spp.			
Ordobrevia nubifera				Not on any status lists
Oxyethira spp.	Oxyethira spp.			
Paltothemis lineatipes	Red Rock Skimmer			
Paracladopelma spp.	Paracladopelma spp.			
Paraleptophlebia spp.	Paraleptophlebia spp.			
Parametriocnemus spp.	Parametriocnemus spp.			
Paratanytarsus spp.	Paratanytarsus spp.			
Pentaneura spp.	Pentaneura spp.			
Petrophila spp.	Petrophila spp.			
Phaenopsectra spp.	Phaenopsectra spp.			
Polycentropus spp.	Polycentropus spp.			
Polypedilum spp.	Polypedilum spp.			
Procladius spp.	Procladius spp.			
Psectrocladius spp.	Psectrocladius spp.			
Psectrotanypus spp.	Psectrotanypus spp.			
Pseudochironomus spp.	Pseudochironomus spp.			
Rheotanytarsus spp.	Rheotanytarsus spp.			
Rhyacophila spp.	Rhyacophila spp.			

Sialis spp.	Sialis spp.			
Sigara mckinstryi	A Water Boatman			Not on any status lists
Sigara spp.	Sigara spp.			
Simulium spp.	Simulium spp.			
Sperchon spp.	Sperchon spp.			
Tanytarsus spp.	Tanytarsus spp.			
Thienemannimyia spp.	Thienemannimyia spp.			
Tinodes spp.	Tinodes spp.			
Trichocorixa calva				Not on any status lists
Tricorythodes explicatus	A Mayfly			
Tricorythodes spp.	Tricorythodes spp.			
Tropisternus spp.	Tropisternus spp.			
Veliidae fam.	Veliidae fam.			
Zavrelimyia spp.	Zavrelimyia spp.			
MOLLUSKS				
Anodonta californiensis	California Floater		Special	
Gyraulus spp.	Gyraulus spp.			
Menetus opercularis	Button Sprite			CS
Physa spp.	Physa spp.			
Pisidium spp.	Pisidium spp.			
PLANTS				
Cotula coronopifolia	NA			
Eleocharis macrostachya	Creeping Spikerush			
Lythrum californicum	California Loosestrife			
Mimulus cardinalis	Scarlet Monkeyflower			
Persicaria lapathifolia				Not on any status lists
Rorippa palustris palustris	Bog Yellowcress			
Schoenoplectus californicus	California Bulrush			
Stuckenia pectinata				Not on any status lists
Typha domingensis	Southern Cattail			
Typha latifolia	Broadleaf Cattail			
Veronica anagallis-aquatica	NA			

Attachment D

July 2019

IDENTIFYING GDEs UNDER SGMA
Best Practices for using the NC Dataset

The Sustainable Groundwater Management Act (SGMA) requires that groundwater dependent ecosystems (GDEs) be identified in Groundwater Sustainability Plans (GSPs). As a starting point, the Department of Water Resources (DWR) is providing the Natural Communities Commonly Associated with Groundwater Dataset (NC Dataset) online[1] to help Groundwater Sustainability Agencies (GSAs), consultants, and stakeholders identify GDEs within individual groundwater basins. To apply information from the NC Dataset to local areas, GSAs should combine it with the best available science on local hydrology, geology, and groundwater levels to verify whether polygons in the NC dataset are likely supported by groundwater in an aquifer (Figure 1)[2]. This document highlights six best practices for using local groundwater data to confirm whether mapped features in the NC dataset are supported by groundwater.

Figure 1. Considerations for GDE identification.
Source: DWR[2]

[1] NC Dataset Online Viewer: https://gis.water.ca.gov/app/NCDatasetViewer/
[2] California Department of Water Resources (DWR). 2018. Summary of the "Natural Communities Commonly Associated with Groundwater" Dataset and Online Web Viewer. Available at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Data-and-Tools/Files/Statewide-Reports/Natural-Communities-Dataset-Summary-Document.pdf

The NC Dataset identifies vegetation and wetland features that are good indicators of a GDE. The dataset is comprised of 48 publicly available state and federal datasets that map vegetation, wetlands, springs, and seeps commonly associated with groundwater in California[3]. It was developed through a collaboration between DWR, the Department of Fish and Wildlife, and The Nature Conservancy (TNC). TNC has also provided detailed guidance on identifying GDEs from the NC dataset[4] on the Groundwater Resource Hub[5], a website dedicated to GDEs.

BEST PRACTICE #1. Establishing a Connection to Groundwater

Groundwater basins can be comprised of one continuous aquifer (Figure 2a) or multiple aquifers stacked on top of each other (Figure 2b). In unconfined aquifers (Figure 2a), using the depth-to-groundwater and the rooting depth of the vegetation is a reasonable method to infer groundwater dependence for GDEs. If groundwater is well below the rooting (and capillary) zone of the plants and any wetland features, the ecosystem is considered disconnected and groundwater management is not likely to affect the ecosystem (Figure 2d). However, it is important to consider local conditions (e.g., soil type, groundwater flow gradients, and aquifer parameters) and to review groundwater depth data from multiple seasons and water year types (wet and dry) because intermittent periods of high groundwater levels can replenish perched clay lenses that serve as the water source for GDEs (Figure 2c). Maintaining these natural groundwater fluctuations are important to sustaining GDE health.

Basins with a stacked series of aquifers (Figure 2b) may have varying levels of pumping across aquifers in the basin, depending on the production capacity or water quality associated with each aquifer. If pumping is concentrated in deeper aquifers, SGMA still requires GSAs to sustainably manage groundwater resources in shallow aquifers, such as perched aquifers, that support springs, surface water, domestic wells, and GDEs (Figure 2). This is because vertical groundwater gradients across aquifers may result in pumping from deeper aquifers to cause adverse impacts onto beneficial users reliant on shallow aquifers or interconnected surface water. The goal of SGMA is to sustainably manage groundwater resources for current and future social, economic, and environmental benefits. While groundwater pumping may not be currently occurring in a shallower aquifer, use of this water may become more appealing and economically viable in future years as pumping restrictions are placed on the deeper production aquifers in the basin to meet the sustainable yield and criteria. Thus, identifying GDEs in the basin should done irrespective to the amount of current pumping occurring in a particular aquifer, so that future impacts on GDEs due to new production can be avoided. A good rule of thumb to follow is: *if groundwater can be pumped from a well - it's an aquifer*.

[3] For more details on the mapping methods, refer to: Klausmeyer, K., J. Howard, T. Keeler-Wolf, K. Davis-Fadtke, R. Hull, A. Lyons. 2018. Mapping Indicators of Groundwater Dependent Ecosystems in California: Methods Report. San Francisco, California. Available at: https://groundwaterresourcehub.org/public/uploads/pdfs/iGDE_data_paper_20180423.pdf
[4] "Groundwater Dependent Ecosystems under the Sustainable Groundwater Management Act: Guidance for Preparing Groundwater Sustainability Plans" is available at: https://groundwaterresourcehub.org/gde-tools/gsp-guidance-document/
[5] The Groundwater Resource Hub: www.GroundwaterResourceHub.org

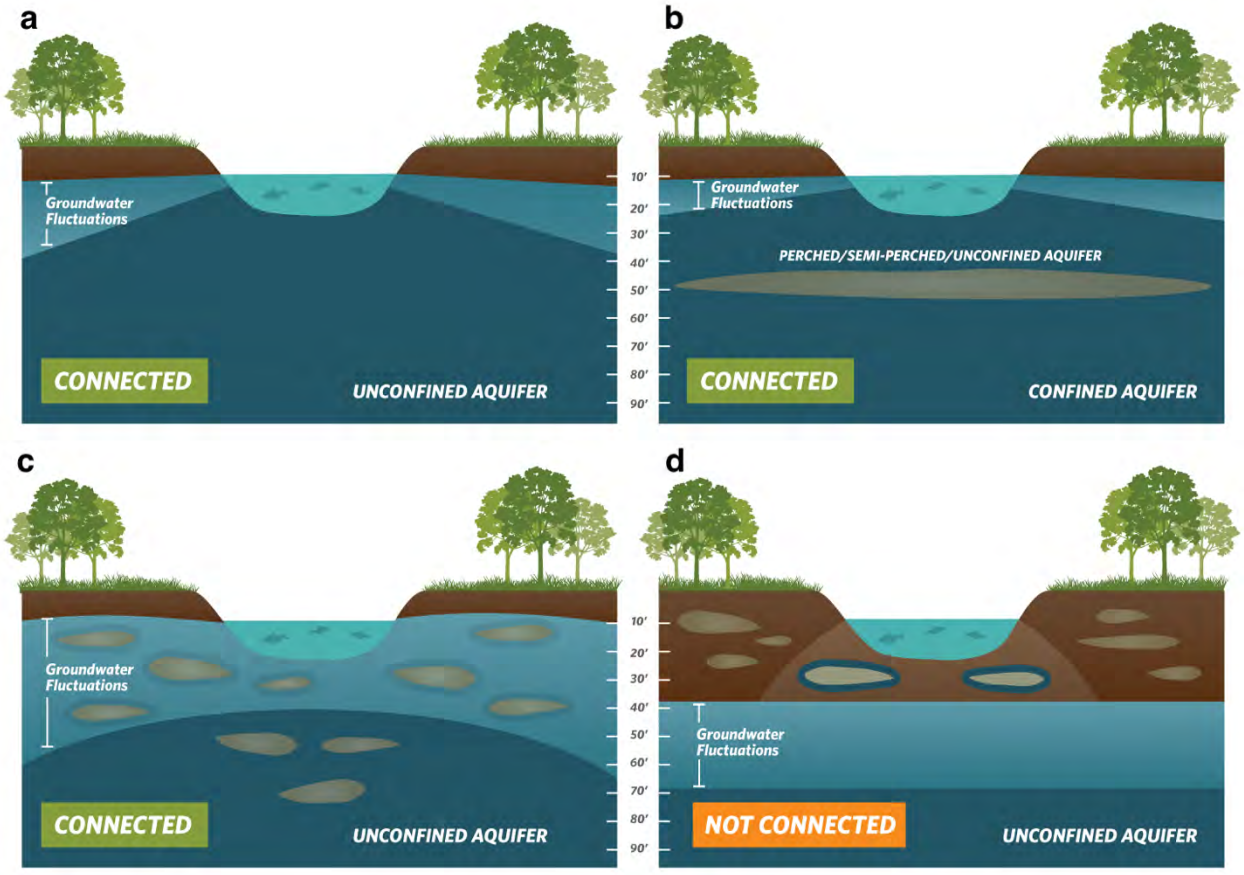


Figure 2. Confirming whether an ecosystem is connected to groundwater. Top: (a) Under the ecosystem is an unconfined aquifer with depth-to-groundwater fluctuating seasonally and interannually within 30 feet from land surface. (b) Depth-to-groundwater in the shallow aquifer is connected to overlying ecosystem. Pumping predominately occurs in the confined aquifer, but pumping is possible in the shallow aquifer. Bottom: (c) Depth-to-groundwater fluctuations are seasonally and interannually large, however, clay layers in the near surface prolong the ecosystem's connection to groundwater. (d) Groundwater is disconnected from surface water, and any water in the vadose (unsaturated) zone is due to direct recharge from precipitation and indirect recharge under the surface water feature. These areas are not connected to groundwater and typically support species that do not require access to groundwater to survive.

BEST PRACTICE #2. Characterize Seasonal and Interannual Groundwater Conditions

SGMA requires GSAs to describe current and historical groundwater conditions when identifying GDEs [23 CCR §354.16(g)]. Relying solely on the SGMA benchmark date (January 1, 2015) or any other single point in time to characterize groundwater conditions (e.g., depth-to-groundwater) is inadequate because managing groundwater conditions with data from one time point fails to capture the seasonal and interannual variability typical of California's climate. DWR's Best Management Practices document on water budgets[6] recommends using 10 years of water supply and water budget information to describe how historical conditions have impacted the operation of the basin within sustainable yield, implying that a baseline[7] could be determined based on data between 2005 and 2015. Using this or a similar time period, depending on data availability, is recommended for determining the depth-to-groundwater.

GDEs depend on groundwater levels being close enough to the land surface to interconnect with surface water systems or plant rooting networks. The most practical approach[8] for a GSA to assess whether polygons in the NC dataset are connected to groundwater is to rely on groundwater elevation data. As detailed in TNC's GDE guidance document[4], one of the key factors to consider when mapping GDEs is to contour depth-to-groundwater in the aquifer that is supporting the ecosystem (see Best Practice #5).

Groundwater levels fluctuate over time and space due to California's Mediterranean climate (dry summers and wet winters), climate change (flood and drought years), and subsurface heterogeneity in the subsurface (Figure 3). Many of California's GDEs have adapted to dealing with intermittent periods of water stress, however if these groundwater conditions are prolonged, adverse impacts to GDEs can result. While depth-to-groundwater levels within 30 feet[4] of the land surface are generally accepted as being a proxy for confirming that polygons in the NC dataset are supported by groundwater, it is highly advised that fluctuations in the groundwater regime be characterized to understand the seasonal and interannual groundwater variability in GDEs. Utilizing groundwater data from one point in time can misrepresent groundwater levels required by GDEs, and inadvertently result in adverse impacts to the GDEs. Time series data on groundwater elevations and depths are available on the SGMA Data Viewer[9]. However, if insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons in the GSP until data gaps are reconciled in the monitoring network (see Best Practice #6).

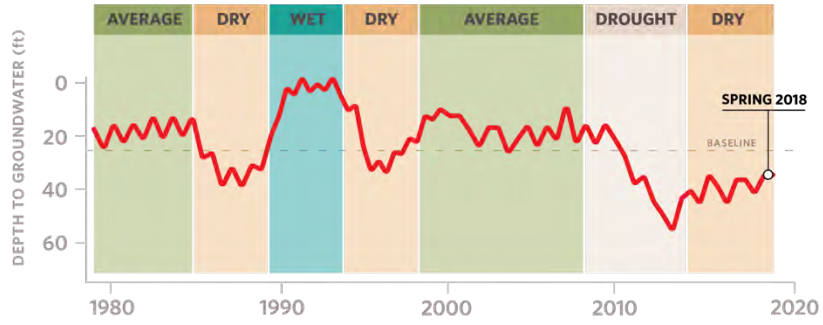


Figure 3. Example seasonality and interannual variability in depth-to-groundwater over time. Selecting one point in time, such as Spring 2018, to characterize groundwater conditions in GDEs fails to capture what groundwater conditions are necessary to maintain the ecosystem status into the future so adverse impacts are avoided.

[6] DWR. 2016. Water Budget Best Management Practice. Available at: https://water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/BMP_Water_Budget_Final_2016-12-23.pdf

[7] Baseline is defined under the GSP regulations as "historic information used to project future conditions for hydrology, water demand, and availability of surface water and to evaluate potential sustainable management practices of a basin." [23 CCR §351(e)]

[8] Groundwater reliance can also be confirmed via stable isotope analysis and geophysical surveys. For more information see The GDE Assessment Toolbox (Appendix IV, GDE Guidance Document for GSPs[4]).

[9] SGMA Data Viewer: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer

BEST PRACTICE #3. Ecosystems Often Rely on Both Groundwater and Surface Water

GDEs are plants and animals that rely on groundwater for all or some of its water needs, and thus can be supported by multiple water sources. The presence of non-groundwater sources (e.g., surface water, soil moisture in the vadose zone, applied water, treated wastewater effluent, urban stormwater, irrigated return flow) within and around a GDE does not preclude the possibility that it is supported by groundwater, too. SGMA defines GDEs as "ecological communities and species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface" [23 CCR §351(m)]. Hence, depth-to-groundwater data should be used to identify whether NC polygons are supported by groundwater and should be considered GDEs. In addition, SGMA requires that significant and undesirable adverse impacts to beneficial users of surface water be avoided. Beneficial users of surface water include environmental users such as plants or animals[10], which therefore must be considered when developing minimum thresholds for depletions of interconnected surface water.

GSAs are only responsible for impacts to GDEs resulting from groundwater conditions in the basin, so if adverse impacts to GDEs result from the diversion of applied water, treated wastewater, or irrigation return flow away from the GDE, then those impacts will be evaluated by other permitting requirements (e.g., CEQA) and may not be the responsibility of the GSA. However, if adverse impacts occur to the GDE due to changing groundwater conditions resulting from pumping or groundwater management activities, then the GSA would be responsible (Figure 4).

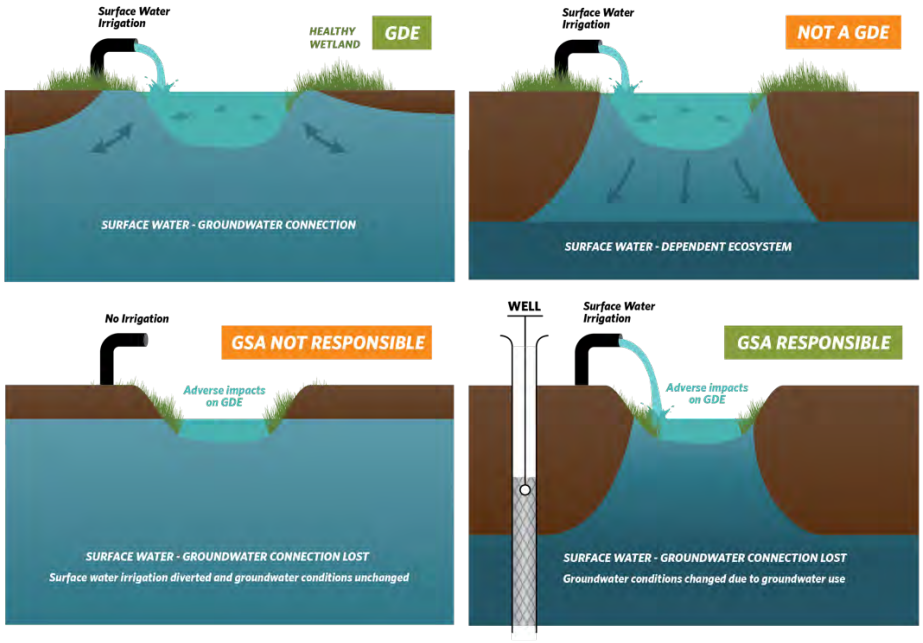


Figure 4. Ecosystems often depend on multiple sources of water. Top: (Left) Surface water and groundwater are interconnected, meaning that the GDE is supported by both groundwater and surface water. (Right) Ecosystems that are only reliant on non-groundwater sources are not groundwater-dependent. Bottom: (Left) An ecosystem that was once dependent on an interconnected surface water, but loses access to groundwater solely due to surface water diversions may not be the GSA's responsibility. (Right) Groundwater dependent ecosystems once dependent on an interconnected surface water system, but loses that access due to groundwater pumping is the GSA's responsibility.

[10] For a list of environmental beneficial users of surface water by basin, visit: https://groundwaterresourcehub.org/gde-tools/environmental-surface-water-beneficiaries/

BEST PRACTICE #4. Select Representative Groundwater Wells

Identifying GDEs in a basin requires that groundwater conditions are characterized to confirm whether polygons in the NC dataset are supported by the underlying aquifer. To do this, proximate groundwater wells should be identified to characterize groundwater conditions (Figure 5). When selecting representative wells, it is particularly important to consider the subsurface heterogeneity around NC polygons, especially near surface water features where groundwater and surface water interactions occur around heterogeneous stratigraphic units or aquitards formed by fluvial deposits. The following selection criteria can help ensure groundwater levels are representative of conditions within the GDE area:

- Choose wells that are within 5 kilometers (3.1 miles) of each NC Dataset polygons because they are more likely to reflect the local conditions relevant to the ecosystem. If there are no wells within 5km of the center of a NC dataset polygon, then there is insufficient information to remove the polygon based on groundwater depth. Instead, it should be retained as a potential GDE until there are sufficient data to determine whether or not the NC Dataset polygon is supported by groundwater.

- Choose wells that are screened within the surficial unconfined aquifer and capable of measuring the true water table.

- Avoid relying on wells that have insufficient information on the screened well depth interval for excluding GDEs because they could be providing data on the wrong aquifer. This type of well data should not be used to remove any NC polygons.

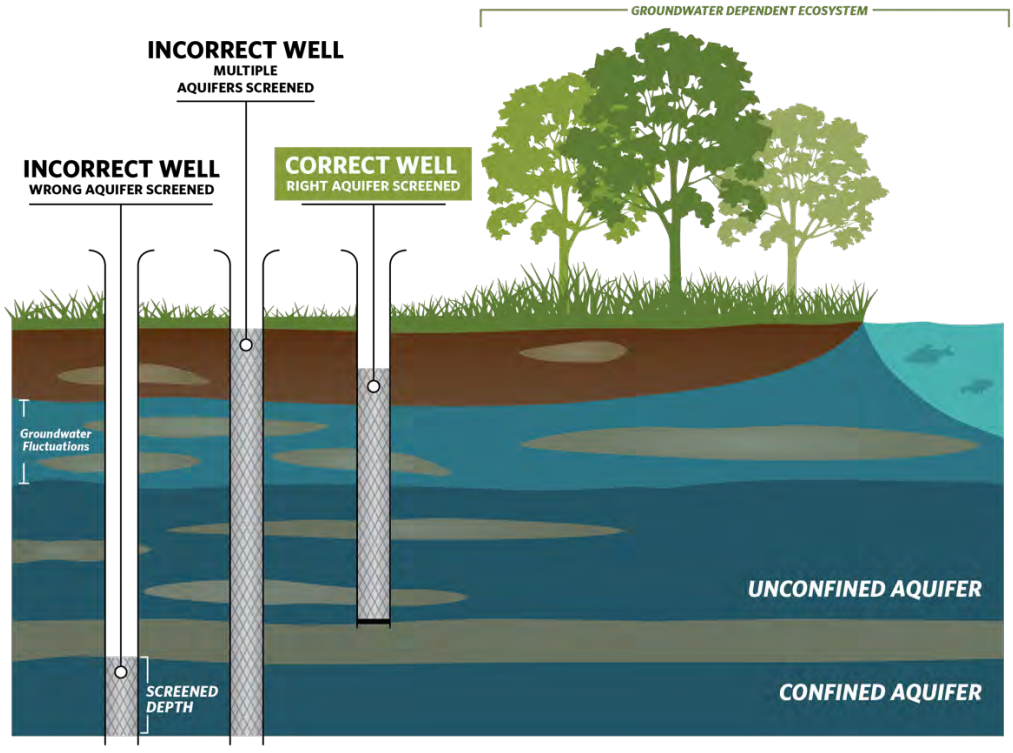


Figure 5. Selecting representative wells to characterize groundwater conditions near GDEs.

BEST PRACTICE #5. Contouring Groundwater Elevations

The common practice to contour depth-to-groundwater over a large area by interpolating measurements at monitoring wells is unsuitable for assessing whether an ecosystem is supported by groundwater. This practice causes errors when the land surface contains features like stream and wetland depressions because it assumes the land surface is constant across the landscape and depth-to-groundwater is constant below these low-lying areas (Figure 6a). A more accurate approach is to interpolate groundwater elevations at monitoring wells to get groundwater elevation contours across the landscape. This layer can then be subtracted from land surface elevations from a Digital Elevation Model (DEM)[11] to estimate depth-to-groundwater contours across the landscape (Figure b; Figure 7). This will provide a much more accurate contours of depth-to-groundwater along streams and other land surface depressions where GDEs are commonly found.

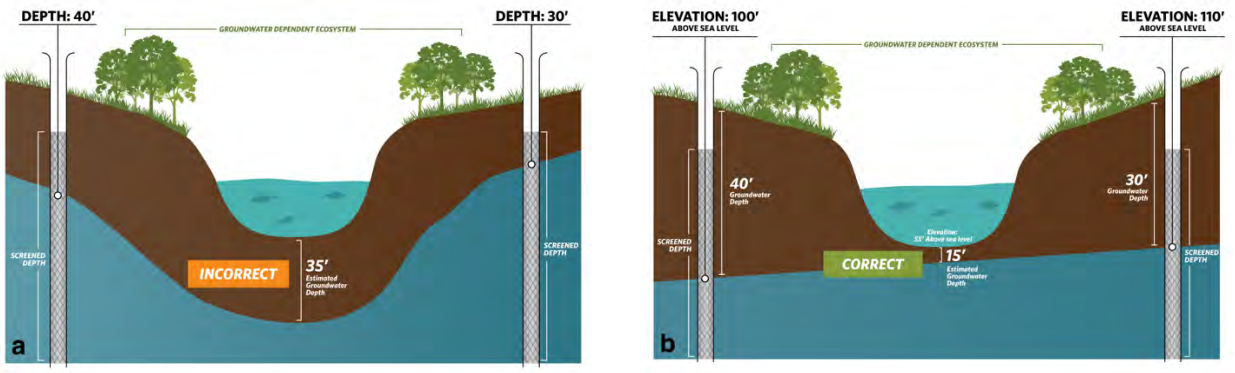


Figure 6. Contouring depth-to-groundwater around surface water features and GDEs. (a) Groundwater level interpolation using depth-to-groundwater data from monitoring wells. (b) Groundwater level interpolation using groundwater elevation data from monitoring wells and DEM data.

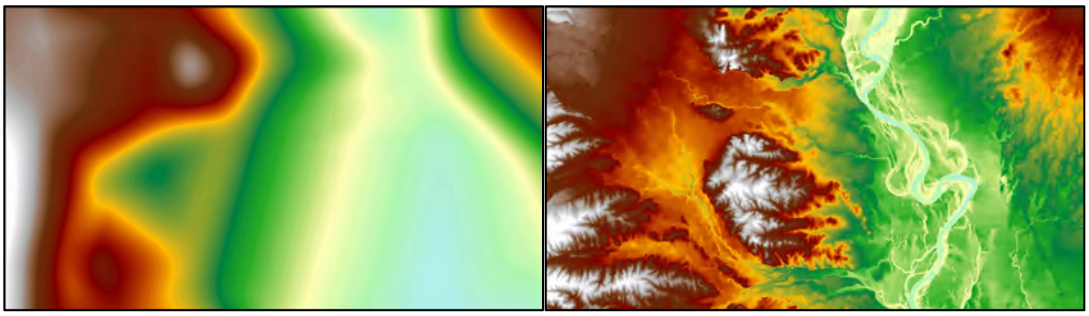


Figure 7. Depth-to-groundwater contours in Northern California. (Left) Contours were interpolated using depth-to-groundwater measurements determined at each well. (Right) Contours were determined by interpolating groundwater elevation measurements at each well and superimposing ground surface elevation from DEM spatial data to generate depth-to-groundwater contours. The image on the right shows a more accurate depth-to-groundwater estimate because it takes the local topography and elevation changes into account.

[11] USGS Digital Elevation Model data products are described at: https://www.usgs.gov/core-science-systems/ngp/3dep/about-3dep-products-services and can be downloaded at: https://iewer.nationalmap.gov/basic/

BEST PRACTICE #6. Best Available Science

Adaptive management is embedded within SGMA and provides a process to work toward sustainability over time by beginning with the best available information to make initial decisions, monitoring the results of those decisions, and using the data collected through monitoring programs to revise decisions in the future. In many situations, the hydrologic connection of NC dataset polygons will not initially be clearly understood if site-specific groundwater monitoring data are not available. If sufficient data are not available in time for the 2020/2022 plan, The Nature Conservancy strongly advises that questionable polygons from the NC dataset be included in the GSP until data gaps are reconciled in the monitoring network. Erring on the side of caution will help minimize inadvertent impacts to GDEs as a result of groundwater use and management actions during SGMA implementation.

KEY DEFINITIONS

Groundwater basin is an aquifer or stacked series of aquifers with reasonably well-defined boundaries in a lateral direction, based on features that significantly impede groundwater flow, and a definable bottom. *23 CCR §341(g)(1)*

Groundwater dependent ecosystem (GDE) are ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface. *23 CCR §351(m)*

Interconnected surface water (ISW) surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted. *23 CCR §351(o)*

Principal aquifers are aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to wells, springs, or surface water systems. *23 CCR §351(aa)*

ABOUT US

The Nature Conservancy is a science-based nonprofit organization whose mission is *to conserve the lands and waters on which all life depends*. To support successful SGMA implementation that meets the future needs of people, the economy, and the environment, TNC has developed tools and resources (www.groundwaterresourcehub.org) intended to reduce costs, shorten timelines, and increase benefits for both people and nature.

Attachment E

Maps of representative monitoring sites in relation to key beneficial users

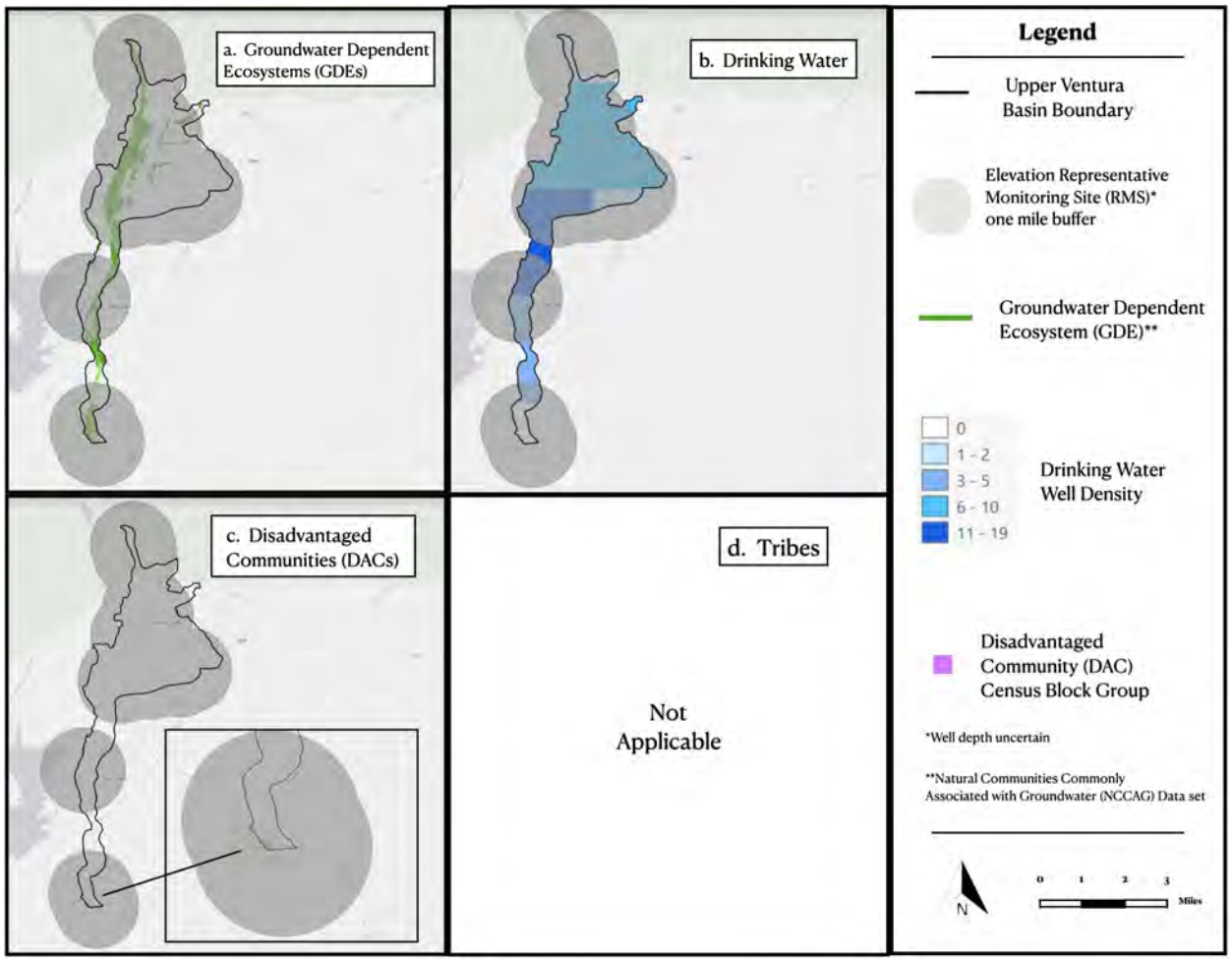


Figure 1. Groundwater elevation representative monitoring sites in relation to key beneficial users: a) Groundwater Dependent Ecosystems (GDEs), b) Drinking Water users, c) Disadvantaged Communities (DACs), and d) Tribes.

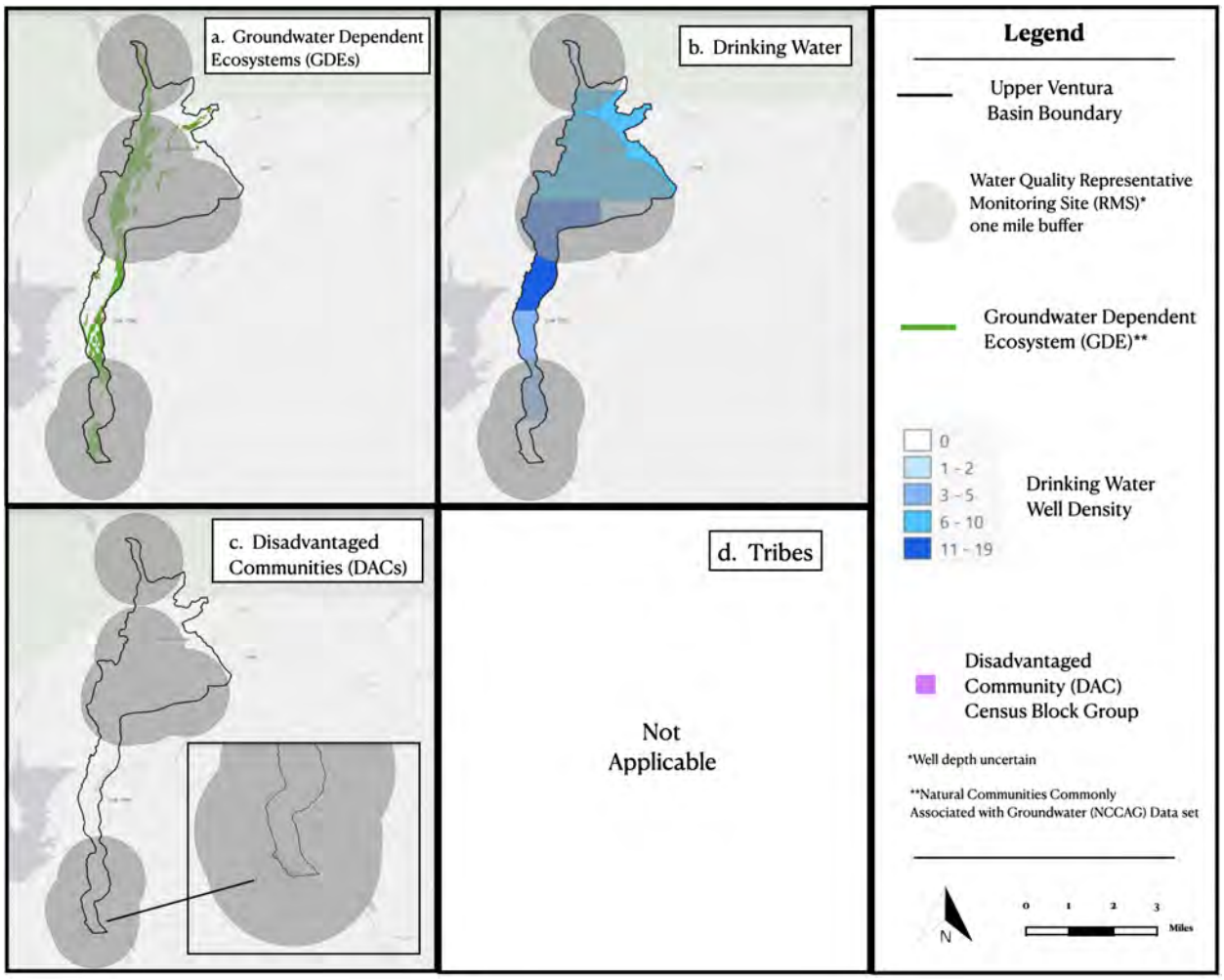


Figure 2. Groundwater quality representative monitoring sites in relation to key beneficial users: a) Groundwater Dependent Ecosystems (GDEs), b) Drinking Water users, c) Disadvantaged Communities (DACs), and d) Tribes.

PUBLIC WORKS VENTURA COUNTY

COUNTY of VENTURA

Jeff Pratt
Agency Director

David Fleisch
Assistant Director

Central Services **Joan Araujo**, Director | Engineering Services **Christopher Cooper**, Director | Roads & Transportation **Christopher Kurgan**, Director | Water & Sanitation **Joseph Pope**, Director | Watershed Protection **Glenn Shephard**, Director

October 8, 2021

Upper Ventura River Groundwater Agency
Attn: Mr. Bryan Bondy
202 W. El Roblar Dr.
Ojai, CA 93023

Subject: Public Comment Draft Upper Ventura River Valley Basin Groundwater Sustainability Plan

Dear Mr. Bondy:

Ventura County Public Works Agency, Watershed Protection (VCPWA-WP), appreciates the opportunity to review the Upper Ventura River Basin Groundwater Agency (UVRBGA) *Public Comment Draft Upper Ventura River Valley Basin Groundwater Sustainability Plant* (Draft) dated August 2021. Following are our comments:

49 On page ES-xi, a table such as Table 3.3.03 would be helpful to summarize demands and supplies and to provide a usage order of magnitude. It would also be helpful to provide a brief discussion of climate change assumptions (order of magnitude / %changes in precipitation / ET, etc.).

50 On page ES-xii, table ES-01, an explanation should be provided as to why the surface water historical total in/out (48,025-AFY) is lower than the current/projected in out (86,241/96,474-AFY).

51 On page ES-xiv, the well on which the groundwater levels in the hydrograph shown in Fig. ES-11 should be identified.

52 On Page ES-xxii, the Municipal and Industrial (M&I) and Agricultural (Ag) water use efficiency and Casitas Municipal Water District (CMWD) proposed projects to bridge the 5,160-AFY yield gap should be added as described in Section 6.

53 Section 2.2.1 lists the source types of water for municipal and industrial, agricultural, and domestic uses. Are there any significant stream, channel or surface water diversions contributing to water supplies (aside from the Robles Diversion and the privately owned

53 agricultural diversion mentioned in Sections 3.1.1.2 and 4.9.1)? The Draft only lists diversions reported by the State Water Resources Control Board (SWRCB).

54 Section 2.2.2.2 should be revised to reflect that the CMWD's 2020 Urban Water Management Plan update was completed and formally adopted.

55 In Section 2.2.2.2, have there been any recent updates to the Regional Water Quality Control Board (RWQCB) total maximum daily loads (TMDLs) for the Ventura River and its tributaries? If so, these updates should be referenced in the text.

56 In Section 2.2.3.2, it may be useful to state that that the California Well Standards Bulletins are undergoing a technical advisory committee review at the time of the GSP was prepared.

57 A statement should be included in Section 2.3.1 that CMWD's Mira Monte well pumps less than 1% of the water supplied by CMWD.

58 In Sections 3.1, 3.1.3.1.3 and 3.1.3.2, despite the lower hydraulic conductivity of the Ojai Conglomerate, could this formation potentially connect any portions of the water-bearing alluvial sediments of the Upper Ventura River Valley Basin and the Ojai Valley Basin? If so, the Ojai Valley Basin could act as a source of groundwater recharge in Section 3.1.3.2.

59 In general, there are references throughout the text to the groundwater model in Appendix H. It would be helpful to include a summary of the model in GSP text.

60 Section 3.1.1.3 states that water is not imported to the Ventura River Watershed. It may be appropriate to note the planned CMWD interconnect project with Carpinteria Valley Water.

61 Sections 3.1.3.3, 3.2.4 and 4.7 discuss the elevated concentrations of nitrates in the Mira Monte/Meiners Oaks Area. It should be noted that Ventura County discretionary planning reviews consider the RWQCB Basin Plan groundwater quality objectives and groundwater beneficial uses as pertains to potential development and proposed projects.

62 On page 70, last paragraph, climate change is anticipated to change the timing and duration of precipitation events and could influence the year-to-year surface and groundwater budgets. It is suggested to rephrase or acknowledge what is anticipated from climate change, but note that there is a large level of uncertainty.

63 On page 77 and Table 3.3-03 – While estimated Municipal and Industrial (M&I) demands have decreased over time, Agricultural (Ag) demands have stayed constant and therefore start to represent a larger portion of total demand. Discussion should be included about how this is addressed in the future water demands.

64 Table 3.3-03 shows annual Ag demands at 505 AFY, while Table 3.3-06 has a more specific Ag pumping demand. Is the difference due to Ag surface water deliveries? This should be clarified.

65 On page 78 – Reliability of Historic Surface Water Deliveries, information should be added on how CMWD estimates planned deliveries. Regarding the following text: "The surface water supply was deemed reliable because demands were less than projected for much of the historical period and the surface water supply was less than the safe yield of the reservoir, as it was understood at the time" and "the reservoir safe yield has been re-assessed to be 10,660 AF/yr for Lake Casitas (now called "safe demand"), as discussed in Sections 3.3.2 and 3.3.3.2."

1. The first sentence above is not necessarily accurate since not all of Lake Casitas water is delivered to the Upper Ventura River (UVR). If the other CMWD demands increase, UVR deliveries could potentially decrease.
2. Did the "Safe Demand" estimate incorporate the climate change effects as outlined in this Draft? What is the estimated portion to be delivered to the UVR if the supply is limited to the "Safe Demand"?

66 On page 79, second paragraph, clarify if stream outflows from individual streams make up 83% of the total groundwater model domain inflows.

67 On page 82 – Average 2006-2016 "M&I GW Supplies" of 845 AFY in Table 3.3-03 "Estimated Historical Demands and Supplies in the UVRGB by Category and Source" are much less than the average 2006-2016 "M&I Pumping" of 4,707 AFY in Table 3.3-06 "UVRGB Groundwater Inflows and Outflows by Water Year, Historical and Current Period." Is this due to M&I exports out of the basin? If so, there should be a note on Table 3.3-03 similar to the note on Ag groundwater exports. Otherwise, this discrepancy needs to be explained.

68 On pages 87-88, per Table 3.3-03, are M&I demands appropriately estimated, given the likelihood of multiple-dry year conditions?

69 On page 88, in the last paragraph, there is a significant gap between the CMWD safe demand and project demand. What portion of the gap applies to UVR? Is the schedule to close this gap within the next 10 years overly optimistic?

70 Page 90 relates the conclusions from Baseline vs Climate Change. What is the frequency of ENSO/PDO events? Can it be stated that the size of the basin and its responsiveness to changes in precipitation/runoff such that the higher rain fall events of ENSO/PDO rapidly refill the basin?

71 On page 102, top paragraph, the statement "Modeling projections for the GSP suggest that the proposed minimum thresholds may be occasionally exceeded at some monitoring

71 locations (Appendix Q). However, the criterion for undesirable results is not predicted to be triggered during the 50-year GSP implementation period" seems contradictory and potentially weakens the selection of MTs.

72 On page 115, second Paragraph, "…and UVRGA determines that exceedances are caused by groundwater pumping." The criteria for making this determination should be identified.

73 Section 4.7.2.4 discusses the increased costs for treatment of groundwater to meet water quality objectives for municipal beneficial users. This is an important issue, especially within the Meiners Oaks Water District's pumping areas.

74 On page 132, top paragraph, consider using groundwater levels for measuring this SCM (in addition to flows). Measurement may be implied with the addition of new wells, but it is not sufficiently described in this section.

75 On page 142, Section 5.3, additional detail would be helpful regarding the spatial and temporal extent of the monitoring network. Although the GSP network may meet the DWR BMP guidance for well density, the Miramonte/Meiners Oaks area is lacking in monitoring locations. This could be a data gap with an additional well be needing to be identified in this area.

76 Does the Draft address amending the Plan at the five-year assessment to reflect any revisions or modifications made to the RWQCB Water Quality Objectives (Section 5.2)? The Draft discusses potential modification to monitoring networks if there are significant changes in pumping patterns or groundwater quality.

77 Section 6.2 states the UVRGA will attempt to survey domestic well owners in the Basin. The survey will be designed to collect information from the well owners about well status, construction, usage, etc. VCPWA-WP oversees compliance with the County Well Ordinance (No. 4468). UVRGA should notify VCPWA-WP if a well is surveyed and does not comply with the County Well Ordinance.

78 No mention is made of the CMWD proposed projects to increase water conservation and new water supply to bridge the 5,160 AFY gap in the loss of yield from Lake Casitas. The magnitude of impact of the 5,160-AFY to the UVR should also be documented.

79 The Draft does not discuss any anticipated effects on the Basin from the future removal of the Matilija Dam. It might be beneficial to discuss the impacts to the Basin after execution and completion of the project, likely to occur during the 20-year measurable objectives achievement period (Section 7.1.6).

If you should have any questions, please contact James Maxwell at james.maxwell@ventura.org or (805) 654-5164, or me at kim.loeb@ventura.org or (805) 650-4083.

Sincerely,

Kimball R. Loeb, PG, CEG, CHG
Manager, Groundwater Resources Section
Water Resources Division

C: Jeff Pratt, Director, Ventura County Public Works
Glenn Shephard, Director, Ventura County Public Works, Watershed Protection
Arne Anselm, Deputy Director, Ventura County Public Works, Water Resources

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Bryan Bondy

From: Upper Ventura River Groundwater Agency <sward@uvrgroundwater.org>
Sent: Friday, October 8, 2021 4:24 PM
To: Summer Ward
Subject: GSP Comment/Question

GSP Comment/Question Form

Last Name:	Pitterle	Santa Barbara Channelkeeper Comments (10-8-2021)
First Name:	Benjamin	
Email Address:	ben@sbck.org	
Confirm Email Address:	ben@sbck.org	
Phone:		
Mailing Address:	Santa Barbara Channelkeeper	
GSP Section for Comment/Question:	80	4.4 Chronic Downing of Groundwater Levels
GSP Comment/Question:		Chronic Lowering of Groundwater Levels The GSP used the lowest recorded historical groundwater level outlier as the groundwater level and storage minimum threshold. The stated purpose of establishing this threshold is to prevent significant and unreasonable effects that include causing municipal, domestic, or agricultural beneficial users to be unable to meet basic water supply needs with groundwater or alternative supplies, or permanent or prolonged impacts to riparian GDEs. We note that the ability to pump groundwater from the Robles reach is routinely disrupted during drought for many water rights holders in the basin including the existing municipal water districts. These purveyors rely significantly if not entirely during drought years on alternative supply from Lake Casitas. Lake Casitas is currently critically reduced in capacity. In light of these circumstances and the risk of increased frequency of drought due to climate change, we find the selection of the lowest recorded historical groundwater level in appropriate as a minimum threshold to prevent undesirable effects to water supplies related to chronic lowering of groundwater levels.
Would you like to join the UVRGA Official Interested Parties List?:	Yes	

Beneficial Uses:

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Bryan Bondy

From: Upper Ventura River Groundwater Agency <sward@uvrgroundwater.org>
Sent: Friday, October 8, 2021 4:21 PM
To: Summer Ward
Subject: GSP Comment/Question

GSP Comment/Question Form

Last Name:	Pitterle
First Name:	Benjamin
Email Address:	ben@sbck.org
Confirm Email Address:	ben@sbck.org
Phone:	
Mailing Address:	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103
GSP Section for Comment/Question:	81
GSP Comment/Question:	4.9 Depletions of Interconnected Service Water Foster Park Flow Protocols The "Foster Park Flow Protocols" are not based on the best available science. Santa Barbara Channelkeeper negotiated the protocols with the City of Ventura as a means to provide "life support" for the lower reaches until a final outcome is reached with the Ventura River Watershed Adjudication. The State Water Board's groundwater and surface water model was not available when the protocols were developed. The California Department of Fish and Wildlife's instream flow recommendations for the Ventura River were not available when the protocols were developed. Based on current implementation of the protocols in 2021, extractions at Foster Park continued to take place even though river flows in the reach dropped below 2 CFS for prolonged periods of time. 2 CFS was identified by the City of Ventura's own 2013 Hydrology Study as a critical threshold below which is detrimental to critical habitat conditions. The "Foster Park Flow Protocols" do not have the endorsement of State and Federal resource agencies. For these reasons, the GSP should not rely on long-term implementation of the "Foster Park Flow Protocols" to ensure that undesirable results do not occur.

Would you like to join the UVRGA Official Interested Parties List?: Yes

Beneficial Uses:

This email was built and sent using Visual Form Builder.

Bryan Bondy

From: Upper Ventura River Groundwater Agency <sward@uvrgroundwater.org>
Sent: Friday, October 8, 2021 4:13 PM
To: Summer Ward
Subject: GSP Comment/Question

GSP Comment/Question Form

Last Name:	Pitterle
First Name:	Benjamin
Email Address:	ben@sbck.org
Confirm Email Address:	ben@sbck.org
Phone:	
Mailing Address:	Santa Barbara Channelkeeper 714 Bond Avenue Santa Barbara, CA 93103 United States of America
GSP Section for Comment/Question:	82 4.9 Depletions of Interconnected Service Water
GSP Comment/Question:	GDE Analysis The GSP has not adequately demonstrated that permanent and prolonged impacts to GDEs have not already occurred in the Robles reach due to historic groundwater extractions. Rather, the GSP essentially asserts that the Robles reach is not a GDE because certain riparian vegetation communities were not identified in the GSA's recent analysis. Significant groundwater extractions, however, have been occurring for many decades. Such extractions and any related depletions of surface water would likely have significant impact on any riparian vegetation that may have been present during the period analyzed during GSP development. Channelkeeper echoes comments submitted by the Surfrider Foundation, Ventura Chapter as they related to the GDE analysis included in the draft GSP. These comments are reiterated below: "The Riparian Groundwater Dependent Ecosystems Assessment Report characterizes the Robles reach as a "Losing reach with generally disconnected groundwater- surface water." This categorization eliminates the majority of this Groundwater Dependent Ecosystem from consideration under SGMA by assuming that it is

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83 “disconnected” and thus has too great a depth to groundwater to support riparian habitat. Other reaches are similarly dismissed. The analysis presented relies heavily on the Nature Conservancy “Natural Communities (NC) Dataset,” using

84 vegetation communities to eliminate GDE polygons from the Upper Ventura River Groundwater Basin. The NC dataset is a statewide geographic computer database that maps vegetation types in all potential GDEs throughout the State of California. The large geographic scope of this map does not accurately represent current on-the-ground conditions, and more robust ground truthing should be undertaken. Even the aerial photos presented tell a different story than is acknowledged in the narrative. Unfortunately, the UVRGSA analysis does not fully implement the Best Practices for

85 using the NC Dataset guidance provided by the Nature Conservancy, which presents six best practices for using local groundwater data to confirm whether mapped features in the NC dataset are supported by groundwater. (Best Practices for using the NC Dataset, TNC July 2019) According to this guidance: While depth-to-groundwater levels within 30 feet of the land surface are generally accepted as being a proxy for confirming that polygons in the NC dataset are supported by groundwater, it is highly advised that fluctuations in the groundwater regime be characterized to understand the seasonal and interannual groundwater variability in GDEs. (see Best Practice #2.) one of the key factors to consider when mapping GDEs is to contour depth-to-groundwater in the aquifer that is supporting the ecosystem (see Best Practice #5). The GIS Spatial Analysis of Maximum Rooting Depth and Groundwater Level presented in the Riparian GDE document does not present such contour depth-to-groundwater mapping or account for temporal variability. Furthermore, TNC

86 guidance acknowledges that; In many situations, the hydrologic connection of NC dataset polygons will not initially be clearly understood if site-specific groundwater monitoring data are not available. If sufficient data are not available in time for the 2020/2022 plan, The Nature Conservancy strongly advises that questionable polygons from the NC dataset be included in the GSP until data gaps are reconciled in the monitoring network. Erring on the side of caution will help minimize inadvertent impacts to GDEs as a result of groundwater use and management actions during SGMA implementation. Many of California’s GDEs have adapted to dealing with intermittent periods of water stress, however if these groundwater conditions are prolonged, adverse impacts to GDEs can result. Therefore, it is likely that the NC vegetation mapping is representative of conditions in which groundwater levels have been frequently and repeatedly pumped beyond the reach of riparian tree roots. Meanwhile, field observations over the past few wetter years show that the riparian vegetation has rebounded, illustrating how the ecosystem responds with the variation in water years. Receding groundwater levels and corresponding loss of surface flows due to pumping during the current drought will likely reverse this recent trend, with the potential loss of the many young sycamores and other riparian vegetation.

87 Determining Groundwater/Surface water interactions TNC guidance for determining GDEs recognizes the importance of surface flows; In addition, SGMA requires that significant and undesirable adverse impacts to beneficial users of surface water be avoided. Beneficial users of surface water include environmental users such as plants or animals, which therefore must be considered when developing minimum thresholds for depletions of interconnected surface water. The Model Results and SMC Implications Presentation (March 25, 2021) reaches the conclusion that: • Basin water budget is dominated by streamflow percolation into the Basin and groundwater discharge to Ventura River • GW pumping averages only ~10% of the GW Budget As low as 4% in wet years Up to 31% in dry years • Basin GW levels will be lower in dry seasons, but Basin will still re-fill in normal to wet years The conclusion that there is no impact from pumping based on the fact that the basin rapidly refills in the wet season points to the likelihood that the surface water is in fact “connected” to groundwater during these periods. Moreover, the fact that pumping represents up to 31% of

87 the budget in critical dry years raises the question of how groundwater extractions impact surface flows and groundwater levels. The Model Results identify four areas of concentrated pumping, three of which directly impact groundwater levels in the "Robles Reach." This reach is the area with the most storage in the basin, and should be

88 considered as the "primary sub-basin" for water supply. The three areas of concentrated pumping in this reach are likely to affect conditions throughout the basin. The analyses and graphs presented in the Model Results do not provide

89 information on the spacial and temporal surface flow conditions as they relate to groundwater levels. Because the downstream reaches are largely dependent on surface and groundwater flows out of this sub-basin, further analysis is needed to more clearly define the relationship between groundwater levels and surface flows. The analyses should, at a minimum, determine threshold groundwater levels at which surface flows are diminished or eliminated, both in the reach being monitored and downstream. This relationship was established decades ago in the Ventura River Conjunctive Use Report (1978) which states that; Flows in the live stretch are affected by both the rate of recharge of the upper part of the Ventura River groundwater basin and by the rate of groundwater extraction from wells in the river. Investigations published in the Conjunctive Use Report identified groundwater elevation thresholds in the upper basin at which flows in the live reach will cease; when the water level in well 4N23Wl6C4 falls below Elevation 495, surface flow in much of the live stretch stops although some pools remain. A flow of 1 cfs or more in the live stretch corresponds with a water level in this well of greater than about Elevation 507. Groundwater levels also affect surface flows in the Robles Reach,

90 which frequently dries up despite constant inflows. Unfortunately, the Aquatic GDE Impact Analysis is quick to dismiss the effect of groundwater elevation on surface flows; No monitoring is recommended at either of the critical riffle aquatic GDEs or the Robles Habitat Area, as impacts from pumping in these areas were determined to be minimal or non-existent. This conclusion is inconsistent with the guidance provided in Monitoring Networks and Identification of Data Gaps BMP (DWR 2016) which states: 23 CCR §354.34(c))(6): Depletions of Interconnected Surface Water. Monitor surface water and groundwater, where interconnected surface water conditions exist, to characterize the spatial and temporal exchanges between surface water and groundwater, and to calibrate and apply the tools and methods necessary to calculate depletions of surface water caused by groundwater extractions. The monitoring network shall be able to characterize the following: (A) Flow conditions including surface water discharge, surface water head, and baseflow contribution. (B) Identifying the approximate date and location where ephemeral or intermittent flowing streams and rivers cease to flow, if applicable. (C) Temporal change in conditions due to variations in stream discharge and regional groundwater extraction. (D) Other factors that may be necessary to identify adverse impacts on beneficial uses of the surface water. DWR guidance provides detailed information on developing a monitoring network to accurately assess these concerns." Confluence Area GDE The Draft GSP accurately identifies the Confluence Area as a

91 GDE. The GSP, however, falls short in its determination that more years of study are necessary to determine if surface flow depletions caused by upstream pumping are significant and unreasonable. The confluence area is critical habitat for federally endangered Southern California steelhead trout. Steelhead have been observed over-summering in pools within this reach by state and local resource agencies. Surface water habitat and water quality conditions degrade significantly (to the point of complete dewatering) in this reach due to depletions of interconnected groundwater in the Robles reaches. The numeric model utilized to determine the effect of pumping on surface flows in the Confluence Area is not based on the best available science, which includes the State Water Resource Control Board's Groundwater and Surface Water model, currently well under development. "Direct" Depletions of Surface Water The GSP defines the

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92	terms “direct” and “indirect” depletion with regard to depletion of interconnected surface waters. Direct depletion is defined as surface water depletion caused by a cone of depression from pumping wells near the Ventura River. The GSP, however, then continues to identify only the Foster Park Well field as a facility causing direct depletion. Multiple, major water extraction facilities are located in the Robles reach of the Upper Ventura River Basin. These facilities utilize wells located in direct proximity of the Ventura River. Pumping from these wells has the potential to create a cone of depression that could deplete surface flows. The Robles Reach historically receives perennial inflows from the upper Ventura River and its Matilija Creek and North Fork Matilija Creek tributaries. These inflows persist even during prolonged periods of drought. The GSP has not provided adequate evidence to support its assertion that most groundwater in the basin “naturally” drains out of the basin at a rate greater than inflows. In any case, pumping from wells located within the basin and within immediate proximity of the Ventura River clearly have the capacity to produce cone of depression effects that can reduce and eliminate surface flows earlier than may naturally occur absent pumping. Such reduction in flows could have significant effects on riparian habitat and aquatic communities within the Robles Reach and downstream.

Would you like to join the UVRGA Official Interested Parties List?: Yes

Beneficial Uses:

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General Comments received from CMWD 10-13-2021

CASITAS Municipal Water District

October 13, 2021

Brian Bondy, Executive Director
Upper Ventura River Groundwater Sustainability Agency

Sent via email to bbondy@uvrgroundwater.org

Subject: Comments on the UVRGSA Draft Groundwater Sustainability Plan

Dear Mr. Bondy:

Thank you in advance for accepting these comments and allowing for Casitas' Board of Directors review prior to submittal to the Upper Ventura River Groundwater Sustainability Agency (UVRGSA). Casitas Municipal Water District (Casitas) has the following comments on the UVRGSA's Draft Groundwater Sustainability Plan (Draft GSP) published August 2021. In general, the comments are clarifications and updates to descriptive text relating to water supplies and facilities managed by Casitas.

Page ES-iv, and Pages 9-10
Please revise the language to be based on most recent planning documents as follows.

> *Current Draft GSP Language:*
> *CMWD operates Lake Casitas, which provides approximately ⅔ of the water supply in the Basin. CMWD operates Lake Casitas pursuant to its combined 2015 Urban Water Management Plan (UWMP) and Agricultural Water Management Plan (2020 update of UWMP in progress).*
>
> *CMWD is also currently working on a Comprehensive Water Resources Plan (draft as of June 2020) that identifies the safe demand for its water supplies and identifies projects to address the gap between supply and demand for implementation over the next 10 years. Implementation of this plan is expected to address CMWD's anticipated supply gap, thereby preventing increased reliance on groundwater supply which would otherwise potentially impact UVRGB operational flexibility.*
>
> *Revised Language:*
> *CMWD operates Lake Casitas, which provides approximately ⅔ of the water supply in the Basin. CMWD's 2020 Urban Water Management Plan (UWMP) is a long-term planning document comparing supplies and demands over the next 20 years. The 2020 UWMP outlines reliability of existing and planned water sources, demand management measures, progress toward meeting the State's demand reduction goals, and water shortage contingency plans. During droughts, Casitas manages its supplies with its Water*

Efficiency and Allocation Program (WEAP), which uses a water allocation system to manage demands based on water supply conditions.

Page 33-34

Please revise the language as follows, reflecting that the dry reach begins upstream of the Robles Diversion based on Casitas' observations and mapping shown in Figure 3.2-12 of the Draft GSP.

Current Draft GSP Language:

Just past the Robles Diversion (at Gage 607) the Ventura River has very low flows (and is often dry) in the summer and early fall months. These dry conditions are typical in the Robles and Santa Ana Areas, except during stormflows in much of the Ventura River. In general, flows are generally highest in the months of January to March and are generally lowest August through October.

Revised Language:

Beginning just upstream of the Robles Diversion and at Gage 607 (located just past the Robles diversion), the Ventura River has very low flows (and is often dry) in the summer and early fall months. These dry conditions are typical in the Robles and Santa Ana Areas, except during stormflows in much of the Ventura River. In general, flows are generally highest in the months of January to March and are generally lowest August through October.

Page 35

Please revise the language as follows:

Current Draft GSP Language:

Casitas Reservoir is the largest reservoir within the watershed. The Casitas Dam was constructed in 1959 by the United States Bureau of Reclamation (USBR), providing a maximum storage capacity of 254,000 AF (Entrix, 2001) with a long-term average demand of 17,500 AF (VRWC, 2015). Water is diverted from the Ventura River via the Robles Diversion and delivered to the reservoir through the Robles Diversion Canal, a concrete-lined 5.4-mile canal (EDAW, 1978). The diversion works consist of a cutoff wall, forebay basin, spillway, fish passage structures, and diversion canal to Casitas Reservoir (CMWD, 2005). Typically, a little less than half of the reservoir supply comes from the Ventura River. Runoff from Coyote and Santa Ana sub-watersheds provides the remainder of its supply (Entrix, 2001). Diversions from Ventura River to Casitas Reservoir are typically from January to March when the river flows are sufficient to meet certain operational regulatory requirements designed to address upstream steelhead migration impediments between the diversion works and just north of the Santa Ana Boulevard bridge. The diversion system has a nominal capacity of 500 cfs (CMWD, 2021). Environmental considerations and physical operating conditions govern operation of the diversion structure under different hydrologic situations. The Biological Opinion (BO) from the National Marine Fisheries Service (adopted in 2004) modified previous requirements for passage of flows for fish habitat. This was further modified during the recent drought to allow increased diversions to the Lake when storage levels in the Lake are low (CMWD,

2021). Within the Migration Period (Jan. 1st to June 30th) outlined in the BO, available flows above 30 cfs up to 500 cfs can be diverted down the Robles Canal, with flows at or below 30 cfs, bypassing the diversion structure and flowing downstream. Additional diversion rules are applied to maintain flows during and after stormflow events within the fish migration season. Outside of the migration period (July 1 to December 31), available flows over 20 cfs up to 500 cfs can be diverted down the Robles Canal.

Water from the Lake Casitas Reservoir is the primary water supply for many users in the Basin. Lake Casitas' water is also blended with poorer quality groundwater to improve water quality and extend supplies (VRWC, 2015). The reservoir is carefully managed to maintain supplies during a dry period equivalent to the historical 21-year dry period from 1945 to 1965, the longest dry period on record. While the lake has not yet been put to a "21-year dry period test," it has been a reliable source of water in many multi-year dry periods when numerous wells were dry and there was little flow in the Ventura River (VRWC, 2015).

Revised Language:
Lake Casitas is the largest storage reservoir within the watershed. Casitas Dam was constructed in 1959 by the United States Bureau of Reclamation (USBR), with a current maximum storage capacity of 238,000 AF. Water is diverted from the Ventura River via the Robles Diversion and delivered to the reservoir through the Robles Diversion Canal, a concrete-lined 5.4-mile canal (EDAW, 1978). The diversion works consist of a cutoff wall, forebay basin, spillway, fish passage structures, and diversion canal to Lake Casitas (CMWD, 2005). Typically, a little less than half of the reservoir supply comes from the Ventura River. Runoff from Coyote and Santa Ana sub-watersheds provides the remainder of its supply (Entrix, 2001). Diversions from Ventura River to Lake Casitas are typically from January to March when the river flows are sufficient to meet certain operational regulatory requirements designed to address upstream steelhead migration impediments between the diversion works and just north of the Santa Ana Boulevard bridge. The diversion system has a nominal capacity of 500 cfs (CMWD, 2021). Environmental considerations and physical operating conditions govern operation of the diversion structure under different hydrologic situations. The Biological Opinion (BO) from the National Marine Fisheries Service (adopted in 2004) modified previous requirements for passage of flows for fish habitat. This was further modified during the recent drought to allow increased diversions to Lake Casitas when storage levels are low (CMWD, 2021). Within the steelhead migration season (Jan. 1st to June 30th) outlined in the BO, available flows above 30 cfs up to 500 cfs can be diverted down the Robles Canal, with flows at or below 30 cfs, bypassing the diversion structure and flowing downstream. Additional release rules are applied to maintain flows during and after stormflow events with downstream releases of up to 171 cfs.. Outside of the migration season (July 1 to December 31), available flows over 20 cfs up to 500 cfs can be diverted down the Robles Canal.

Water from the Lake Casitas Reservoir is the primary water supply for many users in the Basin. Lake Casitas' water is also blended with poorer quality groundwater to improve water quality and extend supplies (VRWC, 2015). The reservoir is carefully managed to maintain supplies during a an extended dry period, and planned operations are based on hydrologic modeling that incorporates a historic 21-year dry period, future climate change

impacts, and the National Marine Fisheries Service 2003 non-jeopardy Steelhead Trout Biological Opinion for the Robles Diversion and Fish Passage Facility. Lake Casitas has been a reliable source of water in many multi-year dry periods when numerous wells were dry and there was little flow in the Ventura River (VRWC, 2015).

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Regarding the language below describing availability of gage 607 data, please note that the data is now available through 2020 on Casitas' website: https://www.casitaswater.org/for-customers/fisheries-program.

Streamflow data along the Ventura River are available at the 607 gage (located just downgradient of the Robles Diversion) and the Foster Park station (gage 608). While continuous and recent streamflow data is available from the Foster Park station, data from gage 607 was not available past 2017 due to delays in reporting by CMWD. This is not considered a significant data gap or uncertainty. These data will be incorporated into the modeling when CMWD publishes.

Page 64

Please revise the language as follows, reflecting that the dry reach begins upstream of the Robles Diversion based on Casitas' observations and mapping shown in Figure 3.2-12 of the Draft GSP.

Draft GSP Language:
The Ventura River within the Robles Area is mostly dry south of the Robles Diversion, except under stormflow conditions, when flows in the Ventura River exceed the infiltration rate along the riverbed.

Revised Language:
The Ventura River within the Robles Area is mostly dry starting just upstream of the Robles Diversion, except under stormflow conditions, when flows in the Ventura River exceed the infiltration rate along the riverbed.

Page 78

Please revise the language as follows:

Draft GSP Language:
A 2004 Water Supply and Use Report (CMWD, 2004) quantified the safe yield for the reservoir to be 20,540 AF/yr based on a 21-year critically dry period – down from the original 28,000 AF/yr safe yield planned by the USBR in 1954. The 20,540 AF/yr safe yield was used in the 2005, 2010, and 2015 urban water management plans. As the drought beginning in 2012 progressed, demands decreased due to voluntary and mandatory conservation measures implemented by CMWD and its retail purveyors. These measures were implemented proactively to extend the supplies of Lake Casitas. More recently, the reservoir safe yield has been re-assessed to be 10,660 AF/yr for Lake Casitas (now called "safe demand"), as discussed in Sections 3.3.2 and 3.3.3.2.

Revised Language:
A 2004 Water Supply and Use Report (CMWD, 2004) quantified the safe yield for the reservoir to be 20,540 AF/yr based on a 21-year critically dry period – down from the original 28,000 AF/yr safe yield planned by the USBR in 1954. The 20,540 AF/yr safe yield was used in the 2005, 2010, and 2015 urban water management plans. As the drought beginning in 2012 progressed, demands decreased due to voluntary and mandatory conservation measures implemented by CMWD and its retail purveyors. These measures were implemented proactively to extend the supplies of Lake Casitas.

More recently, the Lake Casitas yield model was updated to include:

- *Extended hydrologic period of record of 1945-2018 (from previous of 1945-1999)*
- *Incorporated results of recent Lake Casitas bathymetric survey – reduced maximum storage capacity from 254,000 AF to 237,761 AF*
- *Added function to compute reservoir spills*
- *Incorporated Robles Diversion operations based on 2003 Biological Opinion requirements and 2018 Critical Drought Protection Measures*
- *Reduced modeled Robles diversions based on a diversion efficiency of 70 percent, consistent with operational data since the Fish Passage Facility was constructed*
- *Improved method of calculating monthly net evaporation loss*

On April 21, 2021, the Board of Director adopted a planned Casitas System operational yield of 15,010 AF/yr. The new operational yield is based on the updated modeling results, a -4.3 percent climate change adjustment based on the anticipated changes to precipitation, and a -15 percent supply safety factor to account for uncertainty in modeling assumptions. This updated yield was incorporated into CMWD's 2020 Urban Water Management Plan.

Page 82
Please revise the language as follows:

Draft GSP Language:
The current safe yield (also referred to as "safe demand") for Lake Casitas is 10,660 AF/yr. Average CMWD deliveries for the current period are close to the 10,660 AF/yr safe demand. Consistent with the historical evaluation (Section 3.3.1.1), the surface water supply was deemed reliable because demands were less than projected for much of the historical period and the surface water supply was less than the safe yield of the reservoir, as it was understood at the time.

Revised Language
The current operational yield for the Casitas System is 15,010 AF/yr. Average CMWD deliveries for the current period (2017 through 2019) were approximately 11,000 AF/yr. Consistent with the historical evaluation (Section 3.3.1.1), the surface water supply was deemed reliable for purposes of this GSP because water demands were less than projected for much of the historical period and water demands has stayed within the planned operational yield of the reservoir.

Page 88
Please revise the language as follows:

Draft GSP Language:
As discussed in Section 3.3.2, Lake Casitas current "safe demand" is estimated to be 10,660 AF/yr (CWRP report). The CMWD CWRP indicates a 5,160 AF supply gap between the reservoir safe demand and projected demands for the overall CMWD service area. However, CMWD's draft CWRP includes projects planned for implementation over the next decade to bridge the gap between "safe demand" and projected demands for Lake Casitas surface water supplies. This includes conservation measures to reduce future demands and projects to generate new water supplies. As such, with the planned future projects and conservation measures in CMWD's CWRP, surface-water deliveries to UVRGB are anticipated to be reliable through the 20-year GSP implementation period.

Revised Language
As discussed in Section 3.3.2, the current operational yield of the Casitas System is estimated to be 15,010 AF/yr (CMWD 2020 UWMP). The CMWD 2020 UWMP is a water supply planning document that projects demands and supplies over the next 20 years. This includes demand management measures as well as projects to generate additional water supplies. For purposes of this analysis, with the planned supplies and conservation measures in CMWD's 2020 UWMP, long-term surface-water deliveries to UVRGB are anticipated to be reliable through the 20-year GSP implementation.

If there are any questions in this regard, please do not hesitate to contact me at mflood@casitaswater.com or 805.649.2251, Ext. 111.

Sincerely,

Michael Flood
General Manager

c:

Appendix H

UVRGB Numerical Model Construction and Calibration Documentation

TENTATIVE FINAL

INTERA
GEOSCIENCE & ENGINEERING SOLUTIONS

BONDY
Groundwater Consulting, Inc.

TECHNICAL MEMORANDUM

To: The Upper Ventura River Groundwater Agency (UVRGA)

From: Abhishek Singh, PhD, PE; Nathan Hatch; Erick Fox; Steven Humphrey; INTERA Incorporated
Bryan Bondy, PG, CHG; Bondy Groundwater Consulting, Incorporated

Date: November 17, 2021

Re: **Upper Ventura River Basin Numerical Model Construction, Calibration, and Predictive Modeling Documentation**

1.0 INTRODUCTION

This technical memorandum provides the documentation for the numerical model constructed and calibrated for development of the groundwater sustainability plan (GSP) for the Upper Ventura River Groundwater Basin (UVRGB). The numerical model is referred to as the Upper Ventura River Groundwater Model (UVRGM).

The Sustainable Groundwater Management Act (SGMA) requires all groundwater and surface water models used for a GSP to meet the following standards (CCR 352.4(f)):

(1) The model shall include publicly available supporting documentation.

(2) The model shall be based on field or laboratory measurements, or equivalent methods that justify the selected values, and calibrated against site specific field data.

(3) Groundwater and surface water models developed in support of a Plan after the effective date of these regulations shall consist of public domain opensource software.

The UVRGM addresses the above-listed SGMA requirements. This memorandum provides the required supporting documentation. The model utilizes publicly available Unites States Geologic Survey (USGS) public-domain code MODFLOW and was developed using best available science and data for the UVRGB, including basin-specific groundwater field data such as geologic/lithologic data, geophysical data, streamflow, and groundwater levels. The UVRGM simulates key surface-water and groundwater processes within the UVRGB and simulates three-dimensional, transient groundwater levels and flows within the Basin. The model was calibrated to available historical (2005 – 2019) groundwater levels and

streamflow data and exceeds industry calibration standards. The model development and calibration process followed ASTM International (ASTM) standards D5447[1] and D5891[2].

The calibrated UVRGM was used to assess historical (2005 – 2019) groundwater levels, flows and depletions of surface water from the Ventura River and develop the historical water budget for the GSP. In addition, climate change datasets (provided by California Department of Water Resources (DWR) for SGMA planning purposes) and projections for future water use and pumping were incorporated into the model to develop predictive scenarios to assess the future water levels, river flows and depletions, and groundwater budget, as required by SGMA and the GSP Emergency Regulations.

2.0 BASIN SETTING AND HYDROGEOLOGY

Key figures from GSP Sections 3.1 and 3.2 are included here for reference. **Figures 2.1a** and **2.1b** show the surface geology and major fault systems within and surrounding the UVRGB (USGS, 2005, 2015). The UVRGB has been delineated into six hydrogeologic areas based on the hydrogeology, stratigraphy, and primary recharge and discharge processes, as shown in **Figure 2.2** (discussed in detail in GSP Section 3.1 and 3.2). **Figure 2.3** shows Ventura River flow conditions and areas with salient surface-water/groundwater interactions (discussed in detail in GSP Section 3.1 and 3.2).

3.0 MODEL DESIGN

MODFLOW-NWT (Niswonger et al., 2011) was selected as the numerical code for the UVRGM. MODFLOW is a finite-difference groundwater-flow code that solves the three-dimensional form of the continuity equation that governs flow through saturated porous media. The benefits of using MODFLOW include (1) MODFLOW incorporates the necessary physics of groundwater flow, which are the basis for the conceptual model (described in Sections 3 to 5 of this report); (2) MODFLOW is the most widely accepted groundwater flow code in use today; (3) MODFLOW was written and is supported by the USGS and is public domain; (4) MODFLOW is well documented (Harbaugh et al., 2000); (5) MODFLOW has a large user group; and (6) there are several mature graphical user interface programs written for use with MODFLOW.

MODFLOW-NWT is a Newton-Raphson formulation for MODFLOW-2005 (Harbaugh, 2005), which improves the solution of the unconfined groundwater-flow systems. MODFLOW-NWT treats nonlinearities of cell drying and rewetting by use of a continuous function of groundwater head (even under unsaturated conditions), rather than the discrete approach of drying and rewetting used by earlier versions of MODFLOW. Unlike older versions of MODFLOW that either inactivated unsaturated cells or used rewetting functions (that can introduce mass-balance errors and numerical instabilities), MODFLOW-NWT uses the "Upstream-Weighting" (UPW) package to calculate intercell conductances, hydraulic heads, and flow in (but not out of) unsaturated cells. MODFLOW-NWT was selected to simulate unconfined groundwater flow conditions. The solver used for the model was the Orthomin/stabilized conjugate-gradient χMD solver. Default values for solver settings, corresponding to

[1]ASTM D5447: Standard Guide for Application of a Numerical Groundwater Flow Model to a Site-Specific Problem
[2]ASTM D5981: Standard Guide for Calibrating a Groundwater Flow Model Application

"complex" models (see Niswonger et al., 2011, for details) were chosen for this model. Head- and flux-convergence tolerance were set at 0.1 ft and 5000 cubic feet per day (ft^3/day), respectively.

The MODFLOW datasets were developed to be compatible with Groundwater Vistas for Windows Version 8.04 (Rumbaugh and Rumbaugh, 2005). Groundwater Vistas was used to visualize model properties and results. Changes to static model properties (such as hydraulic conductivities and storage coefficients) were made in Groundwater Vistas. Spatio-temporal input packages (Stream Flow River (SFR), Well (WEL), Recharge (RCH), and EVapoTranspiration (EVT)) were created and modified using Python scripts outside Groundwater Vistas. Since the model utilizes input packages created outside Groundwater Vistas, it was run outside Groundwater Vistas using the Windows Command Prompt and the MODFLOW-NWT executable.

4.0 MODEL DOMAIN AND BOUNDARY CONDITIONS

Figure 4.1 shows the lateral model domain and the active (where groundwater levels and flow are simulated) areas within the model domain. Different colors show where one or both layers were active (see **Section 5.0** for details on model layering). The original basin boundary of the UVRGB was delineated in Bulletin 118 in 2003 (DWR, 2003). The boundary was modified (Kear, 2016) and approved by DWR in 2016. In general, the active model boundary corresponds to the 2016 DWR Basin boundary with a few exceptions described below. In select areas where the alluvium is very thin (10 feet [ft] or less), the model layers were inactivated which allows numerical convergence since thin cells that go dry can cause convergence issues with MODFLOW-NWT. This was done in the north-east edge of the Mira Monte/Meiners Oaks Area, where the Sespe and Coldwater Sandstone Bedrock units are shallow and outcrop along the edges of the basin. Select cells with thin and elevated alluvium (which goes dry during low water level conditions) along the periphery of the Ventura River floodplain were also inactivated to allow for improved convergence. The southern extent of the active model domain was extended south (shown by the dashed line in **Figure 4.1**) of the 2016 DWR Basin boundary to a mapped bedrock outcrop along the river, where groundwater underflows would be minimal (due to minimal alluvium thickness where bedrock outcrops).

The vertical extent of the model was defined based on the bottom and thickness of the younger and older alluvium (and Ojai Conglomerate in the Mira Monte/Meiners Oaks Area) within the UVRGB. Preliminary estimates of alluvium thickness within the UVRGB were obtained from a regional modeling study for the Ventura River Watershed being performed pursuant to the California Water Action Plan (Ventura River Instream Flow Program) (DBSA, 2020). Note, the alluvium includes the older alluvium, where present beneath younger alluvium, and the Ojai Conglomerate the bedrock formation in the Mira Monte/Meiners Oaks Area. Model calibration and available data indicate that Ojai Conglomerate has much lower permeability than the alluvial units. The alluvium bottom (and corresponding top of bedrock) mapping was revised and refined by incorporating high resolution ground surface elevation (Light Detection and Ranging - LIDAR) data and additional subsurface data from well construction records and studies. These studies include those by Fugro (2002, 2015), hydrogeologic investigations and studies (Hopkins, 2007; VCFCD, 1971; Entrix, 2001), published cross-sections (Fugro, 2002; Entrix, 2001), and basin-specific surface geology information (USGS, 2005, 2015). INTERA reviewed, analyzed, and made picks for the bedrock elevation from the well construction records and published cross-

sections. The prior alluvium bottom and thickness (DBSA, 2020) were validated against and revised, where necessary, to match the well picks and cross-sections. **Figure 4.2** shows the regional alluvium bottom received from the Ventura River Instream Flow Program modeling study (DBSA, 2020) along with the well logs and cross-sections where the alluvium bottom was validated or revised. **Figure 4.3** shows the bottom of the alluvium (top of bedrock), which forms the effective base of the groundwater model.

The UVRGB is surrounded by bedrock outcrops in the north, west, and south. In the east, the basin is separated from the Ojai Basin with a recognized groundwater and surface water divide. As such, no-flow boundaries were specified along the UVRGB boundaries in the model. Model boundary conditions within the active domain include groundwater recharge from and discharge to the Ventura River; recharge from precipitation and return flows; groundwater losses to evapotranspiration; and groundwater extractions. Groundwater recharge from percolating precipitation (discussed in **Section 6.1**) and return-flows (discussed in **Section 6.2**) was simulated using the MODFLOW RCH package (Harbaugh et al., 2000; Harbaugh, 2005), which applies a specified rate of recharge for each model stress period. Surface flows were simulated using the MODFLOW SFR2 package (Prudic et al., 2004; Niswonger and Prudic, 2005), which routes surface flows along the river channel and dynamically simulates surface-water/groundwater interactions based on the relative elevations of the Ventura River stage and groundwater table at each reach in the Ventura River (discussed in **Section 7.0**). Groundwater losses to evapotranspiration were simulated for the riparian vegetation within the Ventura River floodplain with the MODFLOW EVT package (Harbaugh et al., 2000; Harbaugh, 2005), which dynamically simulates groundwater uptake by vegetation based on a specified maximum evapotranspiration rate and the elevation of the groundwater table in relation to the rooting depth (discussed in **Section 8.0**). Groundwater pumping was simulated using the MODFLOW WEL package (Harbaugh et al., 2000; Harbaugh, 2005), which applies a specified extraction rate to each model cell with groundwater wells (discussed in **Section 9.0**). Note, that MODFLOW-NWT reduces groundwater extractions for cells as they get desaturated and no extraction is simulated for dry cells (even if groundwater pumping is specified for those cells). This represented a minimal (approximately 2%) difference in simulated and specified extraction rates over the historical simulation period. This is well within the uncertainty of the specified (estimated) pumping volumes in the model. Groundwater losses to surficial drainage was simulated using the MODFLOW DRN package (discussed in **Section 10.0**).

5.0 MODEL DISCRETIZATION

MODFLOW requires a rectilinear grid. **Figure 5.1** shows the model grid used for the UVRGM. The UVRGM grid had a general north-south/east-west orientation, with an origin at 1,951,202.0 ft northing and 6,161,918.4 ft easting in the California State Plane, NAD 1983, Zone 5 coordinate system. The model grid was rotated at an angle of -7.5^{o} to align with the long axis of the Basin. The grid spacing ranged from 50 ft by 100 ft along the Ventura River floodplain to 100 ft by 100 ft in the remainder of the model domain. The model has 505 rows, 213 columns, and 2 layers for a total of 215,130 cells; 47,142 of which are active.

Given the hydrogeology of the UVRGB, the model was split into two layers. **Figure 4.1** shows areas where layer 1 and/or layer 2 are active within the model domain. **Table 5.1** shows the model layer,

active cells, and layer type for both model layers. The upper layer represents the younger alluvium within the Ventura River floodplain. The maximum depth of the younger alluvium within the river floodplain was kept at 30 ft (consistent with well logs from near the Ventura River). The older alluvium of the Terrace Area located west of the Ventura River was also included in layer 1 because it is laterally connected to younger alluvium to the south, although this connection is very limited. This area consists of alluvial deposits that are elevated above and separated from the Ventura River floodplain by bedrock and, therefore, have a very limited hydraulic connection with alluvium in other areas of the Basin. Layer 2 underlies layer 1 and represents a mix of young and older alluvium within the floodplain and older alluvium and Ojai Conglomerate in the east. Layer 2 covers almost the entire UVRGB, except in some parts of the Kennedy Areas where the floodplain alluvium is thinner than 30 ft and the Terraces Area to the west. In these areas only layer 1 was active (**Figure 4.1**). Layer 2 was also inactivated where the alluvium is very thin, for example in the elevated north-east edge of the Mira Monte/Meiners Oaks Area. Layer 1 was treated as "unconfined" and layer 2 was treated as **"**convertible" (**Table 5.1**), such that unconfined (head-dependent) transmissivities and specific yields were used when groundwater elevations were below the top of the model layer and confined (head independent) transmissivities and storage coefficients were used when groundwater elevations were above the top of the model layer.

Figures 5.2 and **5.3** show the top and bottom of layer 1. The top of the layer is based on high resolution LIDAR elevation data (averaged to the model grid scale). In areas where only layer 1 is active (**Figure 4.1**) the bottom of layer 1 represents the bottom of the alluvium. In areas where both layer 1 and layer 2 are active, the bottom of layer 1 represents the top 30 ft of alluvium, representing the younger alluvium deposited within the river floodplain. **Figure 5.4** shows the top of layer 2. In areas where only layer 2 is active (**Figure 4.1**), this represents the average ground surface elevation (from LIDAR data) at the model grid scale. In areas where both layer 1 and 2 are active, the top of layer 2 corresponds to the bottom of layer 1. The bottom of layer 2 represents the base of alluvium or Ojai Conglomerate (where present) and is shown in **Figure 4.3**. **Figures 5.5** and **5.6** show the thickness of the two model layers.

The historical model simulates and was calibrated to surface water and groundwater conditions from January 2005 to Sept 2019. Model stress periods represent time intervals when transient inputs (like streamflows) and boundary conditions (like pumping) are held constant. Inputs and boundary conditions can change from one stress-period to another. Daily stress periods were used for the wet winter and early spring months from November to March (when stormflows typically occur in the basin) to account for the highly dynamic and variable surface flow conditions. Monthly stress periods were used for the months from April to October. This led to a total of 2311 stress periods for the historical model. By default, each stress-period used one time-step (with up to 500 iterations to solve for groundwater heads and flows for each time-step). For some model simulations shorter (weekly) time-steps were needed for the monthly stress periods for numerical convergence.

6.0 RECHARGE PACKAGE

Recharge was modeled using the MODFLOW RCH package (Harbaugh et al., 2000; Harbaugh, 2005), which applies a given rate of recharge to the topmost active cell. The recharge components simulated by the RCH package include infiltration of precipitation and return flows from agriculture, municipal and

industrial (M&I) applications, pipeline distribution losses, and septic systems. These recharge components are described in the sub-sections below.

6.1 Recharge from Precipitation

Recharge from direct precipitation was estimated using the Basin Characterization Model (BCM[1]), a publicly available model and dataset for the California hydrologic region which includes all basins in the state (Flint and Flint, 2014; Flint et al., 2013). The BCM is a distributed grid-based regional model that calculates the water balance (**Figure 6.1**) for any time step or spatial scale by using climate inputs, precipitation, minimum and maximum air temperature. Potential evapotranspiration is calculated from solar radiation with topographic shading and cloudiness, snow is accumulated, sublimated, and melted (sublimation, snowfall, snowpack, snowmelt), and excess water moves through the soil profile, changing the soil water storage. Changes in soil water are used to calculate actual evapotranspiration, and when subtracted from potential evapotranspiration calculates climatic water deficit. Depending on soil properties and the permeability of underlying bedrock, water may become recharge or runoff. Routing is done via post-processing to estimate baseflow, streamflow, and groundwater recharge (Flint et al., 2013). Inputs to the BCM include (1) a 30-meter (m) digital elevation model (DEM), (2) spatially distributed monthly Parameter-elevation Regressions on Independent Slopes Model (PRISM) precipitation (Daly, 2008), (3) the National Land Cover Database, (4) atmospheric conditions including minimum and maximum air temperature, (5) Soil Survey Geographic (SSURGO) database (USDA NRCS, 2016), and (6) mapped surficial geology. One of the outputs of the BCM is temporally varying (monthly), gridded, in-place recharge, which is the precipitation that infiltrates below the root zone.

The BCMv65 (2014) version contains historical recharge from 1896 – 2010, with an update in 2017 that adds hydrologic data for water years 2011 – 2016. For the historical model, the BCM data were used for monthly recharge from January 2005 to September 2016. To fill in the October 2016 – September 2019 period, precipitation records from Ventura County Watershed Protection District's (VCWPD) station 218 in Meiners Oaks were used to match the months beyond the BCM simulation period (October 2016 – September 2019) with "analogous" months (months with similar precipitation ranges) within the BCM's simulation period. BCM-simulated recharge from the analogous months was applied to the extended monthly period. **Figure 6.2** shows the relationship between average monthly precipitation at VCWPD station 218 and BCM recharge. Based on these results, model recharge occurs when the monthly average precipitation is 4 inches or more. As such, months with missing BCM data where the precipitation at station 218 was less than 4 inches were assigned no direct recharge. Where there was 4 inches of precipitation or more, historical months with similar precipitation was identified. Additionally, consideration was given to also matching the precipitation in the month preceding the missing month, to ensure that antecedent moisture conditions were accounted for in analogous month used to fill the missing period. **Table 6.1** shows the missing months and the corresponding analogous months from the BCM simulation period, used to estimate recharge for those months. The table also shows precipitation for both sets of months. Only months with more than 4 inches of rain are shown as months with less than 4 inches of rain had 0 recharge. Once the missing months were estimated, monthly recharge from

[1]https://ca.water.usgs.gov/projects/reg_hydro/basin-characterization-model.html

BCM was applied to the corresponding stress periods in the UVRGM. Since BCM is a monthly model, recharge was kept constant within a month, but could vary from one month to another.

Figures 6.3a – 6.3d shows BCM recharge for several example months. Higher recharge is seen in wet months and years (for example, January 2005) and little to no recharge is seen in dry months and years (for example, January 2015 which was during the 2012 – 2016 drought).

6.2 Return Flows

Recharge from return flows was categorized into four different terms: (1) M&I landscape irrigation, (2) pipeline distribution losses, (3) septic systems, and (4) agricultural. Each of these components is described below.

6.2.1 Recharge from M&I Return Flows

M&I return flows were conceptualized as landscape irrigation in excess of plant needs that is assumed to percolate to the water table. It was assumed that 50% of delivered M&I water is for outdoor use, 20% of which is lost to return flows. This is consistent with return flow assumptions for other nearby basins in similar settings (UWCD, 2018). The three water service providers in the area are Casitas Municipal Water District (CMWD), Ventura River Water District (VRWD), and Meiners Oaks Water District (MOWD). **Figure 6.4** shows the service area for each district within the UVRGB. The total volume of M&I water for each water district was assumed to be equal to each water service provider's residential usage and was applied evenly over the respective water service provider area with no overlap between different water districts. Total water use data for VRWD and MOWD[1] from 2005 to 2019 was provided by the districts. Water use for each district within UVRGB was estimated based on the proportion of the service area of the district inside the UVRGB boundary and the total service area. The water use within the UVRGB for each water district was divided by the service area within UVRGB to come up with a water use per unit area. M&I return flow factor (20% of 50% of total M&I use) was applied to the water use per unit area rate, which was applied uniformly across the district's service area. A slightly modified approach was taken for CMWD that has a very large service area much of which is outside UVRGB. Given the large service area, it was difficult to estimate a CMWD's water deliveries within the UVRGB boundary. As such, the per area M&I usage rate (and corresponding return flow) estimated for VRWD was also applied to the CMWD service area. M&I return flows were kept constant within a year but varied from year to year.

6.2.2 Recharge from Water Distribution System Leakage Return Flows

Distribution losses that contribute to return flows are conceptualized as the water that is lost in distribution from central water supply locations on its way to endpoints such as residential or industrial facilities due to leaks in pipes. A similar approach was applied as was done for M&I return flows. Water deliveries for each district within the UVRGB was kept the same as for the M&I return flow calculation (**Section 6.2.1**). Distribution system losses were assumed to be 4% (consistent with CMWD UWMP) of

[1] Note, MOWD services both M&I and agricultural customers in the UVRGB; however, for this calculation MOWD's total water use rate was utilized to estimate M&I return flows. M&I and Agricultural deliveries for MOWD may be separated out in the next revision of this model.

water use and applied over the entire service area. Distribution losses were kept constant within a year but varied from year to year.

6.2.3 Recharge from Septic System Return Flows

Septic return flows are conceptualized as water that is lost from septic tanks due to leaks. The water use per area calculated for M&I return flows (**Section 6.2.1**) was assumed to apply to areas with septic tanks. It was assumed that 50% of the total water use was for indoor use, and thus flowed to into septic tanks. Septic return flows were only applied to parcels of land that were known to use septic tanks (VCWPD GIS data received from UVRGA in February 2020). Septic return flows were calculated as the total indoor water usage using a constant per area rate for each water district. **Figure 6.4** shows the parcels within UVRGB where septic return flows were applied as part of the recharge package. Several agricultural parcels were also on septic systems; hence, the figure shows parcels where both septic and agricultural (discussed in the next section) return flows were applied. Septic return flows were kept constant within a year but varied from year to year.

6.2.4 Recharge from Agricultural Return Flows

Agricultural return flows were conceptualized as irrigation in excess of plant needs that is assumed to percolate to the water table. They were estimated by assuming a constant 2 acre-feet/acre/year for all cropland in the basin (UVRGA, 2020). This constant 2 acre-feet/acre/year is meant to represent average crop demand in the region and is informed by UVRGA Board Members' survey of groundwater extractions within the UVRGB (UVRGA, 2020). 20% of the assumed constant crop demand is assumed to be lost to return flows consistent with return flow assumptions for other nearby basins in similar settings (UWCD, 2018). Agricultural land-use was determined using the Agricultural Commissioner's maps of crops in the area which was also subsequently refined by inspection of aerial imagery. **Figure 6.5** shows the parcels within UVRGB where agricultural return flows were applied as part of the recharge package. Several agricultural parcels were also on septic systems; hence, the figure shows parcels where both agricultural and septic return flows were applied. Since, a constant 2 acre-feet/acre/year was assumed for agricultural demand, agricultural return flows stayed constant over the simulation period.

Figure 6.6 shows the total return flows (sum of M&I, distribution losses, septic, and agricultural return flows) for an example model stress-period (January 2019).

6.2.5 Total Recharge

Total recharge is the sum of recharge from direct precipitation and total contributions from return flows. Note, both precipitation-based recharge and return flows vary over time, hence different stress periods can have different total recharge. **Table 6.2** shows the annual recharge components for each water year in the UVRGM simulation period.

7.0 STREAMFLOW PACKAGE

The MODFLOW streamflow routing (SFR2) package (Prudic et al., 2004; Niswonger and Prudic, 2005) was selected to simulate the complex interaction between surface water and groundwater along the

Ventura River. The SFR2 package uses the continuity (conservation of mass) equation to route surface water flow through one or more simulated rivers, streams, canals, or ditches. Streams are divided into segments and segments into reaches where reaches are specified for an individual model cell. Each reach can have different physical properties (such as length, elevation, slope, streambed thickness, streambed conductivity). Reach properties can be spatially varying but cannot change from one stress-period to another. A stream segment represents a set of reaches that can have different time-variant inputs and properties. For each stream segment, SFR2 allows for inflows, outflows, diversions, tributary contributions, and other gains/losses (such as direct precipitation gains or evapotranspiration losses) to be specified for each stress-period. SFR2 also allows for several approaches (such as Manning Coefficients, rating curves, 8-point cross-section, or a lookup table) to define time-varying flow-width and flow-depth relationships for each segment. Different options may be used for different segments of the stream and may change from one stress period to another.

SFR routes the surface water inflows and outflows from one reach to the next (downstream reach), including tributary contributions and apportioning diversion flows based on the diversion rules specified. For each reach SFR uses the flow-width/flow-depth relationship (for the given segment) to calculate the channel width and stage. The channel width is used in the calculation of riverbed conductance, which also takes into account the riverbed thickness and conductivity. Groundwater gains and losses are iteratively calculated based on the riverbed conductance and the relative elevations of the stream stage and groundwater elevations – when groundwater elevations are higher than the stage then the river reach gains groundwater proportional to the riverbed conductance and the difference between the groundwater table and stage; when groundwater elevations are below the stage but above the river bottom then the river reach loses surface water to groundwater proportional to the riverbed conductance and the difference between the stage and the groundwater table; when the groundwater elevation is below the river bottom then the river reach loses surface water to groundwater at a constant rate proportional to the riverbed conductance (i.e. the groundwater table is disconnected from the river and surface water losses are independent of the water table elevations). **Figure 7.1** shows different surface-water/groundwater interaction scenarios and the relationship between flow, river stage, groundwater elevations. Recharge from or discharge to the stream is dependent on the difference between the hydraulic head in the river and the underlying aquifer as well as the riverbed conductance, based on the following equations:

$$Q = \frac{KA}{T}(H_{GW} - H_{Riv}) \qquad \text{if } H_{GW} > R_{BOT} \qquad \text{[Equation 1]}$$

$$Q = \frac{KA}{T}(H_{GW} - R_{BOT}) \qquad \text{if } H_{GW} < R_{BOT} \qquad \text{[Equation 2]}$$

Where H_{GW} is the groundwater head, H_{Riv} is the head in the river, K is the riverbed conductivity, A is the surface area of the riverbed, and T is the thickness of the riverbed. The surface area of the riverbed (A) is based on the length and width of the river channel and can change based on flows and the flow-width relationship. The term KA/T is also referred to as the riverbed conductance.

LIDAR data were used to delineate primary and secondary braids of the Ventura River for input into the SFR2 package. Aerial imagery was used to validate the results. Segments define hydrologically consistent units for which inflows/outflows, and flow-stage-width relationships can be specified. The Ventura River was divided into 43 segments based on streambed and channel characteristics as assessed from aerial

imagery. **Figure 7.2** shows the 43 different stream segments discretized along the Ventura River. These included secondary braids, which were delineated based on GIS analysis and areal imagery. The flow-stage-width relationships were uniform for every stream segment with 11 points at which the different flow-stage-width is specified (**Figure 7.3**). These relationships were adjusted during model calibration to match observed and simulated streamflows (at gage 607 and 608) and groundwater levels in wells near the Ventura River (**Section 13**).

Each segment was divided into multiple reaches, with each reach corresponding to the model grid cell intersecting the segment. LIDAR data was used to determine the elevation, channel length, and slope for each reach element. **Figure 7.4** shows elevations along a north-south cross-section of the Ventura River.

The streambed riverbed conductance (KA/T in equations 1 and 2) values were calibrated by adjusting the riverbed conductivity (K) for different river reaches to match simulated and observed streamflows (at gage 607 and 608) and groundwater levels at wells near the Ventura River (**Section 13**). Note, that the conductance is also dynamically adjusted by the model as flow conditions (and the corresponding channel width) changes. As such, riverbed conductance can vary for different reaches and different simulation times (based on flows in the Ventura River). **Figure 7.5a** and **7.5b** show the riverbed conductance for river reach elements for a representative wet (February 2010) and dry conditions (September 2010).

Inflows to the SFR2 package consisted of gaged inflows from Matilija Creek (gage 602/602A) and the North Fork Matilija Creek (gage 604), inflows from San Antonio Creek (gage 605/605A) as shown on **Figure 7.2**. Runoff from the River catchment area within the UVRGB and flows ungaged tributaries (Coyote Creek, Cozy Dell Canyon & McDonald Canyon, Happy Valley Drain, Live Oak Creek, Mirror Lake Drain, Oak View Drain, Rice Canyon & Wills Canyon, and Kennedy Canyon) were also included in the SFR package, as shown on **Figure 7.6**. Tributary/runoff contributions were calculated using the modified Curve Number approach (USDA, 1986; Hawkins et al, 2002), which accounts for drainage characteristics for the catchment as well as antecedent moisture conditions (Ward et al., 2004). A representative curve number for the contributing catchment was used based on the land-use and soil-type for each contributing catchment. Flow accumulation analysis in ArcGIS was used to calculate the contributing area for each catchment. **Table 7.1** shows the Curve Number and area for each of the contributing catchment. The curve numbers were adjusted for dry or wet antecedent conditions (Ward et al., 2004) based on the average precipitation of the preceding three months. Baseflow was added to tributary flows by using a simple exponential decay function to estimate flows after stormflow event. Runoff occurring in the subbasin area of the main channel was distributed over the length of the channel without any baseflow contribution. **Figure 7.6** shows the tributary flows for each of the tributaries.

Two diversions were simulated from the Ventura River: outflows from the Robles Diversion; and outflows from a private agricultural diversion in the Kennedy Area (**Figure 7.2**). Flows were removed downstream of river segment 4 (**Figure 7.2**) to simulate outflows from the Robles Diversion, which feed Casitas Reservoir. Daily data for the Robles Diversion were available from October 1993 through September 2017. Monthly data was available from CMWD to fill in the remaining simulation period (October 2017 to September 2019). The monthly data was converted to a daily frequency by dividing up the total monthly diversions among the number of days diversions were known to occur for a given month proportional to relative flows in the stream for that period (i.e. more diversions were apportioned to days with higher inflows).

Diversion amounts for the private agricultural diversion in the Kennedy Area were based on data available from the State Water Resources Control Board electronic Water Rights Information Management System (eWRIMS[1]) website for the years 2010 - 2019. Annual data was available from 2005 to 2009 from UVRGA. For the pre-2010 model years (when monthly diversion data was not available), the annual diversion data was distributed to monthly volumes based on the average monthly ratios from the 2010 – 2019 period of record. Note, this diversion withdraws water from a subsurface sump (infiltration gallery) adjacent to the Ventura River. As such, diversions represent a mix of surface flows and subsurface underflows. To model this dynamic, diversions were simulated as surface-flow diversion downstream of segment 2 (**Figure 7.2**) in the SFR package from December through April (when flows in the Ventura River are high) and as extractions using the WEL package in the groundwater model cell from May through November (when flows in the River are low and underflows likely represent a more significant proportion of the diversions).

The Ventura River is characterized by flows in multiple braided channels. Flows were split equally between the two braids and then aggregated where the braids converged. The Robles Diversion includes a cut-off wall, such that flows overtopping the cut-off wall spill into a secondary channel (segment 6 in **Figure 7.2**). Records of overtopping events during the simulation period (2005 – 2019) were not available. Inspection of areal imagery from 2005 to 2019, did not reveal any periods when flows overtopped the cut-off wall. The highest observed flow at gage 607, which is on the primary channel and upstream of the confluence with the secondary channel, during the simulation period was 10,000 cubic feet per second (cfs). Hence, a threshold of 10,000 cfs was specified as the flow threshold for the secondary channel. Flows higher than 10,000 cfs would be diverted into the secondary channel, while flows lower than 10,000 cfs would all flow into the primary channel (segment 5).

8.0 EVAPOTRANSPIRATION FROM RIPARIAN VEGETATION

Plants can uptake and transpire water from the unsaturated zone (above the water table) and the groundwater table (if roots extend to the groundwater table). Surficial evapotranspiration (ET) was accounted for in the BCM model which calculates recharge, after accounting for surface ET losses. The groundwater table is relatively deep in the Mira Monte/Meiners Oaks area, and hence, most of the vegetation here is not expected to be transpiring water directly from the deeper groundwater table. Vegetation in the riparian zone (Ventura River floodplain), may be connected to the groundwater table depending on rooting depth and the water table elevation. Hence, groundwater ET was calculated for riparian vegetation along the Ventura River (i.e., within the Kennedy, Robles, Santa Ana, and Casitas Springs Areas). Groundwater losses to evapotranspiration from riparian vegetation were modeled using the Evapotranspiration (ET), or EVT, package from MODFLOW (Harbaugh et al., 2000; Harbaugh, 2005).

The Nature Conservancy (TNC) provides mapping of natural communities commonly associated with groundwater (NCCAG) dataset. These NCCAG were further evaluated and screened based on known ecological and hydrologic conditions in the UVRGB to identify basin-specific potential GDEs (See GSP Appendices O and P for details). **Figure 8.1** shows the riparian vegetation in the UVRGB, which could uptake groundwater based on root depth and water table elevation. The riparian vegetation consists of

[1] https://www.waterboards.ca.gov/waterrights/water_issues/programs/ewrims/

native plants and trees and are divided into six vegetation classes: Coast Live Oak, Riparian Mixed Hardwood, Riversidean Alluvial Scrub, Scalebroom, Wetlands, and Willow Shrub. Riparian vegetation also includes the invasive species *Arundo donax* (Arundo), a significant source of riparian transpiration in the UVRGB. Mapping of Arundo was sourced from surveys done in 2007, 2011, 2015, and 2019 (**Figures 8.2a – 8.2d**) and was made available for the modeling by Rincon Consultants. In total, counting Arundo, seven vegetation groups were included in the EVT package in the UVRGB.

The EVT package requires three main inputs: an ET surface, a maximum ET rate, and an ET extinction depth. **Figure 8.2** shows the relationship between the ET rate, the ET surface, the extinction depth, and the groundwater table. The EVT package scales actual ET between the maximum ET rate and 0, depending on the relative water table elevation with respect to the extinction depth. Groundwater ET is maximum when the water table is at or above the ET surface and 0 if the water table is at or below the extinction depth. Hence, the ET surface represents the surface at which maximum transpiration occurs and the ET extinction depth represents the depth below the ET surface at which evapotranspiration declines to 0. The relative elevation from the extinction depth up until the ET surface is linearly proportional to the rate at which is ET losses are simulated. ET surface was set at the average surface elevation (based on LIDAR data) for the area within each model grid cell that had native vegetation coverage.

The ET rate is known to be dependent on vegetation characteristics (plant type, crop coefficients, rooting depth, vegetation density) and environmental factors (temperature, relative humidity, wind, and soil moisture availability). Vegetation characteristics for the various native riparian vegetation and Arundo were provided by Rincon Consultants in the form of maximum rooting depth, crop coefficients (Kc), and spatial density terms for each vegetation class in each hydrogeologic area (with the Robles and Santa Ana Areas further split into north and south) and different seasons (**Table 8.1**).

The extinction depth for any given model cell was determined using a spatial average (based on relative spatial density) of each vegetation group's maximum rooting depth (**Table 8.1**). **Figure 8.3** shows the effective rooting depths for all EVT cells in the model.

The spatial coverage of the native vegetation was kept constant over the simulation period (2005 to 2009). However, the spatial coverage of Arundo (GIS data received from Rincon Consultants) changed every four years based on the surveys completed since 2007. ET parameters were calculated for each vegetation class in each model grid cell. The effective ET parameters for a given model grid were then calculated as a weighted average based on the relative spatial density for all native vegetation classes in a given hydrogeologic zone (**Table 8.1**). ET values from native vegetation and Arundo were added for each model grid cell based on the relative density of Arundo and native vegetation in each model grid cell. **Figure 8.4** shows the effective crop coefficient for all EVT cells in the model for an example time period (January 2019). Note, that crop coefficients vary seasonally as vegetation can go dormant during the dry summer and fall months (**Table 8.1**).

The maximum ET rate was determined from nearby evaporation pan data. There are two evaporation pans operated by Casitas Municipal Water District – one at the recreation center at higher elevation, and another near the Casitas Reservoir at a lower elevation. The average pat evaporation rate from these two stations was multiplied by a scaling factor, 1.04, to convert to reference ET rate (BCMAFF, 2001). The evaporation pan data was available from October 1993 to January 2017. For missing periods,

the respective month for an average year was substituted. To determine the maximum ET rate, the reference ET was multiplied by a spatially averaged Kc and spatial density for the respective vegetation class in a given hydrogeological zone. ET rates were kept constant within a month but could vary from month to month, to account for seasonal variability in ET. **Figure 8.5** shows the reference ET rates over the simulation period (2005 – 2019).

Note, high ET rates and extinction depths in some thin and elevated cells along the edges of the model domain led to numerical convergence problems due to the cells drying from excessive ET losses. ET was removed from these cells to facilitate numerical convergence. Plants in these areas probably sustained by other water sources.

9.0 MODEL PUMPING

Groundwater pumping was modeled using the WEL package (Harbaugh et al., 2000; Harbaugh, 2005). 133 wells are known to extract groundwater from the basin, along with the Foster Park Subsurface Intake which extracts groundwater near the Ventura River. Four agencies pump groundwater at 18 locations from the basin for M&I use: CMWD, MOWD, VRWD, and the City of San Buenaventura (the City). Two private mutual water companies (MWCs) pump from the basin for domestic use, along with 92 wells which pump for on-site domestic use. Water for agricultural use is extracted at 23 sites. **Figure 9.1** shows the groundwater wells in the UVRGB by average extraction rates, water use type, and M&I well owner.

Pumping records were available for the four M&I agencies and for four agricultural wells. Water extraction for the remainder of the agricultural wells, the domestic MWCs, and de minimis users was estimated for 2017 according to the Groundwater Extraction Estimates Technical Memorandum presented to the UVRGA board on June 30, 2020, and information provided by the UVRGA Ad Hoc Stakeholder Engagement Committee that was developed through interviews with certain well owners (UVRGA, 2020). **Figure 9.2** shows the data availability for different well types in the UVRGB. Because the model uses both daily and monthly stress periods, the pumping records and estimated pumping volumes were converted to model units of cubic feet per day (cfd) and applied to each (daily or monthly) stress-period. Data originally at the daily scale was simply aggregated for each month; data originally at the monthly scale was spread evenly to each day.

Monthly records for the entire model period were available for CMWD and MOWD. Daily records for the entire period were available for VRWD. City records were available at monthly intervals from 2005-2009, and daily data were available for 2010-2019. These records were reviewed, data gaps filled, and outliers removed when compiling the pumping data for the model. The M&I records were resampled to daily and monthly time steps as needed for the groundwater model.

Annual pumping records for four agricultural wells and two MWCs were made available by UVRGA. 2017 estimates for agricultural and MWC wells without historic pumping records were included in the Groundwater Extraction Estimates Technical Memorandum (UVRGA, 2020). Pumping for other (non-2017) years was calculated by scaling the 2017 pumping estimate based on the ratio of the annual precipitation (VCWPD gage 20B) to 2017 precipitation for a given year. Pumping was inversely correlated with precipitation, such that years with higher than 2017 precipitation had lower pumping,

and vice-versa. The annual scaling of pumping was done so as to ensure the minimum and maximum scaled pumping were within a range of ±30% of 2017 pumping (i.e. the year with the lowest annual precipitation would have 30% more pumping than the 2017 estimate; and the year with highest annual precipitation would have 30% less pumping than 2017). To bring annual agricultural pumping estimates to a monthly timestep, a monthly scaling function was used to linearly increase pumping from 0 in January (when much of the agricultural water demand is met by precipitation) to a maximum constant value from June to November (when most of the agricultural water demand is met by groundwater extractions) and then reducing linearly to 0 in January of the following year. Scaling factors were used such that the total annual pumping volumes were maintained. **Table 9.1** shows the agricultural monthly distribution factors.

Pumping by the domestic MWC and de minimis private wells were estimated for 2017 in the Groundwater Extraction Estimates Technical Memorandum (UVRGA, 2020), and these same estimates were used for all the years of the model period.

As discussed in Section 7.0, the agricultural diversion in the Kennedy Area was modeled using the SFR package from December to April and with the WEL package from May to November.

Figure 9.3 shows the monthly pumping volumes by category for the UVRGM.

10.0 DRAINS

During initial calibration, rising water levels were observed in the eastern Mira Monte/Meiners Oaks Area. These were contrary to observed groundwater levels in the area. There are also known surface drainage features in the area. Hence, drain cells were specified to allow for high groundwater to outflow to surface drainage features. Drain cells elevations were based on ground-surface elevations and observed groundwater levels. **Figure 10.1** shows the locations of the drain cells. `

11.0 INITIAL HEADS

The model requires initial heads (groundwater levels) to be specified for January 2005 (beginning of the model simulation period). Observed groundwater levels from spring 2005 were interpolated to define the initial heads for the model. These were iteratively run through the model and adjusted to match observed and simulated water levels for spring 2005. Initial heads are shown in **Figure 11.1**.

12.0 MODEL HYDRAULIC PROPERTIES

Hydraulic properties for the model include hydraulic conductivity, specific yield, and specific storage for both model layers. Based on the hydrogeologic conceptual model (**Section 2.0**), the younger alluvium in the river floodplain is stream-channel deposits of sand and gravel, which high permeability and specific yield. The younger alluvium is deposited over older more consolidated alluvium, which can vary in depth and extent depending on how the river has incised and deposited sediments. Layer 1 represents the predominantly younger floodplain deposits. Hence, a high conductivity range of 100 to 5000 ft/d was used for this layer, consistent with the material description from well logs (i.e., predominantly boulders,

cobbles, gravels, and sands). Layer 1 also includes the Terrace and consisting of elevated thin older alluvium along the western periphery of the floodplain. Hydraulic conductivity in these areas was kept lower at 10 – 50 ft/d. Layer 2 represents a mix of younger and older alluvium within the river floodplain, and older more consolidated alluvium and the Ojai Conglomerate bedrock unit in the Mira Monte/Meiners Oaks Area. As such, higher hydraulic conductivities (100 to 5000 ft/d) were maintained for layer 2 in the river floodplain. In the Santa Ana and Casitas Springs Area, Layer 2 was predominantly younger alluvium with conductivities in the 1000 – 5000 ft/d range. In the Mira Monte/Meiners Oaks Area, layer 2 represents older consolidated alluvium and the Ojai Conglomerate bedrock unit. A hydraulic conductivity value of 1 ft/d was used in areas where the Ojai Conglomerate is in outcrop. Hydraulic conductivity ranged from 5 – 10 ft/d in other parts of the Mira Monte/Meiners Oaks Area. **Figures 12.1a and 12.1b** show the calibrated hydraulic conductivities for each of the model layers.

The subsurface dam along the Ventura River in Foster Park was modeled as a linear hydraulic flow barrier (HFB) spanning across the river floodplain. HFBs reduce the effective hydraulic conductivity between model grid cells. The HFB was specified for both layers and delineated based on published cross-sections and engineering drawings (Fugro, 2002). **Figure 12.2** shows the location of the HFBs used for the subsurface dam. A uniform hydraulic conductivity of $1x10^{-5}$ ft/d was used for the HFB cells.

Similar to hydraulic conductivities, specific yield values were specified based on the hydrogeology of different parts of the basin and calibration to observed water levels. Layer 1, representing younger alluvium in the River floodplain had a relatively higher specific yield of 0.2. Layer 2, representing a mix of younger and older alluvium in the River floodplain, had specific yield values ranging from 0.1 to 0.2. Specific yield in the Mira Monte/Meiners Oaks area, where layer 2 represents older consolidated alluvium and bedrock units ranged from 0.1 to 0.15. A uniform specific storage of 0.001 was used for layer 2 across the model area. Note, that specific storage is only used when the groundwater level is above the top of the model layer (i.e. during confined conditions). Hence, the specific storage value for layer 2 was only operative in the River floodplain during high water level conditions (when the groundwater table is in layer 2 and above the top of layer 2). Since there is only one active layer (Layer 2) in the Mira Monte/Meiners Oaks Area, and the groundwater table is always below the top of the model layer, specific storage was not used in this part of the model domain. **Figures 12.3a, 12.3b, and 12.4** show the storage properties for the two model layers.

13.0 MODEL CALIBRATION

Model calibration entailed adjusting model hydraulic parameters via trial and error to match simulated and observed groundwater levels and streamflows over the historical period from January 2005 to September 2019. Model parameters adjusted during calibration included: spatially varying hydraulic conductivities for both layers; specific yields for both layers; riverbed conductance (specified in the SFR package); river flow-stage and flow-width relationships; and HFB conductivities. During initial testing of the model, simulated groundwater levels were seen to be “flooding” above ground surface in the area where the bedrock outcrops near the Ventura River in the Robles area (**Figures 2.1a and 2.1b**) narrowing the river floodplain, thus restricting groundwater flows. Bedrock elevations were lowered in this area by to reduce flooding and allow groundwater to flow more easily through the narrows. This is

an area with no well logs to define bedrock elevations within the river floodplain, hence there is uncertainty with respect to the bedrock surface in this area.

Observed groundwater elevations were available from 48 groundwater wells in the Basin. **Figure 13.1** shows the wells with water level records used for model calibration. Of these, several (31) were clusters of shallow environmental monitoring wells located in the north-east portion of the Mira Monte/Meiners Oaks area. The remaining 17 wells were located across the Basin, within or at the edge of the River floodplain.

Example wells with observed and simulated hydrographs are shown in **Figures 13.2a** to **13.2g.** Note, groundwater heads during storm flows tends to spike because of the way the SFR package calculates the stage in the River. Storm flows in the Ventura River typically flow across several braids that may, in turn, be incised by the storm flows. The SFR package maintains all the flow in the primary and secondary braids (as defined in the SFR package) and does not have the ability to spread the water across multiple braids as flows increase. The result is that during a storm event the stage in the River can build up, as all the water is restricted within the channel. High stage during the storm flows translates to higher heads in the groundwater table in areas where groundwater is connected to the River. Hence, groundwater heads are also seen to "spike" during these storm events. These spikes are intermittent and quickly dissipate once the storm flows pass through the basin, and groundwater returns to average conditions. As such, the groundwater elevation "spikes" during storm events are modeling artifacts and should not be seen as indicative of actual groundwater levels in the basin. Thus, this numerical phenomenon does not impact to overall model calibration and utility. Groundwater heads in the north-eastern Robles Area and northern Mira Monte/Meiners Oaks Area (wells 04N23W04J01S and 04N23W09B01S shows in **Figures 13.2c** and **13.2d**) are underpredicted during the drought years, with the lowest simulated groundwater levels approximately 40 ft lower than observed. This is likely due to the fact that these wells are partially screened in consolidated or bedrock units that the model is not intended to simulate.

Figure 13.3 shows a scatter-plot for observed and simulated water levels for all wells used for model calibration. As can be seen from the figure, the observed and simulated water levels are strongly correlated, indicating a good level of model calibration. **Table 13.1** shows model calibration statistics for observed versus simulated groundwater levels. The mean absolute error (MAE) and root mean square error (RMSE) - measures of model error - are approximately 6.5 and 9 ft, respectively. The scaled MAE/RMSE (ratio of the model error metric to the range of observed water levels) is 1.1% and 1.5%, respectively. This is significantly less than the industry calibration standard of 10% scaled MAE or RMSE (Spitz and Moreno, 1996; Rumbaugh and Rumbaugh, 2005). Based on the match between the observed and simulated groundwater hydrographs at key wells, the strong correlation between observed and simulated water levels, and the low scaled MAE and RMSE statistics, the groundwater model can be seen to be well calibrated based on industry standards.

Observed streamflow records are available at gage 607 (near the Robles Diversion) and the Foster Park gage 608. **Figures 13.4a** and **13.4b** show observed versus simulated streamflows at gage 607 and 608. Overall, the model captures observed stormflows and baseflows in the Ventura River at these two locations. The high flows during the historically wet years (2005, 2006, and 2011) are well captured. The low (often little to no) flows during the drought years are also simulated within a few cfs of observed flows. The model simulates the near 0 flows at the 607 gage in late summer and fall for most years.

Based on the match between observed and simulated flows at the Foster Park gage, the model has an accuracy of 1-2 cfs in simulating low flows in late summer and fall.

Note, surface flows are highly variable and impacted by upstream and (ungaged) tributary flows. The model routes flows from the gaged data (602, 604, and 605/605A) and estimates contributions from ungaged tributaries. Hence, gage errors or uncertainties estimated ungaged flows propagate to model streamflow results. The gage data at 607 and 608 also show anomalous trends (for example, relatively high flows at the Foster Park 608 gage in the winter of 2013 when there was little to no precipitation in the Basin).

In addition to observed groundwater and surface-water data, the model was also qualitatively calibrated to River flow mapping conducted by CMWD (**Figure 13.5). Figure 13.6** shows winter and fall simulated flow conditions in Ventura River. Simulated flows are in good agreement with observed flow conditions. Both observed and simulated conditions show the Ventura River mostly flowing north of the Robles Diversion (in the Kennedy Area). River flows were predominantly dry between the Robles Diversion and the Confluence with San Antonio Creek during summer and fall, and for most of the drought years (2012 – 2016), except during stormflow events. Simulated and observed flows in the Ventura River are typically wet south of the San Antonio Confluence, especially in the Foster Park area. Similar to mapped flows, the Ventura River was simulated as flowing from the Robles Diversion to the San Antonio Confluence during peak flow conditions (winter of 2005, 2006, 2010, and 2011). The Ventura River typically has very low flows in the Casitas Springs Area in summer and fall. However, the model does not have the requisite resolution to accurately simulate very low (< 1 cfs) flows. This is likely the reason why the simulated flow conditions in the Casitas Springs Area do not match the CMWD mapping in a few summer/fall months (example: 2009). In general, the monthly stress periods used from April to October limits the ability of the model to simulate transient summer stormflows as well as very low flow conditions in late summer and fall, observed in the southern portion of the Ventura River.

14.0 MODEL RESULTS

Groundwater levels at select wells within or near the Ventura River floodplain are shown in **Figures 13.2a** - **13.2g.** Streamflows at gage 607 and 608 are shown in **Figures 13.4a** and **13.4b.** Simulated water level contours for representative high and low water level conditions are shown in **Figures 14.1a – 14.1d.** The predominant flow of groundwater is from north to south along the general topographical gradient. Due to the high permeability of the younger alluvium in the Ventura River floodplain, stormflows in the Ventura River percolate and travel very rapidly through the floodplain. The water level hydrographs in **Figures 13.2a – 13.2g** indicate highly transient groundwater levels that go down during the drier summer and fall months (and drought years) but quickly rebound once the Ventura River receives stormflows in the wetter winter and spring months.

Figures 14.2 and **14.3** show the simulated annual groundwater and surface-water budgets for the historical model. **Tables 14.1** and **14.2** show the values for the different water budget terms for each water year. As can be seen from the water budget, surface-water/groundwater interactions (as shown by percolation to groundwater from losing river reaches and groundwater discharge to gaining river reaches) dominates the groundwater budget. Precipitation-based recharge can be highly variable ranging from more than 2,000 acre-feet/year to effectively zero for the drought years. Pumping

represents the major groundwater outflow component from the UVRGB, with an average of approximately 4,900 acre-feet/year of groundwater extractions. Riparian ET ranges from 1,800 acre-feet/year to approximately 700 acre-feet/year, with the lowest ET during drought years. Groundwater storage in the basin is highly variable and driven primarily by hydrologic conditions in the basin. There is a small net negative change in average storage over the historical simulation period. This is ostensibly due to the simulation period, with 8 out of the 16 water years being dry years (including the 2012 – 2016 drought).

Zonal budget analysis was undertaken to calculate groundwater underflows from one hydrogeologic area to the other. **Figure 14.4** shows the average monthly underflows for the hydrogeologic areas (note that the Robles and Santa Ana Areas were further split into north and south sub-areas). The zonal budget analysis shows that much of the groundwater flows north to south within the River floodplain with minimal groundwater exchange between the floodplain and Mira Monte/Meiners Oaks Area or the Terraces (in the West) and the floodplain.

15.0 PREDICTIVE MODEL

The calibrated historical model was used as the basis to develop predictive model simulations to assess future surface and groundwater budgets, groundwater elevations, and surface flows in the River for the GSP. Three future scenarios were developed for this purpose – a baseline scenario consisting of a repeat of the last 50 years of historical hydrology (water years 1970 to 2019); a 2030 scenario consisting of the last 50 years of historical hydrology (water years 1970 – 2019) altered based on near-term climate change factors (provided by DWR for SGMA planning purposes); and a 2070 scenario consisting of the last 50 years of historical hydrology (water years 1970 – 2019) altered based on long-term climate change factors (provided by DWR for SGMA planning purposes). DWR climate change factors and methodology (DWR, 2018) were used to scale the baseline hydrology to future climate-change impacted conditions. DWR climate change factors were available from 1915 to 2011. Climate change factors were compiled for the predictive simulation period from 1969 to 2011. Climate change factors for the remaining 2012-2019 were determined by finding analogous years (based on monthly precipitation patterns) from the 1949 – 2011 period of record for the climate change dataset. **Figures 15.1a** and **15.1b** show the 2030 and 2070 precipitation and ET change factors used for the predictive models. On average, precipitation goes down by approximately 0.2% and 5% for the 2030 and 2070 scenarios, respectively. On average ET goes up by 4% and 9% for the 2030 and 2070 scenarios, respectively.

Each future model scenario, incorporated future anthropogenic factors such as pumping and return flows, accounting for impacts from climate change, as needed. **Table 15.1a** summarizes key model inputs and assumptions for the predictive model scenarios. **Table 15.1b** summarizes future water use assumptions that were the basis for pumping and return flows for the predictive scenarios. Additional details for key model inputs and boundary conditions are discussed in the following sub-sections.

15.1 Predictive Recharge

Similar to the historical model, the predictive recharge package consisted of precipitation-based recharge and return flows.

15.1.1 Recharge from Precipitation

For the UVRGA predictive model, recharge from precipitation was estimated based on BCM values (Flint and Flint, 2014; Flint et al., 2013). Recharge for the baseline hydrology (water years 1970 - 2019) were taken from the BCM monthly recharge dataset from October 1969 – September 2019 (with missing 2016 – 2019 BCM months filled in using the analogous months approach, as discussed in **Section 6.1**). For the climate change scenarios, the recharge values are multiplied by the monthly precipitation climate change factor provided by DWR (2018). Recharge was divided by the monthly ET change factors to account for higher temperatures (and less recharge) in the future.

15.1.2 Return Flows

For the predictive model, the M&I water usage (to estimate M&I return flows) was calculated based on the Ventura River Water District's per area water usage rates. During dry years, the water usage applied was kept equivalent to the average Ventura River Water District residential usage from 2015-2020 (which included drought conservation during drought conditions). For the non-dry years, the water usage applied was made equivalent to 85% of the average demand from 1985-2009. The M&I return flow factors were kept the same as for the historical model (50% assumed outdoor with 20% of outdoor water use contributing to M&I return flows). Distribution losses and septic return flows were tied to M&I water use, with similar return flow factors as for the historical model (4% for distribution losses and all of indoor water use for septic return flows, respectively). Agricultural water-use was assumed to be the same as for historical conditions (2 acre-feet/acre of agricultural parcel area) with a 20% return flow factor.

All irrigation water usage (inclusive of agricultural and outdoor M&I return flows) was scaled by the average climate change scenario ET factor for the respective scenario, to represent increased water demands (and applied water) due to higher temperatures in the future. For the 2030s scenario, the constant applied ET factor was 1.0424 and 1.089 ET factor used for 2070s scenario.

15.2 Predictive Streamflows and Diversions

The SFR2 package segment relationships as well as data for reaches and flow-stage-width relationships were all kept the same as for the historical model. Inflows and diversions, however, were modeled differently.

Daily historic flow records from the baseline period (October 1969 to Sept 2019) were adjusted to 2030 and 2070 future conditions using the annual and monthly streamflow change factors for the Ventura River watershed (designated HUC8_18070101 by DWR), using the methodology for application of time series change factor data described in DWR (2018) guidance. Note, the DWR streamflow change factors change the volume and the timing of streamflows using annual and monthly change factors. The methodology was applied to the daily flow data using the same methods as recommended for monthly data. Similar to the precipitation factors, streamflow change factors for water years 2012-2019 were selecting from analogous years from the 1949 - 2011 period (with available streamflow change factors) based on matching gaged streamflows (North Fork Matilija Creek, Matilija Creek, and San Antonio Creek) for the 2012 – 2019 water years with observed streamflows from the 1949 – 2011 period. **Figure 15.2** shows the streamflow change factors for the 2030 and 2070 scenarios used for the UVRGB

predictive model. On average, the streamflows go down by 11% and 17% for the 2030 and 2070 scenarios, respectively.

Runoff and tributary inflows were calculated similar to the historic model using the curve number approach (**Section 7.0**) but based on climate-change impacted precipitation from gage 20B.

Future Robles Diversions were calculated based on diversion facility operating rules included in the National Marine Fisheries Service biological opinion rules, which were programmed into an algorithm to simulate diversion volumes at the Robles Diversion based on future (climate-change impacted) inflows from gages 602 and 604. The diversion rules were validated against historical daily diversion data (made available by CMWD).

Future estimates for the agricultural diversion in the Kennedy Area were also provided by UVRGA for drought and non-drought conditions (**Figure 15.1a**). Drought and non-drought classifications for future water years were determined based on percentiles of annual precipitation. Water years with annual precipitation lower than the 33rd percentile of the annual precipitation record were classified as drought years. Other years were classified as non-drought years. Agricultural diversions in the Kennedy area were split between the SFR and the WEL package in the same way as for the historical model.

15.3 Predictive Pumping

Pumping for the predictive scenarios was based on the memo presented to the UVRGA board on December 10, 2020, as modified by Board member input during and following that meeting. (**Table 15.1a**). Daily and monthly time series were developed for all wells under baseline, 2030, and 2070 climate change scenarios as follows:

M&I Pumping:

- City of Ventura future M&I pumping estimates were provided for drought and non-drought years (**Table 15.1a**) (Ventura Water, 2021 and personal communication with city staff). In addition, the City provided estimates for reduced pumping for the third and subsequent consecutive years of drought. The City provided a monthly percentage allocation for future non-drought years. For drought years, pumping was evenly distributed from February to July. **Table 15.2** shows the monthly factors used for City pumping for drought and non-drought years.
- M&I estimates were available for the other agency's total pumping amount at the annual scale. Future estimates of drought and non-drought pumping were also provided for the other three M&I pumpers (CMWD, MOWD, and VRWD) by UVRGA (**Table 15.1a**). Historical pumping records were used to distribute pumping across days/months and different M&I wells for a given Agency. For example, VRWD's future non-drought annual pumping estimate is 950 acre-feet/year. VRWD Well 1 accounted for an average of approximately 39% of annual VRWD pumping under non-drought conditions in the historical model. On each January 1st of historical non-drought years, Well 1 pumped an average of 0.1215% of its annual production. Therefore, in the predictive model Well 1 was assigned approximately 0.45 acre-feet/day of pumping on January 1st during non-drought years.
- To distribute the total agency pumping to individual wells, each well's share of total pumping during the historical model was calculated for both drought and non-drought conditions. **Table 15.3** gives

the well-specific ratios for the M&I wells used to distribute the total agency pumping across each Agency well. These ratios were then applied to the predictive model.

- Note, that drought and non-drought classifications for each year (used to estimate M&I pumping) were based on the precipitation for the given future (baseline, 2030, 2070) scenario. Hence, based on the projected precipitation for a given year and scenario, years could be classified as drought or non-drought differently for different future scenarios.

Agricultural Pumping:

- Future baseline agricultural pumping was assumed to be the same as historical agricultural pumping. For all agricultural wells except those belonging to the Rancho Matilija Mutual Water Company (RMMWC), 2017 pumping estimates were scaled by precipitation using the same method that was used in the historical model. Precipitation scaling factors were calculated for each of the three scenarios based on future (climate-change impacted) precipitation. **Tables 15.4a to 15.4c** show the precipitation-based scaling factors for agricultural pumping for the baseline, 2030, and 2070 scenario. For all agricultural groundwater extractions, an additional ET factor was applied for the 2030 and 2070 climate change scenarios. For each scenario, the average ET factor for the analogous historical model period was used as a scaling factor to represent increased evaporative demand.
- Drought and non-drought estimates for pumping were provided for the RMMWC wells by UVRGA (**Figure 15.1a**). These were associated with future years based on the projected precipitation for future years.

Domestic MWCs and domestic well pumping were held constant at the 2017 levels for all years and all three scenarios.

Tables 15.5a to **15.5c** show the annual future pumping estimates by water use category for each of the three future scenarios.

15.4 Predictive Evapotranspiration

For the predictive climate change scenarios, the reference ET was multiplied by the corresponding monthly ET factor from the DWR climate change dataset. The predictive model used the same calibrated areal coverage of active EVT model cells. Native and Arundo vegetation coverage were kept the same as 2019 over the entire predictive timeframe. For each climate change scenarios, monthly maximum ET rate was scaled by the respective monthly ET change factor from the corresponding DWR climate change dataset.

15.5 Predictive Model Results

Future groundwater levels, streamflows, and water budgets were simulated for each of the predictive scenario (baseline, 2030, and 2070). **Figures 15.3a – 15.3g** show future water levels for the baseline, 2030, and 2070 scenarios for select groundwater wells (**Figure 13.1**). Future water levels for all three scenarios are very similar to each other, indicating the climate change does not have a significant influence on future groundwater levels in the basin. In general, future water level trends are similar to historical water levels and within the uncertainty of the model inputs and predictions. Note, the predictive groundwater levels also “spike” during storm events due to the way the river stage is

calculated in the SFR package. These spikes are intermittent and quickly dissipate once the storm flows pass through the basin, and groundwater returns to average conditions. As such, the groundwater elevation "spikes" during storm events are modeling artifacts and should not be seen as indicative of actual groundwater levels in the basin. **Figures 15.4a** and**15.5a** show streamflows at gage 607 and Foster Park gage (608) for each of the three scenarios. **Figures 15.4b** and **15.5b** show the difference in streamflows between baseline and 2030 and 2070 scenarios for each of the two gage locations. As can be seen from **Figures 15.4b** and **15.5b**, both stormflows and baseflows tends to be slightly lower under the 2030 and 2070 scenarios.

Figures 15.6a – 15.6c show the groundwater budget for the baseline, 2030, and 2070 scenarios. **Tables 15.5a – 15.c** show groundwater budget components for each of the scenarios. **Figures 15.7a – 15.7c** show the surface-water budget for the three scenarios, with **Tables 15.6a – 15.6c** showing the surface-water budget components. Both the surface-water and groundwater budgets are similar across the three scenarios, with slightly lower total recharge for the climate change scenarios. However, basin storage is seen to be stable for all predictive scenarios, with groundwater storage (levels) declining during dry years but rebounding with subsequent wet months/years.

16.0 MODEL LIMITATIONS

While the model represents the best available basin-specific predictive tool, there remain some numerical and data limitations must be understood as they relate to limitations of the model's ability to simulate the hydrologic conditions in the UVRGB:

- Surface-water and groundwater flows are strongly influenced by bedrock elevations and geology. The model incorporates all available lithologic data from UVRGB groundwater wells and surface-geology and geologic cross-sections from published literature. However, there is sparse geologic/lithologic data within the Ventura River floodplain. Additional geologic/lithologic data near the Ventura River in these areas would improve the understanding of bedrock topography and increase confidence in surface-water and groundwater predictions in the area.
- Streamflows were available from gages 602, 604, and 605/605A where flows enter the basin from Matilija Creek, North Fork Matilija Creek, and San Antonio Creek, respectively. However, the River receives flows from several ungaged tributaries. Tributary contributions were estimated using a Curve Number approach. Additional gages on contributing tributaries would validate/refine these estimates. Furthermore, streamflows data is available downstream of the Robles Diversion (gage 607) and at Foster Park (gage 608). Model streamflows were calibrated to observed streamflows at these two gages. However, no streamflow gage data is available along the Ventura River between the two gages. Additional streamflow data along the Ventura River between gages 607 and 608 would allow for more refined simulation and calibration of streamflow conditions along these sections of the Ventura River. The Ventura Watershed numerical model being developed by the SWRCB as part of the Ventura River Instream Flow Program may be used to update estimates of ungagged runoff and tributary flow in the future (DBSA, 2020).

- Some anomalous flow conditions were observed in the streamflow records. Validation of historical streamflow records would improve confidence in the model inflows, surface-water calibration, and streamflow predictions.
- Groundwater elevations from wells within the Ventura River floodplain were used to calibrate groundwater levels and surface-water/groundwater interactions along the Ventura River. Few groundwater observations are available in much of the Robles and Santa Ana Areas. Additional groundwater levels near the Ventura River in this part of the Basin would improve understanding and refine model results for surface-water/groundwater conditions in the Robles and Santa Ana Areas.
- The model underpredicted drought groundwater levels in a few wells in the north part of the Robles and Mira Monte/Meiners Oaks Areas. This was likely due to these wells being screened in and influenced by flow in fractured bedrock units. The model does not simulate contributions from the fractured bedrock. Including this in the future would allow for improved model predictions of drought groundwater levels in this area.
- The groundwater model used daily stress periods for winter and spring conditions (November through March) and monthly stress periods for late spring to fall (April to October). Monthly stress periods from April to October limit the ability of the model to simulate spring and summer stormflows and baseflows conditions. A future update of the model could potentially incorporate year-round daily stress periods.
- The model poses significant uncertainty when simulating very low flows in the summer and fall, especially in the Casitas Springs Area. Based on streamflow calibration results, the model has an uncertainty of 1-2 cfs in simulating low flow conditions (< 5 cfs) typical of summer and fall in the Ventura River. Note, this uncertainty is driven both by the resolution of the model and the uncertainty and gaps in the available data to calibrate the model. The model was used to assess streamflow depletions by running the model with and without pumping (UVRGA GSP Section 3.2.6, 4.9.1, and Appendix N). The depletions are dependent on the pumping and the degree of surface-water/groundwater connectivity within the Ventura River floodplain. Since the same model is used for both the “pumping” and “no pumping” simulations, the relative impact of pumping on streamflow depletions can still be reliably evaluated with the model. In other words, while there is 1-2 cfs of uncertainty in simulating the magnitude of low flows, there is less uncertainty in simulating the relative difference (due to impact from pumping) in the flow conditions. Thus, the model is an appropriate tool for estimating streamflow depletion due to groundwater pumping.

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TABLES

Table 5.1. UVRGM Layers and Active Cells

Model Layer	Stratigraphic Unit(s)	Active Cells	Layer Type
1	Young Alluvium	21,234	Unconfined
2	Mixed/Older Alluvium/Ojai Conglomerate (where present)	25,908	Convertible

Table 6.2. Representative Months for Missing BCM Recharge

Missing Month*	Missing Month Precipitation (in)	Analogous Month	Analogous Month Precipitation (in)
01/2017	10.68	12/2010	10.89
02/2017	9.18	01/2010	7.99
03/2018	7.77	03/2011	7.18
01/2019	7.42	01/2010	7.99
02/2019	8.88	01/2010	7.99
03/2019	4.10	02/2006	5.40
12/2019	6.04	12/2014	4.78

**Months will less than 4 in of rain were assumed to have 0 groundwater recharge consistent with BCM results*

Table 6.2. Annual BCM Recharge and Return Flows

Water Year	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Distribution Losses	Septic Return Flows	Total Recharge
2006	152	62	242	97	125	678
2007	0	62	271	108	140	581
2008	1744	62	262	105	135	2308
2009	44	62	245	98	126	575
2010	1478	62	220	88	113	1961
2011	2215	62	206	82	106	2671
2012	0	62	213	85	110	471
2013	5	62	209	84	109	468
2014	0	62	199	80	102	443
2015	42	62	175	70	90	438
2016	6	62	148	59	76	352
2017	1724	62	139	55	72	2052
2018	1309	62	149	59	76	1655
2019	1570	62	143	57	73	1905
Average	*735*	*62*	*202*	*81*	*104*	*1183*

Table 7.1. Curve Number Values and Contributing Areas for each Tributary Sub-Basin

Sub-Basin	Curve Number	Area (acres)
Kennedy Canyon	76.6	1007
Rice Canyon & Wills Canyon	83.2	1380
Cozy Dell Canyon & McDonald Canyon	81.7	2577
Happy Valley Drain	84.0	2121
Mirror Lake Drain	80.7	715
Live Oak Creek	81.9	2279
Oak View Drain	82.6	631
Coyote Creek	81.4	1862
Ventura River	77.3	4988

Table 8.1. Max Rooting Depth, Seasonal Kc, and Spatial Density by Vegetation Group and Hydrogeological Zone

		Season					
Hydrogeological Area	Vegetation Class	Max Rooting Depth (ft)	Spring Kc	Summer Kc	Fall Kc	Winter Kc	Spatial Density
Kennedy	Coast Live Oak	30	0.59	0.30	0.36	1.06	2.25
Kennedy	Riparian Mixed Hardwood	13.7	0.90	1.20	1.20	0.85	1.14
Kennedy	Riversidean Alluvial Scrub	5	0.45	0.60	0.45	0.35	1.00
Kennedy	Scalebroom	6	0.45	0.60	0.45	0.35	0.75
Kennedy	Wetland	3	1.05	1.15	0.80	0.75	1.00
Robles (North)	Coast Live Oak	30	0.59	0.30	0.36	1.06	2.00
Robles (North)	Riversidean Alluvial Scrub	5	0.45	0.60	0.45	0.35	1.2
Robles (North)	Scalebroom	6	0.45	0.60	0.45	0.35	1.00
Robles (North)	Wetland	3	1.05	1.15	0.80	0.75	1.00
Robles (North)	Willow_Shrub	30	0.59	0.30	0.36	1.06	1.00
Robles (South)	Coast Live Oak	30	0.59	0.30	0.36	1.06	1.50
Robles (South)	Riversidean Alluvial Scrub	5	0.45	0.60	0.45	0.35	1.20
Robles (South)	Scalebroom	6	0.45	0.60	0.45	0.35	1.00
Robles (South)	Wetland	3	1.05	1.15	0.80	0.75	1.00
Robles (South)	Arundo	16	5.00	5.474	3.81	3.57	0.74
Mira Monte/ Meiners Oaks	Coast Live Oak	30	0.59	0.30	0.36	1.06	2.00
Santa Ana (North)	Riparian Mixed Hardwood	13.7	0.90	1.20	1.20	0.85	1.00
Santa Ana (North)	Riversidean Alluvial Scrub	5	0.45	0.60	0.45	0.35	1.40
Santa Ana (North)	Scalebroom	6	0.45	0.60	0.45	0.35	1.25
Santa Ana (North)	Wetland	3	1.05	1.15	0.80	0.75	1.00
Santa Ana (North)	Arundo	16	5.00	5.47	3.81	3.57	0.63
Santa Ana (South)	Coast Live Oak	30	0.59	0.30	0.36	1.06	1.00
Santa Ana (South)	Riparian Mixed Hardwood	13.7	0.90	1.20	1.20	0.85	0.57
Santa Ana (South)	Riversidean Alluvial Scrub	5	0.45	0.60	0.45	0.35	0.80
Santa Ana (South)	Wetland	3	1.05	1.15	0.80	0.75	1.00
Santa Ana (South)	Arundo	16	5.00	5.47	3.81	3.57	0.74
Casitas Springs	Coast Live Oak	30	0.59	0.30	0.36	1.06	2.25
Casitas Springs	Riparian Mixed Hardwood	13.7	0.90	1.20	1.20	0.85	1.14
Casitas Springs	Riversidean Alluvial Scrub	5	0.45	0.60	0.45	0.35	1.40
Casitas Springs	Wetland	3	1.05	1.15	0.80	0.75	1.00

		Season					
Hydrogeological Area	Vegetation Class	Max Rooting Depth (ft)	Spring Kc	Summer Kc	Fall Kc	Winter Kc	Spatial Density
Casitas Springs	Arundo	16	5.00	5.47	3.81	3.57	0.95
Terraces	Coast Live Oak	30	0.59	0.30	0.36	1.06	2.00
Notes:							
Spring: March-May; *Summer: June-August;* *Fall: September-November;* *Winter: December-February*							

Table 9.1. Agricultural Monthly Distribution Factors

Month	Scale Factor
January	0.00000
February	0.02439
March	0.04878
April	0.07317
May	0.09756
June	0.12195
July	0.12195
August	0.12195
September	0.12195
October	0.12195
November	0.12195
December	0.02439
Total	1.00000

Table 13.1. Calibration Statistics (Groundwater Levels)

Calibration Metric	Value
Mean Error	-0.95
Mean Absolute Error (MAE)	6.46
Root Mean Square Error (RMSE)	8.93
Number of Observations	5,284
Range of Observations	612.12
Scaled MAE[1]	0.011
Scaled RMSE[1]	0.015

[1]10% scaled MAE/RMSE is the industry calibration standard (Spitz and Moreno, 1996; Rumbaugh and Rumabugh, 2005)

Table 14.1. Simulated Historical Groundwater Budget

Water Year	Year Type	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Septic Return Flows	Distribution losses Return Flows	Net Stream Percolation from Losing Reaches	Net GW Discharge to Gaining Reaches	Shallow Groundwater Drainage to the East	SW Diversion simulated using WEL package	M&I Pumping	Agricultural Pumping	Domestic Pumping	GW ET from Riparian Vegetation	Inflows	Outflows	Change in Storage	Cumulative Change in Storage
2006	Wet	152	62	242	125	97	24,048	(18,642)	(5)	(708)	(4,600)	(215)	(194)	(1,525)	24,726	(25,889)	(1,090)	(1,090)
2007	Dry	0	62	271	140	108	5,509	(8,632)	(3)	(804)	(5,009)	(283)	(196)	(1,359)	6,090	(16,286)	(10,115)	(11,205)
2008	Normal	1,744	62	262	135	105	24,526	(12,588)	(5)	(846)	(5,292)	(266)	(197)	(1,802)	26,834	(20,996)	5,930	(5,274)
2009	Dry	44	62	245	126	98	9,096	(7,178)	(6)	(903)	(5,618)	(290)	(197)	(1,275)	9,670	(15,466)	(5,523)	(10,798)
2010	Wet	1,478	62	220	113	88	24,365	(13,492)	(9)	(886)	(5,542)	(240)	(193)	(1,399)	26,325	(21,763)	4,673	(6,125)
2011	Wet	2,215	62	206	106	82	25,145	(17,267)	(14)	(856)	(4,727)	(252)	(197)	(1,538)	27,816	(24,851)	3,045	(3,080)
2012	Dry	0	62	213	110	85	12,246	(8,768)	(13)	(785)	(5,908)	(284)	(199)	(1,439)	12,717	(17,398)	(4,490)	(7,569)
2013	Dry	5	62	209	109	84	2,225	(5,015)	(12)	(765)	(4,449)	(310)	(196)	(944)	2,693	(11,690)	(8,439)	(16,008)
2014	Dry	0	62	199	102	80	4,041	(573)	(11)	(787)	(4,867)	(266)	(183)	(809)	4,484	(7,497)	(2,532)	(18,540)
2015	Dry	42	62	175	90	70	2,904	(1,056)	(11)	(271)	(2,815)	(294)	(170)	(678)	3,343	(5,296)	(1,808)	(20,348)
2016	Dry	6	62	148	76	59	3,955	(397)	(11)	(207)	(2,944)	(338)	(166)	(662)	4,307	(4,725)	(354)	(20,702)
2017	Wet	1,724	62	116	71	76	24,609	(9,055)	(15)	(256)	(4,494)	(367)	(184)	(1,001)	26,658	(15,372)	11,363	(9,339)
2018	Dry	1,309	62	121	74	78	8,665	(6,363)	(15)	(199)	(4,142)	(335)	(192)	(767)	10,309	(12,012)	(1,592)	(10,931)
2019	Wet	1,570	62	119	73	77	28,938	(16,696)	(18)	(93)	(3,288)	(395)	(192)	(1,314)	30,838	(21,996)	8,939	(1,992)
Average (2006 – 2019)		735	62	196	104	85	14,305	(8,980)	(11)	(598)	(4,550)	(295)	(190)	(1,179)	15,486	(15,803)	(142)	

All values are in acre-feet.

Table 14.2. Simulated Historical Surface Water Budget

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion simulated using WEL package	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2006	Wet	44,605	12,527	37,128	5,833	18,642	708	(82,387)	(13,009)	(24,048)	119,444	(119,444)
2007	Dry	5,381	1,270	297	309	8,632	804	(10,120)	(1,064)	(5,509)	16,694	(16,694)
2008	Normal	40,874	10,332	36,188	5,871	12,588	846	(71,136)	(11,036)	(24,526)	106,698	(106,698)
2009	Dry	6,829	1,416	4,032	1,182	7,178	903	(10,759)	(1,685)	(9,096)	21,540	(21,540)
2010	Wet	21,348	4,544	33,228	5,525	13,492	886	(46,999)	(7,660)	(24,365)	79,024	(79,024)
2011	Wet	45,682	10,580	49,632	7,243	17,267	856	(82,672)	(23,443)	(25,145)	131,260	(131,260)
2012	Dry	11,029	901	1,298	742	8,768	785	(10,172)	(1,105)	(12,246)	23,524	(23,524)
2013	Dry	1,817	110	470	478	5,015	765	(5,443)	(987)	(2,225)	8,655	(8,655)
2014	Dry	4,188	685	1,474	1,131	573	787	(2,845)	(1,952)	(4,041)	8,839	(8,839)
2015	Dry	1,978	153	964	843	1,056	271	(1,933)	(427)	(2,904)	5,265	(5,265)
2016	Dry	1,138	501	3,512	1,574	397	207	(3,047)	(327)	(3,955)	7,329	(7,329)
2017	Wet	23,963	7,152	49,881	6,540	9,055	256	(65,770)	(6,468)	(24,609)	96,847	(96,847)
2018	Dry	8,027	1,306	1,842	1,427	6,363	199	(9,621)	(877)	(8,665)	19,164	(19,164)
2019	Wet	69,779	13,801	36,595	5,748	16,696	93	(92,791)	(20,983)	(28,938)	142,711	(142,711)
Average (2006 – 2019)		20,474	4,663	18,324	3,175	8,980	598	(35,407)	(6,502)	(14,305)	56,214	(56,214)

All values are in acre-feet.

Table 15.1a. Predictive Model Scenario Assumptions

Scenario	Simulation Period (Water Year)	Hydrology	Land-Use	(Natural) Areal Recharge	(Natural) Stream Recharge	Managed Recharge	Return Flows (Ag)	Return Flows (M&I)	Pumping/Diversions within UVRGA				
									Groundwater ET (Riparian)	M&I	AG & RMMWC	Dom and Domestic MWCs	Robles Diversion
Baseline (Future with no Climate Change)	50 yrs: 1970 - 2019	Historical Conditions	No change expected due to SOAR (Future = current)	Based on Historical Precip/ET	Based on Historical Hydrology	None	Identify Ag parcels based on areal imagery, Assume 2 AFY/acre applied water, 20% of applied water is return flow	Estimate outdoor water use using VRWD as proxy for all res/comm. land in Basin. Assume 50% of water deliveries are outdoor use. Assume 20% of applied outdoor water is return flow	Based on Historical ET	Non-Drought Extraction (AFY): CMWD: 188 MOWD: 924* VRWD: 950* Ventura: 4,200 * = changed by board 12/10/20 Drought Extraction (AFY): CMWD: 45 MOWD: 487 VRWD: 863 Ventura: 1,573 Three or More Consecutive Years of Drought Extraction (AFY): Ventura: 1,298 CMWD, MOWD, VRWD: same as Drought Extraction above.	<u>Ag Wells Except RMMWC</u>: Scale 2017 pumping estimates by precip. <u>RMMWC</u> Sump (33G03): Drought: 309 AFY (ave 15-18) Non-Drought: 1,034 AFY (ave 05-14) Well 8 (04Q01): most recent year 49 AFY, apply during dry part of year Well 5 (09B01): most recent year 136 AFY, apply during dry part of year	Same as historical period	Develop diversion algorithm based on National Marine Fisheries Service biological opinion rules[2] and CMWD CWRP[3]. Use predictive inflows (combined flows from 602 and 604) for River flow conditions.
2030s Climate Change	50 yrs: 1970 - 2019	Historical impacted by 2030s CC Factors	No change expected due to SOAR (Future = current)	Historical impacted by 2030 CC Precip/ET	Historical impacted by 2030 CC Streamflow	None	Baseline adjusted for increased irrigation demand for 2030 CC	Baseline adjusted for increased outdoor water use for 2030 CC	Based on 2030s CC ET	Same as Baseline	Baseline adjusted for increased irrigation demand for 2030 CC* based on average annual ET change factor (one value)	Same as Baseline	Same as Baseline
2070s Climate Change	50 yrs: 1970 - 2019	Historical impacted by 2070s CC Factors	No change expected due to SOAR (Future = current)	Historical impacted by 2070 CC Precip/ET	Historical impacted by 2070 CC Streamflow	None	Baseline adjusted for increased irrigation demand for 2070 CC	Baseline adjusted for increased outdoor water use for 2070 CC	Based on 2070s CC ET	Same as Baseline	Baseline adjusted for increased irrigation demand for 2070 CC	Same as Baseline	Same as Baseline

[2]https://www.casitaswater.org/home/showpublisheddocument?id=1825
[3]https://www.casitaswater.org/home/showpublisheddocument?id=2553

Table 15.1b. Future Water Usage Assumptions

Return Flows Assumptions		
Scenario	Ag	M&I
Baseline	Aerial coverage estimated from Ag Commissioner data - same as historical model. 2 acre-ft/year/acre assumed applied water for all crop areas	Water Service Areas for M&I application same as historical model Per-area water usage rates taken from VRWD data (dry years used average of 2015-2019 water usage; wet years used 85% of average of 2005-2009 water usage)
2030	Aerial coverage same as baseline Water usage adjusted by constant average 2030 ET factor	Coverage same as baseline Outdoor M&I water usage increased by average 2030 ET factor
2070	Aerial coverage same as baseline Water usage adjusted by constant average 2070 ET factor	Coverage same as baseline Outdoor M&I water usage increased by average 2070 ET factor

Table 15.2. Monthly Distribution of City of Ventura Pumping

Month	Non-Drought Year	Drought Year	3rd and Subsequent Drought Year
1	0.0384	0.0000	0.0000
2	0.0663	0.1667	0.1667
3	0.0917	0.1667	0.1667
4	0.0947	0.1667	0.1667
5	0.1021	0.1667	0.1667
6	0.0991	0.1667	0.1667
7	0.0977	0.1667	0.1667
8	0.0985	0.0000	0.0000
9	0.0925	0.0000	0.0000
10	0.0903	0.0000	0.0000
11	0.0745	0.0000	0.0000
12	0.0543	0.0000	0.0000

Table 15.3. Distribution of Predictive M&I Pumping Based on Historical Pumping Distributions

Well ID	Agency	Well Name	Well Distribution Factor (Drought)	Well Distribution Factor (Non-Drought)
04N23W16A01S	CMWD	Mira Monte Well #3	1.000	1.000
05N23W33B03S	MOWD	Well 1	0.302	0.238
05N23W33B04S	MOWD	Well 2	0.167	0.1478
04N23W09B05S	MOWD	Well 4	0.232	0.385
04N23W09B04S	MOWD	Well 7	0.298	0.205
04N23W04J01S	MOWD	Well 8	0.001	0.024
04N23W16C08S	VRWD	Well 1	0.766	0.392
04N23W16C07S	VRWD	Well 2	0.025	0.178
04N23W16F04S	VRWD	Well 3	0.133	0.233
04N23W16C10S	VRWD	Well 4	0.074	0.181
04N23W15B01S	VRWD	Well 5	0.000	0.015
04N23W16C11S	VRWD	Well 7	0.001	0.000
03N23W08B01S	City of Ventura	Nye Well #7	0.275	0.237
03N23W08C02S	City of Ventura	Nye Well #8	0.396	0.149
03N23W08B11S	City of Ventura	Nye Well #11	0.041	0.035
Foster Park Subsurface Intake	City of Ventura	Foster Park Subsurface Intake	0.288	0.578
03N23W08B05S	City of Ventura	Nye Well #1	0.000	0.001
03N23W08B02S	City of Ventura	Nye Well #2	0.000	0.001

Table 15.4a. Agricultural Pumping Precipitation Scaling Factors for Baseline

Year	Scaling Factor	Normalized Ratio	Ratio to 2017	Annual Precip. (in/year)
1967	0.97	1.04	1.15	32.62
1968	1.22	0.82	0.55	15.52
1969	0.81	1.23	1.68	47.72
1970	1.17	0.85	0.65	18.48
1971	1.16	0.86	0.68	19.15
1972	1.31	0.76	0.40	11.26
1973	0.95	1.05	1.20	34.10
1974	1.18	0.84	0.62	17.71
1975	1.11	0.90	0.77	21.90
1976	1.23	0.81	0.54	15.20
1977	1.33	0.75	0.37	10.60
1978	0.80	1.25	1.74	49.44
1979	1.09	0.92	0.84	23.72
1980	0.95	1.05	1.19	33.83
1981	1.22	0.82	0.56	15.77
1982	1.15	0.87	0.70	19.95
1983	0.83	1.20	1.60	45.49
1984	1.22	0.82	0.55	15.69
1985	1.23	0.81	0.54	15.24
1986	0.96	1.04	1.16	32.78
1987	1.36	0.73	0.32	9.03
1988	1.18	0.85	0.64	18.10
1989	1.30	0.77	0.42	12.03
1990	1.37	0.73	0.31	8.74
1991	1.14	0.88	0.71	20.19
1992	1.04	0.96	0.96	27.12
1993	0.85	1.18	1.54	43.73
1994	1.26	0.79	0.49	13.76
1995	0.83	1.20	1.60	45.45
1996	1.20	0.84	0.60	17.09
1997	1.09	0.92	0.83	23.47
1998	0.77	1.30	1.88	53.29
1999	1.33	0.75	0.38	10.66
2000	1.15	0.87	0.70	19.73
2001	1.04	0.96	0.95	26.98
2002	1.40	0.72	0.27	7.73
2003	1.08	0.92	0.84	23.95
2004	1.23	0.81	0.54	15.22
2005	0.81	1.24	1.70	48.25
2006	1.07	0.94	0.88	24.96
2007	1.43	0.70	0.23	6.43

Year	Scaling Factor	Normalized Ratio	Ratio to 2017	Annual Precip. (in/year)
2008	1.08	0.92	0.84	23.80
2009	1.27	0.78	0.46	13.02
2010	1.05	0.95	0.91	25.92
2011	1.00	1.00	1.05	29.71
2012	1.31	0.77	0.41	11.59
2013	1.37	0.73	0.31	8.79
2014	1.36	0.73	0.32	9.08
2015	1.33	0.75	0.36	10.32
2016	1.31	0.77	0.41	11.51
2017	1.02	0.98	1.00	28.35
2018	1.32	0.76	0.39	11.13
2019	1.03	0.97	0.96	27.28

Table 15.4b. Agricultural Pumping Precipitation Scaling Factors for 2030

Year	Scaling Factor	Normalized Ratio	Ratio to 2017	Annual Precip. (in/year)
1967	1.01	0.99	1.09	30.79
1968	1.22	0.82	0.59	16.64
1969	0.86	1.17	1.59	44.82
1970	1.20	0.83	0.62	17.63
1971	1.15	0.87	0.74	20.91
1972	1.36	0.74	0.36	10.04
1973	0.98	1.02	1.17	33.12
1974	1.21	0.82	0.61	17.12
1975	1.19	0.84	0.64	18.16
1976	1.21	0.82	0.61	17.10
1977	1.32	0.76	0.42	11.88
1978	0.82	1.22	1.73	48.92
1979	1.10	0.91	0.86	24.23
1980	0.97	1.03	1.20	33.89
1981	1.26	0.80	0.52	14.79
1982	1.17	0.86	0.70	19.78
1983	0.83	1.20	1.69	47.58
1984	1.26	0.79	0.51	14.39
1985	1.26	0.79	0.52	14.60
1986	0.98	1.02	1.16	32.61
1987	1.36	0.74	0.35	9.94
1988	1.18	0.85	0.67	18.82
1989	1.30	0.77	0.44	12.53
1990	1.38	0.72	0.32	8.94
1991	1.16	0.86	0.72	20.22
1992	1.06	0.95	0.95	26.94
1993	0.88	1.14	1.50	42.32
1994	1.27	0.79	0.51	14.26
1995	0.88	1.13	1.49	41.99
1996	1.20	0.83	0.63	17.84
1997	1.10	0.91	0.84	23.64
1998	0.77	1.30	1.97	55.54
1999	1.32	0.76	0.41	11.69
2000	1.14	0.88	0.75	21.20
2001	1.08	0.93	0.90	25.50
2002	1.40	0.72	0.29	8.29
2003	1.12	0.89	0.81	22.74
2004	1.24	0.81	0.56	15.67
2005	0.87	1.15	1.54	43.53
2006	1.12	0.89	0.79	22.42
2007	1.43	0.70	0.25	7.03

Year	Scaling Factor	Normalized Ratio	Ratio to 2017	Annual Precip. (in/year)
2008	1.11	0.90	0.84	23.60
2009	1.28	0.78	0.48	13.58
2010	1.07	0.94	0.93	26.23
2011	1.07	0.94	0.93	26.25
2012	1.32	0.76	0.42	11.77
2013	1.40	0.72	0.29	8.30
2014	1.37	0.73	0.33	9.35
2015	1.36	0.74	0.35	9.92
2016	1.29	0.77	0.46	13.04
2017	1.04	0.96	1.00	28.22
2018	1.35	0.74	0.37	10.44
2019	1.09	0.92	0.88	24.90

Table 15.4c. Agricultural Pumping Precipitation Scaling Factors for 2070

Year	Scaling Factor	Normalized Ratio	Ratio to 2017	Annual Precip. (in/year)
1967	1.00	1.00	1.06	31.74
1968	1.25	0.80	0.49	14.72
1969	0.82	1.21	1.65	49.51
1970	1.17	0.85	0.65	19.52
1971	1.21	0.82	0.57	16.97
1972	1.34	0.75	0.35	10.59
1973	0.96	1.04	1.16	34.90
1974	1.20	0.84	0.60	17.86
1975	1.18	0.84	0.62	18.67
1976	1.12	0.89	0.76	22.82
1977	1.30	0.77	0.42	12.45
1978	0.79	1.27	1.82	54.48
1979	1.07	0.93	0.87	26.13
1980	0.94	1.06	1.22	36.61
1981	1.21	0.82	0.56	16.91
1982	1.13	0.88	0.73	21.77
1983	0.84	1.19	1.59	47.56
1984	1.28	0.78	0.45	13.56
1985	1.25	0.80	0.49	14.68
1986	0.97	1.03	1.15	34.32
1987	1.36	0.73	0.32	9.44
1988	1.18	0.85	0.63	18.98
1989	1.32	0.76	0.38	11.50
1990	1.36	0.74	0.32	9.55
1991	1.13	0.88	0.74	22.03
1992	1.03	0.97	0.97	28.92
1993	0.85	1.17	1.53	45.93
1994	1.25	0.80	0.50	15.00
1995	0.85	1.18	1.55	46.54
1996	1.18	0.85	0.62	18.73
1997	1.09	0.92	0.82	24.62
1998	0.77	1.30	1.90	56.83
1999	1.32	0.76	0.38	11.33
2000	1.13	0.88	0.73	21.89
2001	1.04	0.96	0.94	28.23
2002	1.41	0.71	0.25	7.50
2003	1.13	0.88	0.73	21.81
2004	1.24	0.81	0.52	15.69
2005	0.84	1.20	1.61	48.15
2006	1.12	0.89	0.75	22.51
2007	1.43	0.70	0.22	6.53

Year	Scaling Factor	Normalized Ratio	Ratio to 2017	Annual Precip. (in/year)
2008	1.08	0.92	0.84	25.30
2009	1.28	0.78	0.44	13.13
2010	1.07	0.94	0.89	26.56
2011	1.04	0.97	0.96	28.79
2012	1.33	0.75	0.37	10.98
2013	1.40	0.71	0.25	7.64
2014	1.38	0.73	0.29	8.67
2015	1.35	0.74	0.34	10.17
2016	1.28	0.78	0.44	13.24
2017	1.02	0.98	1.00	29.96
2018	1.30	0.77	0.41	12.16
2019	1.05	0.95	0.93	27.80

Table 15.5a. Predictive Pumping Volumes by Category for Baseline

Water Year	De Minimus (AF)	Domestic MWCs (AF)	M&I (AF)	Ag (AF)
1970	162	31	6261	468
1971	161	31	6262	491
1972	157	31	4053	520
1973	162	31	5177	461
1974	162	31	6262	480
1975	160	31	6262	484
1976	156	31	4053	501
1977	153	31	2967	527
1978	165	31	5177	431
1979	164	31	6262	451
1980	166	31	6262	446
1981	161	31	6262	486
1982	156	31	6262	489
1983	165	31	6262	426
1984	161	31	6262	477
1985	155	31	6262	508
1986	159	31	6262	458
1987	159	31	4053	516
1988	160	31	5177	508
1989	154	31	4053	518
1990	147	31	2967	534
1991	154	31	5177	495
1992	163	31	6262	466
1993	168	31	6262	423
1994	162	31	4053	488
1995	166	31	5177	435
1996	163	31	6262	475
1997	162	31	6262	479
1998	166	31	6262	410
1999	163	31	4053	495
2000	160	31	5177	500
2001	162	31	6262	467
2002	157	31	4053	527
2003	160	31	5177	491
2004	158	31	4053	499
2005	166	31	5177	429
2006	163	31	6262	448
2007	157	31	4053	536
2008	160	31	5177	495
2009	156	31	4053	507
2010	160	31	5177	478

Water Year	De Minimus (AF)	Domestic MWCs (AF)	M&I (AF)	Ag (AF)
2011	162	31	6262	453
2012	161	31	4053	507
2013	151	31	2967	535
2014	144	31	2692	503
2015	131	31	2692	489
2016	126	31	2692	479
2017	147	31	5177	448
2018	154	31	4053	508
2019	159	31	5177	478

Table 15.5b. Predictive Pumping Volumes by Category for 2030

Water Year	De Minimus (AF)	Domestic MWCs (AF)	M&I (AF)	Ag (AF)
1970	161	31	6261	497
1971	160	31	6262	511
1972	158	31	4053	547
1973	162	31	5177	490
1974	161	31	6262	506
1975	160	31	6262	519
1976	155	31	6262	523
1977	152	31	4053	545
1978	165	31	5177	452
1979	164	31	6262	474
1980	165	31	6262	469
1981	158	31	6262	513
1982	155	31	6262	514
1983	165	31	6262	445
1984	161	31	4053	508
1985	156	31	2967	539
1986	159	31	5177	484
1987	157	31	4053	538
1988	160	31	5177	531
1989	154	31	4053	540
1990	147	31	2967	558
1991	153	31	5177	513
1992	162	31	6262	491
1993	168	31	6262	448
1994	162	31	4053	512
1995	165	31	5177	464
1996	162	31	6262	497
1997	161	31	6262	501
1998	166	31	6262	427
1999	163	31	4053	515
2000	159	31	5177	520
2001	162	31	6262	494
2002	155	31	4053	553
2003	158	31	5177	519
2004	158	31	6262	523
2005	166	31	6262	459
2006	162	31	6262	483
2007	154	31	4053	562
2008	160	31	5177	519
2009	155	31	4053	528
2010	160	31	5177	500

Water Year	De Minimus (AF)	Domestic MWCs (AF)	M&I (AF)	Ag (AF)
2011	162	31	6262	484
2012	159	31	4053	536
2013	150	31	2967	564
2014	143	31	2692	527
2015	127	31	2692	514
2016	125	31	2692	496
2017	147	31	5177	468
2018	153	31	4053	538
2019	159	31	5177	511

Table 15.5c. Predictive Pumping Volumes by Category for 2070

Year	De Minimus (AF)	Domestic MWCs (AF)	M&I (AF)	Ag (AF)
1969	165	31	6261	510
1970	164	31	6262	544
1971	160	31	4053	568
1972	165	31	5177	506
1973	164	31	6262	524
1974	164	31	6262	536
1975	163	31	6262	526
1976	162	31	4053	559
1977	169	31	5177	463
1978	168	31	6262	487
1979	169	31	6262	481
1980	163	31	6262	526
1981	160	31	6262	526
1982	169	31	6262	463
1983	165	31	4053	529
1984	159	31	2967	557
1985	163	31	5177	502
1986	160	31	4053	562
1987	163	31	5177	552
1988	156	31	4053	560
1989	151	31	2967	578
1990	157	31	5177	526
1991	166	31	6262	504
1992	171	31	6262	461
1993	166	31	6262	530
1994	170	31	6262	476
1995	166	31	6262	512
1996	164	31	6262	518
1997	170	31	6262	445
1998	166	31	4053	538
1999	163	31	5177	540
2000	166	31	6262	508
2001	158	31	4053	577
2002	161	31	5177	545
2003	162	31	6262	543
2004	170	31	6262	473
2005	166	31	6262	501
2006	158	31	4053	588
2007	164	31	5177	536
2008	157	31	4053	547
2009	163	31	5177	521

Year	De Minimus (AF)	Domestic MWCs (AF)	M&I (AF)	Ag (AF)
2010	166	31	6262	497
2011	161	31	4053	558
2012	154	31	2967	581
2013	147	31	2692	551
2014	129	31	2692	534
2015	127	31	2692	515
2016	150	31	5177	483
2017	157	31	4053	551
2018	163	31	5177	522
2019	165	31	6261	510

Table 15.6a. Simulated Future Groundwater Budget (Baseline Conditions)

Water Year	Year Type	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Septic Return Flows	Distribution losses Return Flows	Net Stream Percolation from Losing Reaches	Net GW Discharge to Gaining Reaches	Shallow Groundwater Drainage to the East	SW Diversion simulated using WEL package	M&I Pumping	Agricultural Pumping	Domestic Pumping	GW ET from Riparian Vegetation	Inflows	Outflows	Change in Storage	Cumulative Change in Storage
2020	Normal	53	62	201	102	80	18,203	(14,334)	(13)	(784)	(6,261)	(468)	(193)	(1,294)	18,700	(23,347)	(4,548)	(4,548)
2021	Normal	1,336	62	201	102	80	20,213	(13,795)	(15)	(784)	(6,262)	(491)	(192)	(1,159)	21,994	(22,699)	(607)	(5,154)
2022	Dry	670	62	177	90	71	11,868	(9,160)	(15)	(302)	(4,053)	(520)	(188)	(946)	12,938	(15,185)	(2,139)	(7,294)
2023	Wet	3,590	62	193	98	77	26,002	(15,081)	(19)	(716)	(5,177)	(461)	(193)	(1,225)	30,021	(22,873)	7,244	(50)
2024	Normal	888	62	201	102	80	18,707	(14,646)	(20)	(784)	(6,262)	(480)	(193)	(1,135)	20,039	(23,521)	(3,383)	(3,432)
2025	Normal	782	62	201	102	80	23,604	(14,371)	(19)	(784)	(6,262)	(484)	(191)	(1,100)	24,831	(23,212)	1,729	(1,703)
2026	Dry	66	62	177	90	71	11,130	(7,523)	(17)	(302)	(4,053)	(501)	(187)	(892)	11,596	(13,475)	(1,777)	(3,480)
2027	Dry	30	62	169	86	68	6,556	(7,376)	(14)	(234)	(2,967)	(527)	(184)	(793)	6,970	(12,096)	(5,012)	(8,492)
2028	Wet	8,713	62	193	98	77	31,183	(17,358)	(34)	(716)	(5,177)	(431)	(196)	(1,443)	40,325	(25,355)	15,062	6,570
2029	Normal	1,887	62	201	102	80	23,025	(18,290)	(37)	(784)	(6,262)	(451)	(195)	(1,356)	25,356	(27,376)	(1,922)	4,648
2030	Wet	4,233	62	201	102	81	23,588	(18,163)	(46)	(784)	(6,262)	(446)	(198)	(1,361)	28,267	(27,260)	1,097	5,744
2031	Normal	69	62	201	102	80	13,958	(12,069)	(37)	(784)	(6,262)	(486)	(192)	(1,117)	14,472	(20,947)	(6,320)	(575)
2032	Normal	60	62	201	102	80	15,940	(9,017)	(31)	(784)	(6,262)	(489)	(187)	(939)	16,445	(17,710)	(1,111)	(1,687)
2033	Wet	5,935	62	201	102	80	33,073	(18,954)	(51)	(784)	(6,262)	(426)	(196)	(1,349)	39,452	(28,023)	11,517	9,830
2034	Normal	75	62	201	102	81	14,870	(16,633)	(42)	(784)	(6,262)	(477)	(192)	(1,184)	15,391	(25,576)	(9,996)	(167)
2035	Normal	87	62	201	102	80	12,791	(7,943)	(35)	(784)	(6,262)	(508)	(186)	(893)	13,322	(16,611)	(3,127)	(3,293)
2036	Wet	1,258	62	201	102	80	29,514	(13,203)	(36)	(784)	(6,262)	(458)	(190)	(1,249)	31,216	(22,183)	9,133	5,840
2037	Dry	0	62	177	90	71	7,972	(9,713)	(31)	(302)	(4,053)	(516)	(190)	(900)	8,371	(15,705)	(7,229)	(1,389)
2038	Normal	55	62	193	98	77	22,357	(12,134)	(27)	(716)	(5,177)	(508)	(191)	(1,179)	22,842	(19,932)	3,016	1,627
2039	Dry	36	62	177	90	71	7,400	(7,557)	(23)	(302)	(4,053)	(518)	(185)	(844)	7,835	(13,483)	(5,546)	(3,919)
2040	Dry	16	62	169	86	68	3,997	(4,564)	(21)	(234)	(2,967)	(534)	(178)	(620)	4,396	(9,118)	(4,613)	(8,532)
2041	Normal	1,658	62	193	98	77	23,217	(8,273)	(23)	(716)	(5,177)	(495)	(185)	(1,051)	25,304	(15,920)	9,495	962
2042	Wet	3,474	62	201	102	81	25,963	(15,553)	(31)	(784)	(6,262)	(466)	(194)	(1,322)	29,883	(24,613)	5,367	6,329
2043	Wet	6,739	62	201	102	80	30,548	(21,776)	(54)	(784)	(6,262)	(423)	(199)	(1,525)	37,732	(31,023)	6,801	13,130
2044	Dry	88	62	177	90	71	12,657	(15,742)	(41)	(302)	(4,053)	(488)	(193)	(1,137)	13,145	(21,957)	(8,698)	4,432
2045	Wet	6,751	62	193	98	77	28,389	(19,160)	(66)	(716)	(5,177)	(435)	(197)	(1,512)	35,569	(27,264)	8,397	12,829
2046	Normal	287	62	201	102	81	15,199	(14,384)	(54)	(784)	(6,262)	(475)	(194)	(1,253)	15,932	(23,407)	(7,380)	5,449
2047	Normal	1,307	62	201	102	80	21,742	(14,511)	(53)	(784)	(6,262)	(479)	(193)	(1,292)	23,494	(23,575)	26	5,475
2048	Wet	6,722	62	201	102	80	32,900	(19,646)	(87)	(784)	(6,262)	(410)	(197)	(1,492)	40,067	(28,878)	11,278	16,754
2049	Dry	1	62	177	90	71	11,049	(14,316)	(64)	(302)	(4,053)	(495)	(194)	(1,068)	11,449	(20,492)	(8,935)	7,819
2050	Normal	597	62	193	98	77	20,738	(13,178)	(57)	(716)	(5,177)	(500)	(191)	(1,284)	21,765	(21,103)	766	8,585
2051	Wet	2,185	62	201	102	80	23,379	(15,319)	(62)	(784)	(6,262)	(467)	(193)	(1,346)	26,009	(24,434)	1,671	10,256
2052	Dry	0	62	177	90	71	8,425	(8,314)	(50)	(302)	(4,053)	(527)	(188)	(756)	8,824	(14,190)	(5,256)	5,000
2053	Normal	260	62	193	98	77	21,285	(12,453)	(44)	(716)	(5,177)	(491)	(191)	(1,083)	21,974	(20,155)	1,945	6,945
2054	Dry	104	62	177	90	71	14,300	(12,043)	(39)	(302)	(4,053)	(499)	(189)	(1,020)	14,804	(18,145)	(3,248)	3,698
2055	Wet	7,991	62	193	98	77	28,030	(19,511)	(81)	(716)	(5,177)	(429)	(197)	(1,115)	36,451	(27,226)	9,314	13,012
2056	Wet	152	62	201	102	80	24,059	(16,550)	(60)	(784)	(6,262)	(448)	(194)	(1,002)	24,655	(25,300)	(552)	12,459
2057	Dry	0	62	177	90	71	5,679	(9,118)	(48)	(302)	(4,053)	(536)	(188)	(730)	6,078	(14,974)	(8,788)	3,672
2058	Normal	1,744	62	193	98	77	22,971	(12,935)	(50)	(716)	(5,177)	(495)	(191)	(1,123)	25,145	(20,688)	4,564	8,236
2059	Dry	44	62	177	90	71	9,279	(8,555)	(41)	(302)	(4,053)	(507)	(187)	(790)	9,721	(14,436)	(4,605)	3,631
2060	Wet	1,478	62	193	98	77	23,742	(14,380)	(43)	(716)	(5,177)	(478)	(191)	(973)	25,649	(21,959)	3,787	7,418
2061	Wet	2,215	62	201	102	80	27,834	(18,164)	(47)	(784)	(6,262)	(453)	(193)	(1,139)	30,493	(27,044)	3,539	10,958
2062	Dry	0	62	177	90	71	11,493	(10,563)	(39)	(302)	(4,053)	(507)	(192)	(918)	11,893	(16,575)	(4,572)	6,385
2063	Dry	5	62	169	86	68	2,380	(6,457)	(33)	(234)	(2,967)	(535)	(182)	(601)	2,768	(11,010)	(8,099)	(1,714)
2064	Dry	0	62	169	86	68	4,178	(3,153)	(28)	(234)	(2,692)	(503)	(175)	(566)	4,561	(7,353)	(2,704)	(4,418)
2065	Dry	42	62	169	86	68	2,989	(2,206)	(25)	(234)	(2,692)	(489)	(162)	(294)	3,414	(6,102)	(2,618)	(7,035)
2066	Dry	6	62	169	86	68	4,006	(1,407)	(22)	(234)	(2,692)	(479)	(157)	(365)	4,397	(5,358)	(876)	(7,911)
2067	Wet	1,724	62	193	98	77	24,973	(8,996)	(26)	(716)	(5,177)	(448)	(178)	(948)	27,127	(16,489)	10,851	2,940
2068	Dry	1,309	62	177	90	71	8,857	(6,282)	(25)	(302)	(4,053)	(508)	(185)	(759)	10,565	(12,114)	(1,421)	1,519
2069	Wet	1,570	62	193	98	77	28,880	(14,802)	(28)	(716)	(5,177)	(478)	(190)	(1,258)	30,880	(22,650)	8,331	9,849
Average (2020-2069)		1,566	62	189	96	76	17,902	(12,393)	(38)	(586)	(5,060)	(482)	(189)	(1,054)	19,891	(19,802)	197	2,944

All values are in acre-feet.

Table 15.6b. Groundwater Budget Table for 2030

Water Year	Year Type	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Septic Return Flows	Distribution losses Return Flows	Net Stream Percolation from Losing Reaches	Net GW Discharge to Gaining Reaches	Shallow Groundwater Drainage to the East	SW Diversion simulated using WEL package	M&I Pumping	Agricultural Pumping	Domestic Pumping	GW ET from Riparian Vegetation	Inflows	Outflows	Change in Storage	Cumulative Change in Storage
2020	Normal	46	64	209	102	80	15,737	(13,609)	(13)	(817)	(6,261)	(497)	(192)	(1,303)	16,238	(22,692)	(6,299)	(6,299)
2021	Normal	1,295	64	209	102	80	20,698	(13,270)	(15)	(817)	(6,262)	(511)	(191)	(1,201)	22,448	(22,267)	365	(5,935)
2022	Dry	690	64	185	90	71	12,347	(9,171)	(15)	(315)	(4,053)	(547)	(189)	(989)	13,447	(15,278)	(1,720)	(7,654)
2023	Wet	3,432	64	201	98	77	24,830	(14,750)	(19)	(747)	(5,177)	(490)	(193)	(1,257)	28,702	(22,632)	6,161	(1,493)
2024	Normal	819	64	209	102	80	17,971	(13,681)	(20)	(817)	(6,262)	(506)	(192)	(1,143)	19,246	(22,621)	(3,106)	(4,599)
2025	Normal	695	64	209	102	80	22,416	(13,260)	(19)	(817)	(6,262)	(519)	(191)	(1,104)	23,567	(22,172)	1,583	(3,016)
2026	Normal	69	64	210	102	81	12,781	(5,431)	(16)	(817)	(6,262)	(523)	(186)	(909)	13,307	(14,145)	(538)	(3,554)
2027	Dry	34	64	184	90	71	6,947	(6,572)	(14)	(315)	(4,053)	(545)	(183)	(819)	7,390	(12,501)	(4,998)	(8,552)
2028	Wet	8,377	64	201	98	77	29,308	(16,815)	(33)	(747)	(5,177)	(452)	(196)	(1,440)	38,125	(24,859)	13,361	4,809
2029	Wet	1,798	64	209	102	80	21,485	(16,634)	(35)	(817)	(6,262)	(474)	(195)	(1,351)	23,739	(25,769)	(1,936)	2,873
2030	Wet	4,142	64	210	102	81	22,639	(16,823)	(43)	(817)	(6,262)	(469)	(196)	(1,379)	27,238	(25,990)	1,358	4,231
2031	Normal	61	64	209	102	80	12,776	(10,610)	(35)	(817)	(6,262)	(513)	(189)	(1,117)	13,292	(19,544)	(5,895)	(1,664)
2032	Normal	53	64	209	102	80	14,955	(8,023)	(29)	(817)	(6,262)	(514)	(186)	(945)	15,463	(16,777)	(960)	(2,624)
2033	Wet	5,747	64	209	102	80	31,054	(18,097)	(48)	(817)	(6,262)	(445)	(196)	(1,356)	37,257	(27,221)	10,124	7,500
2034	Dry	78	64	185	90	71	15,897	(17,246)	(40)	(315)	(4,053)	(508)	(192)	(1,227)	16,385	(23,582)	(7,091)	409
2035	Dry	91	64	176	86	68	12,684	(10,823)	(34)	(244)	(2,967)	(539)	(187)	(974)	13,168	(15,768)	(2,493)	(2,084)
2036	Wet	1,216	64	201	98	77	26,296	(13,993)	(34)	(747)	(5,177)	(484)	(190)	(1,262)	27,952	(21,887)	6,163	4,079
2037	Dry	0	64	184	90	71	8,722	(8,551)	(29)	(315)	(4,053)	(538)	(188)	(931)	9,131	(14,606)	(5,367)	(1,288)
2038	Normal	56	64	201	98	77	21,835	(12,184)	(25)	(747)	(5,177)	(531)	(191)	(1,230)	22,332	(20,084)	2,354	1,066
2039	Dry	35	64	184	90	71	7,397	(7,129)	(22)	(315)	(4,053)	(540)	(185)	(866)	7,841	(13,111)	(5,160)	(4,094)
2040	Dry	15	64	176	86	68	4,375	(4,426)	(20)	(244)	(2,967)	(558)	(178)	(636)	4,784	(9,030)	(4,130)	(8,224)
2041	Normal	1,514	64	201	98	77	22,106	(7,951)	(22)	(747)	(5,177)	(513)	(184)	(1,079)	24,059	(15,673)	8,482	259
2042	Wet	3,373	64	210	102	81	24,779	(14,652)	(29)	(817)	(6,262)	(491)	(193)	(1,332)	28,609	(23,777)	4,927	5,185
2043	Wet	6,471	64	209	102	80	27,462	(20,015)	(50)	(817)	(6,262)	(448)	(199)	(1,482)	34,389	(29,274)	5,210	10,395
2044	Dry	93	64	184	90	71	13,861	(13,788)	(39)	(315)	(4,053)	(512)	(193)	(1,169)	14,363	(20,070)	(5,601)	4,795
2045	Wet	5,991	64	201	98	77	26,061	(18,611)	(57)	(747)	(5,177)	(464)	(196)	(1,523)	32,492	(26,776)	5,806	10,601
2046	Normal	292	64	210	102	81	15,985	(13,207)	(48)	(817)	(6,262)	(497)	(194)	(1,299)	16,735	(22,326)	(5,414)	5,187
2047	Normal	1,252	64	209	102	80	21,263	(14,229)	(47)	(817)	(6,262)	(501)	(192)	(1,337)	22,970	(23,386)	(53)	5,134
2048	Wet	7,117	64	209	102	80	30,801	(19,075)	(80)	(817)	(6,262)	(427)	(197)	(1,494)	38,374	(28,353)	10,111	15,245
2049	Dry	2	64	184	90	71	11,327	(12,850)	(60)	(315)	(4,053)	(515)	(194)	(1,093)	11,738	(19,079)	(7,222)	8,023
2050	Normal	592	64	201	98	77	20,598	(13,105)	(52)	(747)	(5,177)	(520)	(190)	(1,344)	21,631	(21,135)	606	8,629
2051	Wet	2,181	64	209	102	80	21,857	(14,433)	(57)	(817)	(6,262)	(494)	(193)	(1,352)	24,494	(23,610)	980	9,609
2052	Dry	0	64	184	90	71	8,073	(7,511)	(47)	(315)	(4,053)	(553)	(186)	(760)	8,482	(13,426)	(4,830)	4,779
2053	Normal	262	64	201	98	77	20,972	(11,893)	(42)	(747)	(5,177)	(519)	(189)	(1,108)	21,674	(19,676)	2,268	7,047
2054	Normal	106	64	210	102	81	14,450	(10,051)	(37)	(817)	(6,262)	(523)	(189)	(1,050)	15,013	(18,929)	(3,736)	3,311
2055	Wet	7,395	64	209	102	80	27,961	(17,846)	(72)	(817)	(6,262)	(459)	(197)	(1,130)	35,811	(26,783)	9,125	12,436
2056	Normal	138	64	209	102	80	21,725	(14,923)	(54)	(817)	(6,262)	(483)	(193)	(984)	22,319	(23,716)	(1,296)	11,141
2057	Dry	0	64	184	90	71	5,867	(7,743)	(44)	(315)	(4,053)	(562)	(185)	(716)	6,276	(13,618)	(7,228)	3,912
2058	Normal	1,631	64	201	98	77	21,902	(12,286)	(46)	(747)	(5,177)	(519)	(191)	(1,144)	23,975	(20,109)	3,978	7,891
2059	Dry	44	64	184	90	71	8,912	(7,840)	(38)	(315)	(4,053)	(528)	(186)	(799)	9,365	(13,759)	(4,287)	3,603
2060	Wet	1,443	64	201	98	77	23,760	(14,037)	(40)	(747)	(5,177)	(500)	(191)	(1,003)	25,643	(21,695)	4,188	7,792
2061	Wet	2,132	64	209	102	80	26,866	(17,741)	(44)	(817)	(6,262)	(484)	(193)	(1,168)	29,454	(26,710)	2,890	10,681
2062	Dry	0	64	185	90	71	11,226	(9,384)	(36)	(315)	(4,053)	(536)	(190)	(920)	11,636	(15,435)	(3,688)	6,994
2063	Dry	4	64	176	86	68	2,261	(6,060)	(30)	(244)	(2,967)	(564)	(181)	(597)	2,659	(10,644)	(7,835)	(841)
2064	Dry	0	64	176	86	68	3,786	(2,913)	(26)	(244)	(2,692)	(527)	(174)	(540)	4,179	(7,117)	(2,846)	(3,687)
2065	Dry	43	64	176	86	68	2,856	(1,905)	(23)	(244)	(2,692)	(514)	(158)	(264)	3,292	(5,801)	(2,431)	(6,118)
2066	Dry	7	64	176	86	68	3,652	(1,117)	(21)	(244)	(2,692)	(496)	(156)	(337)	4,053	(5,064)	(927)	(7,045)
2067	Wet	1,691	64	201	98	77	24,996	(8,718)	(25)	(747)	(5,177)	(468)	(178)	(977)	27,127	(16,289)	11,076	4,031
2068	Dry	1,106	64	184	90	71	8,361	(5,888)	(23)	(315)	(4,053)	(538)	(184)	(769)	9,876	(11,770)	(1,764)	2,267
2069	Wet	1,681	64	201	98	77	27,071	(14,162)	(27)	(747)	(5,177)	(511)	(190)	(1,264)	29,193	(22,077)	7,219	9,486
Average (2020-2069)		1,506	64	197	96	76	17,279	(11,701)	(35)	(611)	(5,060)	(507)	(188)	(1,069)	19,219	(19,172)	190	2,493

All values are in acre-feet.

Table 15.6c. Groundwater Budget Table for 2070

Water Year	Year Type	Precipitation-Based Recharge	Agricultural Return Flows	M&I Return Flows	Septic Return Flows	Distribution losses Return Flows	Net Stream Percolation from Losing Reaches	Net GW Discharge to Gaining Reaches	Shallow Groundwater Drainage to the East	SW Diversion simulated using WEL package	M&I Pumping	Agricultural Pumping	Domestic Pumping	GW ET from Riparian Vegetation	Inflows	Outflows	Change in Storage	Cumulative Change in Storage
2020	Normal	47	67	219	102	80	16,140	(13,904)	(13)	(687)	(6,261)	(510)	(196)	(1,392)	16,655	(22,963)	(6,201)	(6,201)
2021	Normal	1,269	67	219	102	80	19,411	(13,082)	(15)	(632)	(6,262)	(544)	(195)	(1,236)	21,149	(21,966)	(706)	(6,907)
2022	Dry	546	67	193	90	71	10,525	(7,701)	(14)	(323)	(4,053)	(568)	(191)	(957)	11,492	(13,807)	(2,197)	(9,104)
2023	Wet	3,683	67	210	98	77	24,792	(14,164)	(19)	(692)	(5,177)	(506)	(196)	(1,296)	28,927	(22,051)	6,978	(2,125)
2024	Normal	912	67	219	102	80	18,346	(13,552)	(20)	(534)	(6,262)	(524)	(195)	(1,201)	19,726	(22,288)	(2,446)	(4,571)
2025	Normal	693	67	219	102	80	21,354	(12,768)	(19)	(616)	(6,262)	(536)	(195)	(1,140)	22,515	(21,537)	1,091	(3,480)
2026	Normal	67	67	219	102	81	24,341	(9,841)	(17)	(792)	(6,262)	(526)	(194)	(1,162)	24,877	(18,795)	6,193	2,713
2027	Dry	40	67	193	90	71	7,882	(11,533)	(14)	(329)	(4,053)	(559)	(193)	(988)	8,343	(17,671)	(9,215)	(6,503)
2028	Wet	8,841	67	210	98	77	27,495	(17,192)	(35)	(733)	(5,177)	(463)	(200)	(1,476)	36,788	(25,276)	11,612	5,109
2029	Wet	1,916	67	219	102	80	20,860	(16,398)	(37)	(795)	(6,262)	(487)	(199)	(1,407)	23,244	(25,587)	(2,244)	2,865
2030	Wet	4,297	67	219	102	81	22,437	(16,505)	(47)	(716)	(6,262)	(481)	(200)	(1,443)	27,204	(25,655)	1,646	4,511
2031	Normal	68	67	219	102	80	14,656	(11,277)	(37)	(512)	(6,262)	(526)	(194)	(1,202)	15,192	(20,010)	(4,709)	(199)
2032	Normal	59	67	219	102	80	15,313	(8,679)	(31)	(485)	(6,262)	(526)	(191)	(1,005)	15,840	(17,181)	(1,232)	(1,430)
2033	Wet	6,003	67	219	102	80	28,944	(17,972)	(52)	(790)	(6,262)	(463)	(200)	(1,382)	35,415	(27,122)	8,388	6,958
2034	Dry	65	67	193	90	71	14,461	(15,372)	(43)	(326)	(4,053)	(529)	(196)	(1,212)	14,948	(21,732)	(6,671)	287
2035	Dry	79	67	184	86	68	10,750	(9,262)	(36)	(255)	(2,967)	(557)	(190)	(950)	11,234	(14,217)	(2,866)	(2,579)
2036	Wet	1,265	67	210	98	77	26,350	(13,034)	(36)	(724)	(5,177)	(502)	(194)	(1,297)	28,067	(20,965)	7,207	4,628
2037	Dry	0	67	193	90	71	8,131	(8,124)	(31)	(329)	(4,053)	(562)	(191)	(949)	8,552	(14,239)	(5,574)	(946)
2038	Normal	59	67	211	98	77	20,877	(11,673)	(27)	(758)	(5,177)	(552)	(194)	(1,249)	21,389	(19,631)	1,874	928
2039	Dry	31	67	193	90	71	6,444	(6,245)	(24)	(329)	(4,053)	(560)	(187)	(845)	6,895	(12,243)	(5,231)	(4,303)
2040	Dry	16	67	184	86	68	5,086	(3,967)	(21)	(254)	(2,967)	(578)	(182)	(648)	5,506	(8,618)	(2,992)	(7,296)
2041	Normal	1,703	67	210	98	77	22,490	(8,108)	(24)	(700)	(5,177)	(526)	(188)	(1,144)	24,646	(15,867)	8,616	1,321
2042	Wet	3,436	67	219	102	81	23,459	(14,189)	(32)	(854)	(6,262)	(504)	(197)	(1,357)	27,365	(23,396)	4,077	5,398
2043	Wet	6,849	67	219	102	80	25,846	(19,133)	(55)	(805)	(6,262)	(461)	(202)	(1,513)	33,163	(28,431)	4,832	10,230
2044	Normal	97	67	219	102	80	14,907	(11,472)	(42)	(791)	(6,262)	(530)	(197)	(1,199)	15,472	(20,492)	(4,904)	5,326
2045	Wet	6,653	67	219	102	80	25,982	(17,424)	(67)	(779)	(6,262)	(476)	(201)	(1,602)	33,104	(26,811)	6,397	11,723
2046	Normal	319	67	219	102	81	16,300	(13,054)	(55)	(591)	(6,262)	(512)	(197)	(1,354)	17,088	(22,026)	(4,831)	6,892
2047	Normal	1,444	67	219	102	80	19,953	(13,705)	(55)	(470)	(6,262)	(518)	(195)	(1,357)	21,865	(22,562)	(591)	6,302
2048	Wet	6,979	67	219	102	80	29,416	(18,329)	(90)	(825)	(6,262)	(445)	(201)	(1,517)	36,864	(27,669)	9,289	15,591
2049	Dry	2	67	193	90	71	10,209	(11,136)	(66)	(329)	(4,053)	(538)	(197)	(1,109)	10,631	(17,427)	(6,680)	8,911
2050	Normal	625	67	211	98	77	20,086	(12,613)	(58)	(737)	(5,177)	(540)	(194)	(1,375)	21,165	(20,696)	580	9,491
2051	Wet	2,376	67	219	102	80	22,048	(14,111)	(65)	(854)	(6,262)	(508)	(197)	(1,413)	24,892	(23,410)	1,577	11,067
2052	Dry	0	67	193	90	71	7,237	(7,172)	(52)	(329)	(4,053)	(577)	(189)	(761)	7,658	(13,133)	(5,346)	5,721
2053	Normal	231	67	210	98	77	19,779	(10,782)	(46)	(501)	(5,177)	(545)	(192)	(1,114)	20,462	(18,356)	2,220	7,941
2054	Normal	112	67	219	102	81	15,467	(9,999)	(40)	(652)	(6,262)	(543)	(193)	(1,115)	16,048	(18,804)	(2,644)	5,297
2055	Wet	8,071	67	219	102	80	26,711	(17,850)	(83)	(765)	(6,262)	(473)	(201)	(1,176)	35,250	(26,811)	8,542	13,839
2056	Normal	141	67	219	102	80	21,847	(14,778)	(61)	(808)	(6,262)	(501)	(197)	(1,040)	22,456	(23,647)	(1,082)	12,756
2057	Dry	0	67	193	90	71	5,741	(7,430)	(49)	(329)	(4,053)	(588)	(189)	(722)	6,161	(13,359)	(7,079)	5,678
2058	Normal	1,728	67	211	98	77	21,426	(12,095)	(52)	(558)	(5,177)	(536)	(195)	(1,187)	23,608	(19,799)	3,924	9,601
2059	Dry	42	67	193	90	71	7,727	(7,207)	(43)	(329)	(4,053)	(547)	(188)	(791)	8,189	(13,159)	(4,848)	4,754
2060	Wet	1,490	67	210	98	77	23,199	(13,192)	(44)	(484)	(5,177)	(521)	(194)	(1,027)	25,141	(20,639)	4,616	9,370
2061	Wet	2,159	67	219	102	80	26,061	(17,191)	(48)	(569)	(6,262)	(497)	(197)	(1,209)	28,688	(25,974)	2,777	12,146
2062	Dry	0	67	193	90	71	10,297	(8,311)	(40)	(329)	(4,053)	(558)	(192)	(916)	10,718	(14,398)	(3,568)	8,578
2063	Dry	4	67	184	86	68	2,148	(5,613)	(33)	(226)	(2,967)	(581)	(185)	(589)	2,556	(10,194)	(7,528)	1,050
2064	Dry	0	67	184	86	68	3,652	(2,717)	(29)	(250)	(2,692)	(551)	(178)	(532)	4,056	(6,949)	(2,798)	(1,747)
2065	Dry	38	67	184	86	68	2,679	(1,703)	(26)	(255)	(2,692)	(534)	(160)	(242)	3,122	(5,612)	(2,420)	(4,167)
2066	Dry	7	67	184	86	68	3,315	(938)	(23)	(238)	(2,692)	(515)	(158)	(308)	3,728	(4,874)	(1,073)	(5,240)
2067	Wet	1,733	67	210	98	77	25,055	(8,484)	(27)	(623)	(5,177)	(483)	(181)	(1,017)	27,240	(15,992)	11,330	6,090
2068	Dry	1,236	67	193	90	71	7,994	(5,654)	(26)	(313)	(4,053)	(551)	(188)	(779)	9,650	(11,563)	(1,796)	4,294
2069	Wet	1,784	67	210	98	77	25,978	(13,702)	(30)	(732)	(5,177)	(522)	(194)	(1,278)	28,213	(21,635)	6,682	10,976
Average (2020-2069)		1,584	67	207	96	76	17,032	(11,407)	(39)	(553)	(5,126)	(525)	(192)	(1,104)	19,063	(18,945)	220	3,431

All values are in acre-feet.

Table 15.7a. Surface Water Budget Table for Baseline

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion simulated using WEL package*	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2020	Normal	16,204	4,901	20,731	3,309	14,334	784	(36,778)	(5,281)	(18,203)	60,263	(60,263)
2021	Normal	20,172	5,513	21,826	3,831	13,795	784	(40,950)	(4,758)	(20,213)	65,922	(65,922)
2022	Dry	10,721	1,972	2,936	1,471	9,160	302	(13,704)	(991)	(11,868)	26,562	(26,562)
2023	Wet	58,273	19,145	76,065	9,250	15,081	716	(127,755)	(24,774)	(26,002)	178,531	(178,530)
2024	Normal	18,448	4,852	20,292	3,597	14,646	784	(36,880)	(7,033)	(18,707)	62,620	(62,620)
2025	Normal	23,653	5,105	25,328	5,020	14,371	784	(42,794)	(7,863)	(23,604)	74,261	(74,261)
2026	Dry	9,920	1,250	2,295	1,751	7,523	302	(9,917)	(1,995)	(11,130)	23,041	(23,041)
2027	Dry	4,812	861	2,254	853	7,376	234	(9,103)	(733)	(6,556)	16,391	(16,391)
2028	Wet	135,574	53,947	118,373	13,993	17,358	716	(265,227)	(43,550)	(31,183)	339,960	(339,960)
2029	Normal	27,908	11,499	32,825	4,680	18,290	784	(64,600)	(8,361)	(23,025)	95,986	(95,986)
2030	Wet	69,751	27,305	71,787	9,079	18,163	784	(148,703)	(24,580)	(23,588)	196,871	(196,871)
2031	Normal	10,101	4,507	14,162	3,116	12,069	784	(27,190)	(3,591)	(13,958)	44,739	(44,739)
2032	Normal	9,938	3,232	15,187	2,836	9,017	784	(21,348)	(3,705)	(15,940)	40,993	(40,993)
2033	Wet	119,319	50,110	96,700	12,272	18,954	784	(224,425)	(40,641)	(33,073)	298,139	(298,139)
2034	Normal	15,729	5,401	14,100	2,895	16,633	784	(37,437)	(3,235)	(14,870)	55,542	(55,542)
2035	Normal	6,624	1,745	10,651	2,198	7,943	784	(15,254)	(1,900)	(12,791)	29,945	(29,945)
2036	Wet	59,645	12,835	55,898	7,942	13,203	784	(99,495)	(21,299)	(29,514)	150,308	(150,308)
2037	Dry	7,640	1,400	1,053	807	9,713	302	(11,630)	(1,313)	(7,972)	20,915	(20,915)
2038	Normal	21,551	2,233	17,186	2,965	12,134	716	(27,509)	(6,919)	(22,357)	56,785	(56,785)
2039	Dry	5,877	736	2,091	1,205	7,557	302	(9,340)	(1,028)	(7,400)	17,768	(17,768)
2040	Dry	2,947	298	1,273	986	4,564	234	(5,753)	(553)	(3,997)	10,303	(10,303)
2041	Normal	29,307	6,685	34,865	5,282	8,273	716	(50,701)	(11,211)	(23,217)	85,129	(85,129)
2042	Wet	75,028	20,511	41,257	6,084	15,553	784	(104,696)	(28,556)	(25,963)	159,215	(159,215)
2043	Wet	155,396	61,083	101,824	12,555	21,776	784	(265,965)	(56,905)	(30,548)	353,418	(353,418)
2044	Dry	12,745	3,312	3,480	1,709	15,742	302	(21,512)	(3,123)	(12,657)	37,292	(37,292)
2045	Wet	141,479	48,603	111,416	12,861	19,160	716	(262,549)	(43,298)	(28,389)	334,236	(334,236)
2046	Normal	11,173	4,722	15,347	3,294	14,384	784	(31,266)	(3,239)	(15,199)	49,705	(49,705)
2047	Normal	24,488	8,752	31,175	5,481	14,511	784	(56,893)	(6,556)	(21,742)	85,191	(85,191)

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion simulated using WEL package*	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2048	Wet	140,192	73,503	125,957	15,216	19,646	784	(297,523)	(44,875)	(32,900)	375,299	(375,299)
2049	Dry	10,126	3,943	978	489	14,316	302	(18,351)	(754)	(11,049)	30,154	(30,154)
2050	Normal	21,113	5,406	24,519	3,817	13,178	716	(40,810)	(7,203)	(20,738)	68,750	(68,750)
2051	Wet	55,372	18,402	46,454	6,559	15,319	784	(103,666)	(15,845)	(23,379)	142,890	(142,890)
2052	Dry	7,996	1,099	356	387	8,314	302	(9,335)	(695)	(8,425)	18,455	(18,455)
2053	Normal	12,304	2,790	27,936	5,065	12,453	716	(36,850)	(3,130)	(21,285)	61,265	(61,265)
2054	Dry	9,699	1,847	15,097	2,615	12,043	302	(25,443)	(1,861)	(14,300)	41,604	(41,604)
2055	Wet	102,614	71,059	114,060	14,233	19,511	716	(266,449)	(27,713)	(28,030)	322,193	(322,193)
2056	Wet	44,605	12,527	37,128	5,833	16,550	784	(79,511)	(13,858)	(24,059)	117,428	(117,428)
2057	Dry	5,381	1,270	297	309	9,118	302	(10,305)	(695)	(5,679)	16,678	(16,678)
2058	Normal	40,874	10,332	36,188	5,871	12,935	716	(70,210)	(13,735)	(22,971)	106,916	(106,916)
2059	Dry	6,829	1,416	4,032	1,182	8,555	302	(11,840)	(1,198)	(9,279)	22,317	(22,317)
2060	Wet	21,348	4,544	33,228	5,525	14,380	716	(49,880)	(6,120)	(23,742)	79,742	(79,742)
2061	Wet	45,676	10,580	49,632	7,243	18,164	784	(90,301)	(13,945)	(27,834)	132,080	(132,080)
2062	Dry	11,037	901	1,298	742	10,563	302	(11,659)	(1,692)	(11,493)	24,843	(24,843)
2063	Dry	1,820	110	470	478	6,457	234	(6,645)	(544)	(2,380)	9,569	(9,569)
2064	Dry	4,188	685	1,474	1,131	3,153	234	(5,250)	(1,439)	(4,178)	10,866	(10,866)
2065	Dry	1,978	153	964	843	2,206	234	(2,847)	(542)	(2,989)	6,378	(6,378)
2066	Dry	1,139	501	3,512	1,574	1,407	234	(3,830)	(531)	(4,006)	8,367	(8,367)
2067	Wet	23,961	7,152	49,881	6,540	8,996	716	(65,319)	(6,953)	(24,973)	97,246	(97,246)
2068	Dry	8,001	1,306	1,842	1,427	6,282	302	(9,254)	(1,049)	(8,857)	19,160	(19,160)
2069	Wet	69,788	13,801	36,595	5,748	14,802	716	(85,355)	(27,214)	(28,880)	141,450	(141,450)
Average (2020-2069)		35,009	12,317	31,486	4,683	12,393	586	(67,400)	(11,172)	(17,902)	96,474	(96,474)

All values are in acre-feet.

Table 15.7b. Surface Water Budget Table for 2030

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion simulated using WEL package*	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2020	Normal	13,258	3,981	17,672	2,534	13,609	817	(31,293)	(4,843)	(15,737)	51,872	(51,872)
2021	Normal	20,390	5,572	22,516	3,869	13,270	817	(40,894)	(4,843)	(20,698)	66,435	(66,435)
2022	Dry	11,285	2,076	3,184	1,543	9,171	315	(14,145)	(1,082)	(12,347)	27,574	(27,574)
2023	Wet	56,879	18,687	74,765	8,978	14,750	747	(125,722)	(24,254)	(24,830)	174,806	(174,806)
2024	Normal	17,471	4,595	18,498	3,410	13,681	817	(33,187)	(7,313)	(17,971)	58,472	(58,472)
2025	Normal	21,707	4,685	23,674	4,588	13,260	817	(38,651)	(7,663)	(22,416)	68,731	(68,731)
2026	Normal	11,833	1,491	2,739	2,082	5,431	817	(7,948)	(3,665)	(12,781)	24,394	(24,394)
2027	Dry	5,220	934	2,451	916	6,572	315	(8,437)	(1,023)	(6,947)	16,407	(16,407)
2028	Wet	134,937	53,694	117,735	13,927	16,815	747	(265,590)	(42,957)	(29,308)	337,855	(337,855)
2029	Wet	27,115	11,172	31,910	4,521	16,634	817	(61,938)	(8,747)	(21,485)	92,170	(92,170)
2030	Wet	69,130	27,062	71,264	8,969	16,823	817	(147,111)	(24,315)	(22,639)	194,065	(194,065)
2031	Normal	8,968	4,002	12,519	2,773	10,610	817	(23,308)	(3,605)	(12,776)	39,690	(39,690)
2032	Normal	8,813	2,866	12,954	2,550	8,023	817	(17,646)	(3,423)	(14,955)	36,024	(36,024)
2033	Wet	117,722	49,439	95,324	12,076	18,097	817	(222,420)	(40,002)	(31,054)	293,476	(293,476)
2034	Dry	16,909	5,806	16,286	3,047	17,246	315	(41,129)	(2,584)	(15,897)	59,610	(59,610)
2035	Dry	6,480	1,707	10,579	2,127	10,823	244	(18,611)	(665)	(12,684)	31,960	(31,960)
2036	Wet	59,927	12,896	55,791	7,926	13,993	747	(103,881)	(21,102)	(26,296)	151,279	(151,279)
2037	Dry	8,177	1,498	1,132	856	8,551	315	(10,669)	(1,138)	(8,722)	20,529	(20,529)
2038	Normal	22,737	2,356	18,183	3,102	12,184	747	(30,202)	(7,272)	(21,835)	59,308	(59,308)
2039	Dry	6,049	757	2,153	1,230	7,129	315	(8,983)	(1,254)	(7,397)	17,634	(17,634)
2040	Dry	3,279	331	1,419	1,097	4,426	244	(5,824)	(598)	(4,375)	10,797	(10,797)
2041	Normal	26,958	6,149	32,586	4,836	7,951	747	(46,600)	(10,520)	(22,106)	79,226	(79,226)
2042	Wet	74,728	20,429	41,226	6,031	14,652	817	(105,340)	(27,764)	(24,779)	157,884	(157,884)
2043	Wet	151,219	59,442	99,464	12,205	20,015	817	(260,844)	(54,856)	(27,462)	343,161	(343,161)
2044	Dry	13,735	3,569	3,689	1,828	13,788	315	(20,042)	(3,022)	(13,861)	36,925	(36,925)
2045	Wet	124,752	42,857	98,148	11,333	18,611	747	(232,577)	(37,809)	(26,061)	296,448	(296,448)
2046	Normal	12,047	5,091	16,422	3,526	13,207	817	(31,653)	(3,473)	(15,985)	51,111	(51,111)
2047	Normal	24,879	8,892	31,784	5,549	14,229	817	(58,289)	(6,599)	(21,263)	86,151	(86,151)

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion simulated using WEL package*	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2048	Wet	149,849	78,566	134,899	16,232	19,075	817	(321,863)	(46,773)	(30,801)	399,438	(399,438)
2049	Dry	10,428	4,060	990	504	12,850	315	(16,955)	(865)	(11,327)	29,147	(29,147)
2050	Normal	23,452	6,005	26,843	4,278	13,105	747	(45,334)	(8,497)	(20,598)	74,429	(74,429)
2051	Wet	52,877	17,573	44,624	6,221	14,433	817	(99,429)	(15,260)	(21,857)	136,546	(136,546)
2052	Dry	7,652	1,052	341	370	7,511	315	(8,445)	(724)	(8,073)	17,242	(17,242)
2053	Normal	12,072	2,737	27,725	4,992	11,893	747	(35,409)	(3,785)	(20,972)	60,165	(60,165)
2054	Normal	10,249	1,952	15,990	2,741	10,051	817	(24,023)	(3,328)	(14,450)	41,801	(41,801)
2055	Wet	99,011	68,564	110,385	13,731	17,846	817	(255,971)	(26,421)	(27,961)	310,354	(310,354)
2056	Normal	36,146	10,151	29,305	4,746	14,923	817	(62,859)	(11,506)	(21,725)	96,089	(96,089)
2057	Dry	5,568	1,315	308	320	7,743	315	(8,977)	(724)	(5,867)	15,568	(15,568)
2058	Normal	39,941	10,096	35,524	5,724	12,286	747	(68,605)	(13,810)	(21,902)	104,317	(104,317)
2059	Dry	6,763	1,403	4,182	1,138	7,840	315	(11,226)	(1,504)	(8,912)	21,641	(21,641)
2060	Wet	21,742	4,628	33,758	5,618	14,037	747	(50,269)	(6,501)	(23,760)	80,530	(80,530)
2061	Wet	44,136	10,223	47,767	6,991	17,741	817	(87,007)	(13,803)	(26,866)	127,676	(127,676)
2062	Dry	11,662	878	1,043	600	9,384	315	(10,320)	(2,337)	(11,226)	23,883	(23,883)
2063	Dry	1,823	114	387	379	6,060	244	(6,179)	(567)	(2,261)	9,008	(9,008)
2064	Dry	4,004	647	1,036	795	2,913	244	(4,415)	(1,438)	(3,786)	9,639	(9,639)
2065	Dry	2,026	161	755	650	1,905	244	(2,319)	(565)	(2,856)	5,741	(5,741)
2066	Dry	1,191	554	2,889	1,299	1,117	244	(3,088)	(554)	(3,652)	7,293	(7,293)
2067	Wet	26,831	8,637	46,073	6,008	8,718	747	(63,580)	(8,437)	(24,996)	97,013	(97,013)
2068	Dry	7,869	1,288	1,367	1,058	5,888	315	(8,357)	(1,068)	(8,361)	17,786	(17,786)
2069	Wet	69,939	14,586	28,041	4,546	14,162	747	(78,625)	(26,324)	(27,071)	132,021	(132,020)
Average (2020-2069)		34,437	12,145	30,606	4,527	11,701	611	(65,724)	(11,024)	(17,279)	94,026	(94,026)

All values are in acre-feet.

Table 15.7c. Surface Water Budget Table for 2070

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion simulated using WEL package*	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2020	Normal	15,317	4,580	20,279	3,011	13,904	854	(35,674)	(6,131)	(16,140)	57,944	(57,944)
2021	Normal	18,702	5,111	21,592	3,524	13,082	854	(38,904)	(4,549)	(19,411)	62,864	(62,864)
2022	Dry	9,597	1,765	2,620	1,310	7,701	329	(11,811)	(988)	(10,525)	23,323	(23,323)
2023	Wet	63,225	20,772	84,398	9,870	14,164	780	(142,105)	(26,311)	(24,792)	193,208	(193,208)
2024	Normal	18,951	4,985	20,438	3,677	13,552	854	(35,495)	(8,616)	(18,346)	62,457	(62,457)
2025	Normal	20,689	4,465	23,507	4,346	12,768	854	(37,485)	(7,791)	(21,354)	66,630	(66,630)
2026	Normal	25,994	3,276	6,049	4,423	9,841	854	(19,938)	(6,158)	(24,341)	50,437	(50,437)
2027	Dry	6,147	1,100	2,917	1,065	11,533	329	(13,931)	(1,279)	(7,882)	23,092	(23,092)
2028	Wet	146,975	58,484	128,600	15,154	17,192	780	(293,173)	(46,515)	(27,495)	367,184	(367,184)
2029	Wet	31,299	12,897	36,957	5,178	16,398	854	(71,427)	(11,295)	(20,860)	103,582	(103,582)
2030	Wet	77,878	30,487	80,397	10,044	16,505	854	(167,833)	(25,895)	(22,437)	216,165	(216,165)
2031	Normal	11,369	5,073	16,146	3,494	11,277	854	(29,288)	(4,269)	(14,656)	48,212	(48,212)
2032	Normal	9,516	3,094	13,987	2,755	8,679	854	(19,844)	(3,728)	(15,313)	38,885	(38,885)
2033	Wet	122,106	51,280	99,764	12,457	17,972	854	(233,636)	(41,853)	(28,944)	304,433	(304,433)
2034	Dry	13,116	4,504	13,608	2,310	15,372	329	(32,785)	(1,992)	(14,461)	49,239	(49,239)
2035	Dry	5,269	1,388	8,617	1,731	9,262	255	(15,103)	(669)	(10,750)	26,522	(26,522)
2036	Wet	68,192	14,674	64,834	8,881	13,034	780	(120,564)	(23,480)	(26,350)	170,395	(170,395)
2037	Dry	7,772	1,424	1,082	801	8,124	329	(10,223)	(1,178)	(8,131)	19,533	(19,533)
2038	Normal	21,914	2,270	17,056	3,003	11,673	780	(28,218)	(7,603)	(20,877)	56,697	(56,697)
2039	Dry	5,227	654	1,857	1,061	6,245	329	(7,740)	(1,189)	(6,444)	15,373	(15,373)
2040	Dry	3,900	394	1,688	1,292	3,967	255	(5,749)	(663)	(5,086)	11,497	(11,497)
2041	Normal	33,596	7,663	41,420	5,982	8,108	780	(61,848)	(13,210)	(22,490)	97,548	(97,548)
2042	Wet	82,495	22,552	45,858	6,563	14,189	854	(120,329)	(28,723)	(23,459)	172,511	(172,511)
2043	Wet	163,589	64,304	108,669	13,151	19,133	854	(286,758)	(57,095)	(25,846)	369,700	(369,700)
2044	Normal	15,818	4,110	4,127	2,076	11,472	854	(18,444)	(5,105)	(14,907)	38,457	(38,457)
2045	Wet	148,331	50,957	116,640	13,443	17,424	854	(278,804)	(42,863)	(25,982)	347,649	(347,649)
2046	Normal	14,065	5,944	18,872	4,045	13,054	854	(35,957)	(4,578)	(16,300)	56,835	(56,835)
2047	Normal	23,524	8,408	31,331	5,178	13,705	854	(55,971)	(7,075)	(19,953)	82,999	(82,999)

Water Year	Year Type	Matilija Creek Inflows	San Antonio Creek Inflows	Ungauged Tributary Inflows	Direct Runoff	Groundwater Discharge to Stream	SW Diversion simulated using WEL package*	Stream Outflows	Surface Water Diversions	Stream Percolation	Inflows	Outflows
2048	Wet	147,129	77,139	133,148	15,864	18,329	854	(317,800)	(45,247)	(29,416)	392,463	(392,463)
2049	Dry	9,464	3,685	849	460	11,136	329	(14,784)	(929)	(10,209)	25,922	(25,922)
2050	Normal	24,913	6,379	27,391	4,622	12,613	780	(47,044)	(9,567)	(20,086)	76,698	(76,698)
2051	Wet	62,537	20,783	53,207	7,306	14,111	854	(119,020)	(17,732)	(22,048)	158,799	(158,799)
2052	Dry	6,851	942	304	337	7,172	329	(7,942)	(756)	(7,237)	15,936	(15,936)
2053	Normal	10,110	2,292	23,860	4,194	10,782	780	(28,894)	(3,345)	(19,779)	52,018	(52,018)
2054	Normal	11,919	2,270	18,748	3,146	9,999	854	(27,455)	(4,015)	(15,467)	46,936	(46,936)
2055	Wet	108,576	75,188	122,751	14,955	17,850	854	(284,463)	(29,000)	(26,711)	340,174	(340,174)
2056	Normal	38,167	10,719	29,734	5,028	14,778	854	(65,184)	(12,249)	(21,847)	99,279	(99,279)
2057	Dry	5,451	1,287	300	315	7,430	329	(8,616)	(756)	(5,741)	15,113	(15,113)
2058	Normal	43,293	10,943	38,783	6,172	12,095	780	(75,719)	(14,921)	(21,426)	112,066	(112,066)
2059	Dry	5,846	1,212	3,765	958	7,207	329	(10,106)	(1,485)	(7,727)	19,318	(19,318)
2060	Wet	21,313	4,537	35,107	5,435	13,192	780	(49,632)	(7,533)	(23,199)	80,364	(80,364)
2061	Wet	42,002	9,729	45,642	6,620	17,191	854	(82,744)	(13,233)	(26,061)	122,038	(122,038)
2062	Dry	11,100	783	725	426	8,311	329	(9,009)	(2,369)	(10,297)	21,675	(21,675)
2063	Dry	1,823	114	314	290	5,613	255	(5,669)	(593)	(2,148)	8,410	(8,410)
2064	Dry	4,004	647	850	647	2,717	255	(4,006)	(1,462)	(3,652)	9,120	(9,120)
2065	Dry	2,026	161	571	487	1,703	255	(1,933)	(591)	(2,679)	5,203	(5,203)
2066	Dry	1,191	554	2,369	1,127	938	255	(2,540)	(578)	(3,315)	6,434	(6,434)
2067	Wet	26,831	8,637	46,156	6,020	8,484	780	(63,338)	(8,514)	(25,055)	96,907	(96,907)
2068	Dry	7,869	1,288	943	728	5,654	329	(7,717)	(1,100)	(7,994)	16,811	(16,811)
2069	Wet	78,001	16,795	24,412	4,068	13,702	780	(82,195)	(29,586)	(25,978)	137,759	(137,759)
Average (2020-2069)		37,100	13,054	32,865	4,781	11,407	650	(70,897)	(11,927)	(17,032)	99,856	(99,856)

All values are in acre-feet.

FIGURES

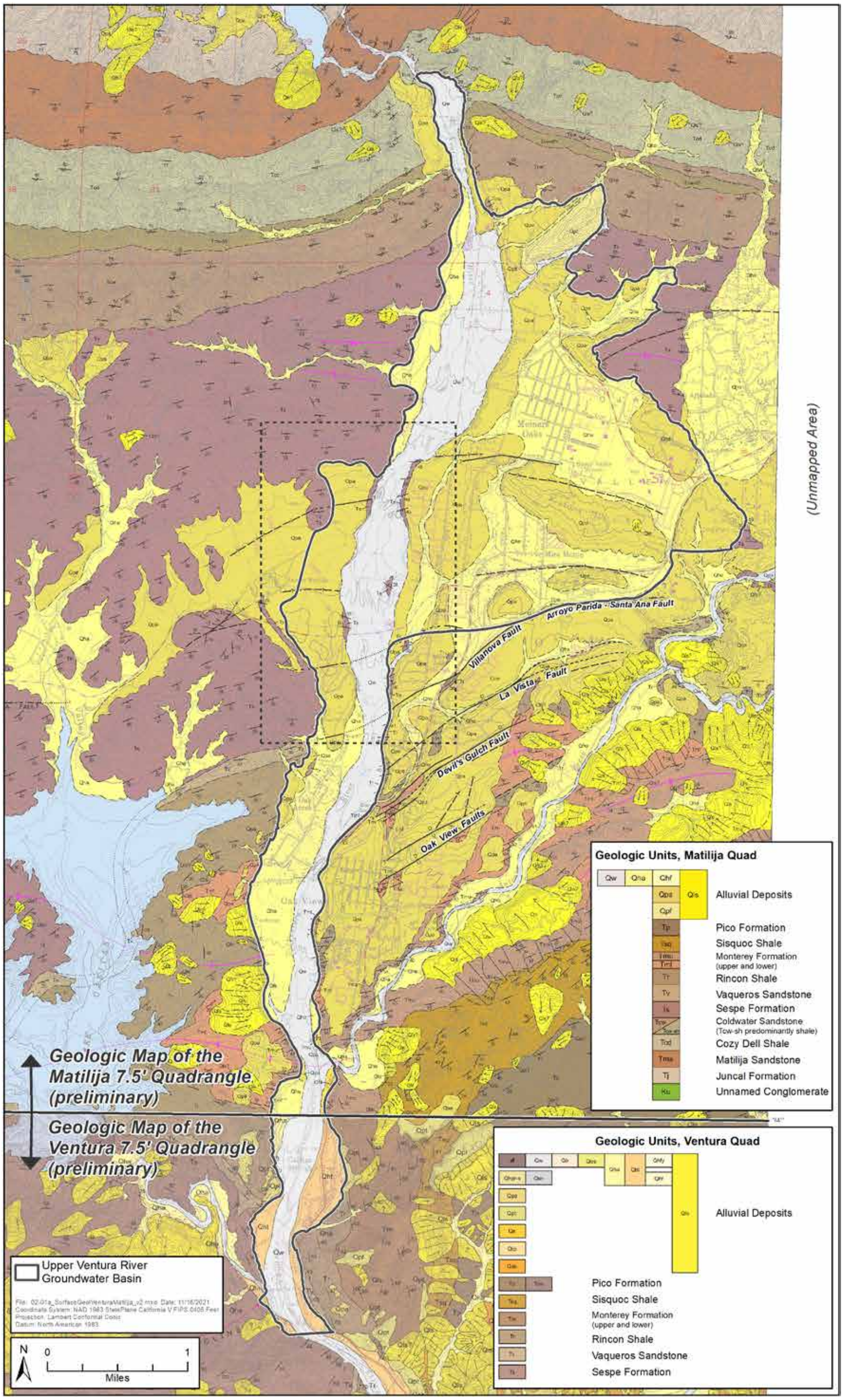

Figure 2.1a. Regional Surface Geologic Map (Ventura & Matilija).

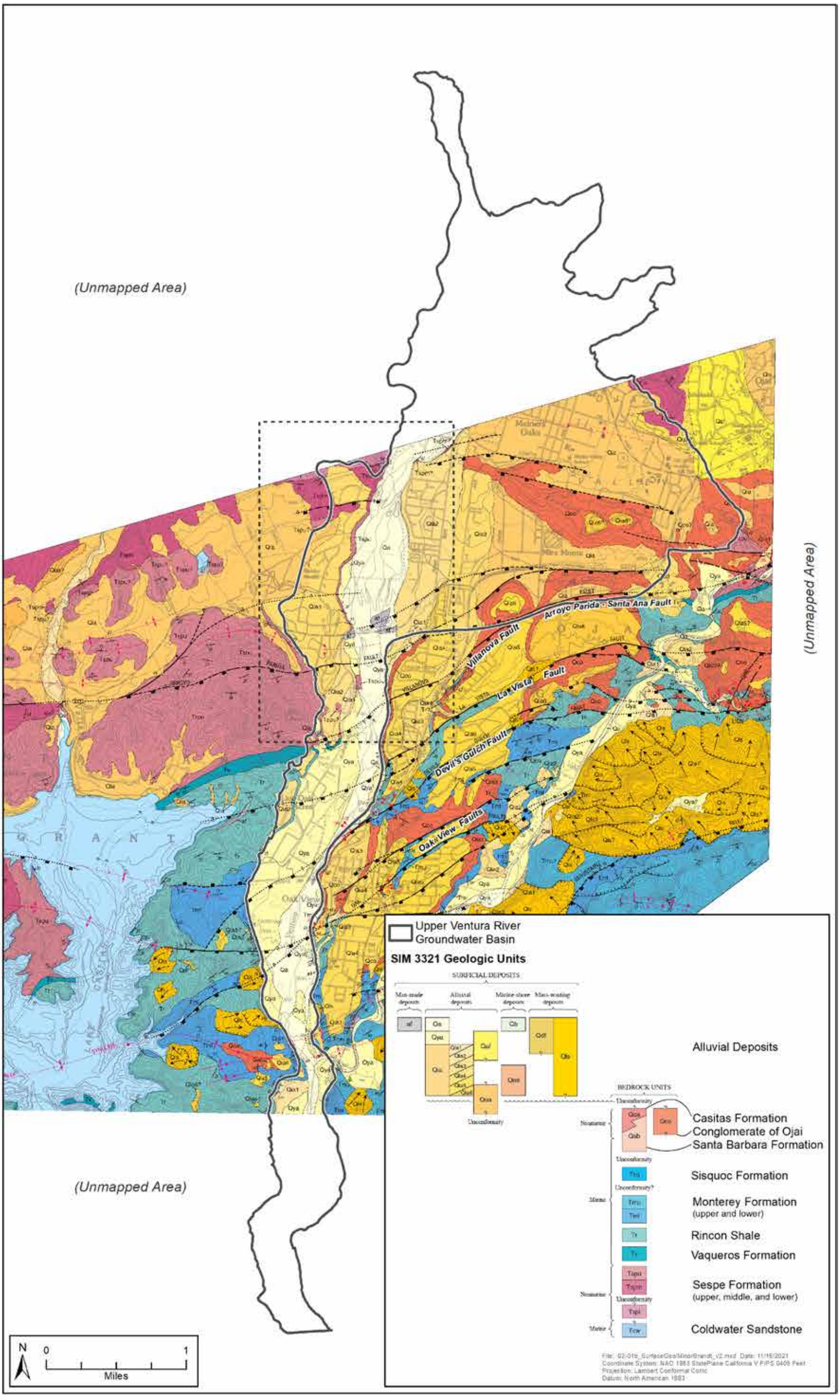

Figure 2.1b. Regional Surface Geologic Map (Minor & Brandt).

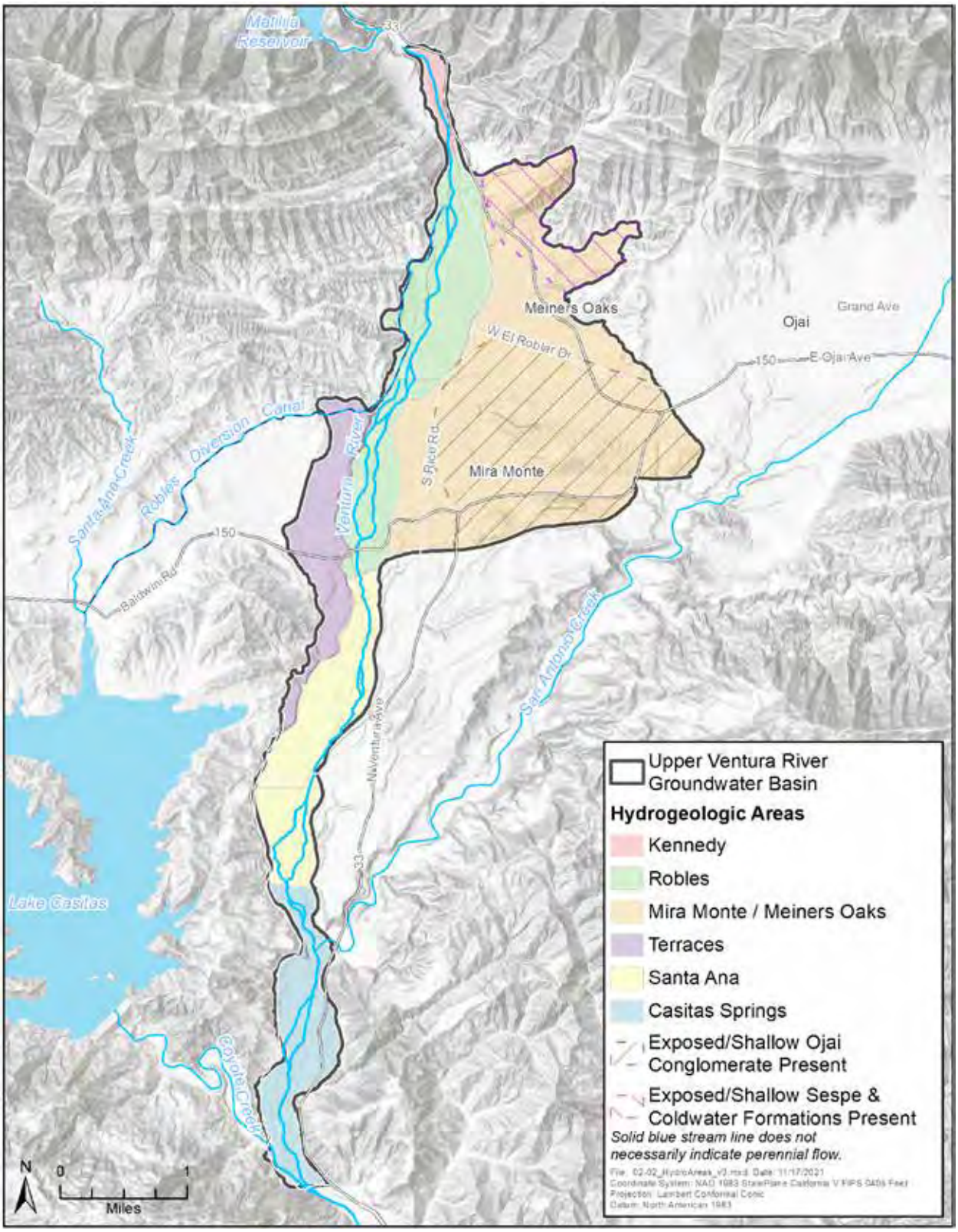

Figure 2.2. Hydrogeologic Areas within the UVRGB.

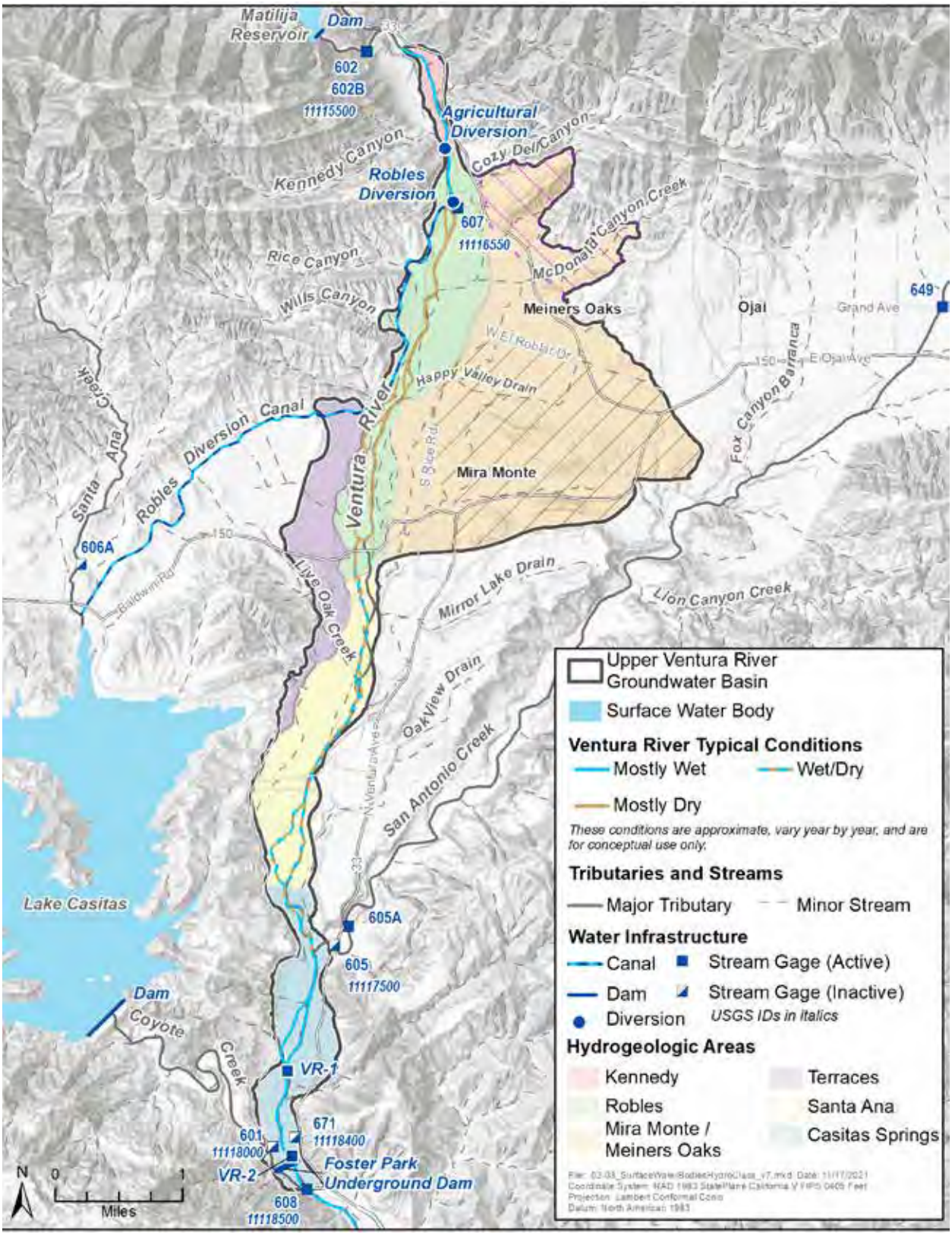

Figure 2.3. Surface Water Bodies – Hydrologic Conditions.

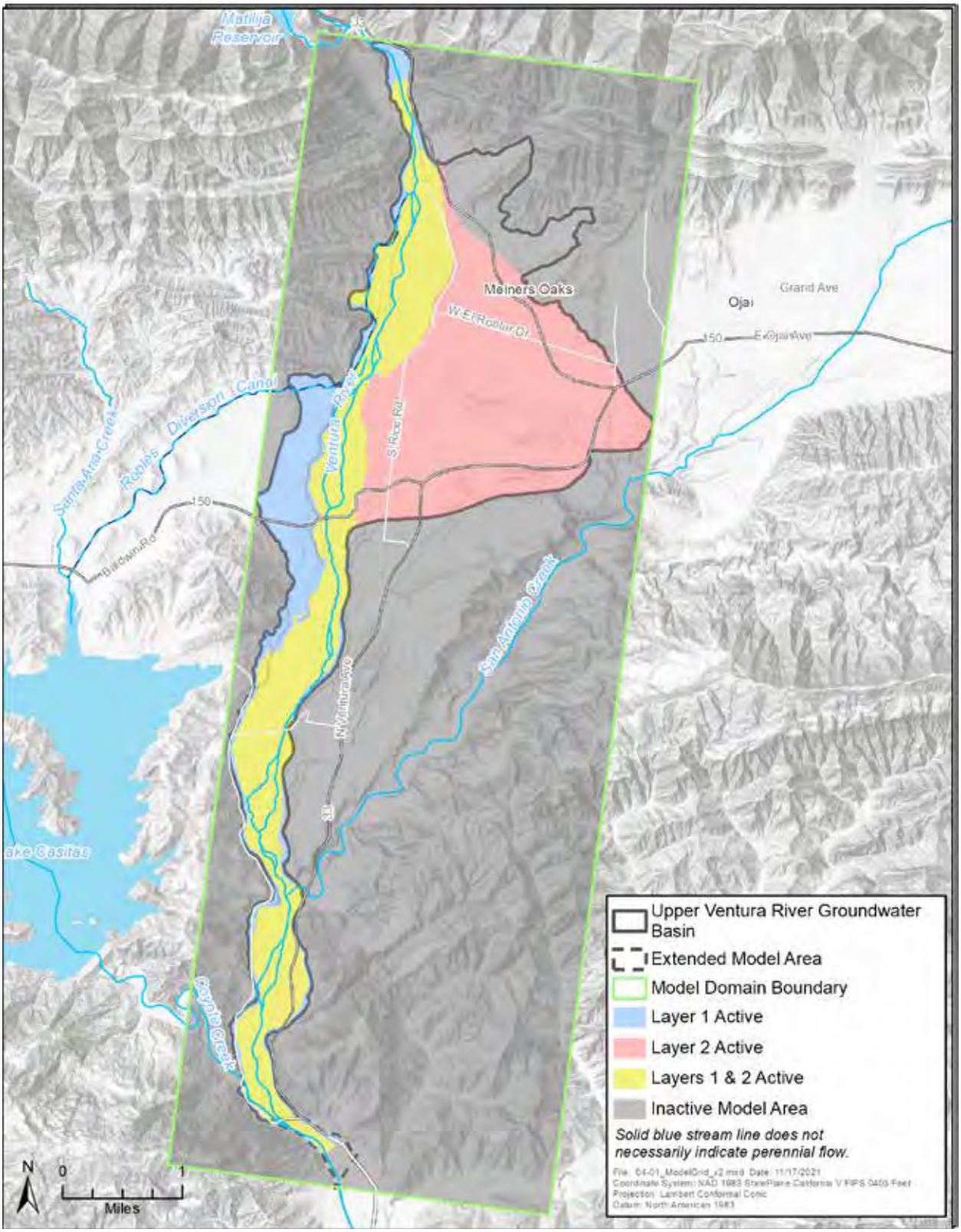

Figure 4.1. Model Layers (Active/Inactive).

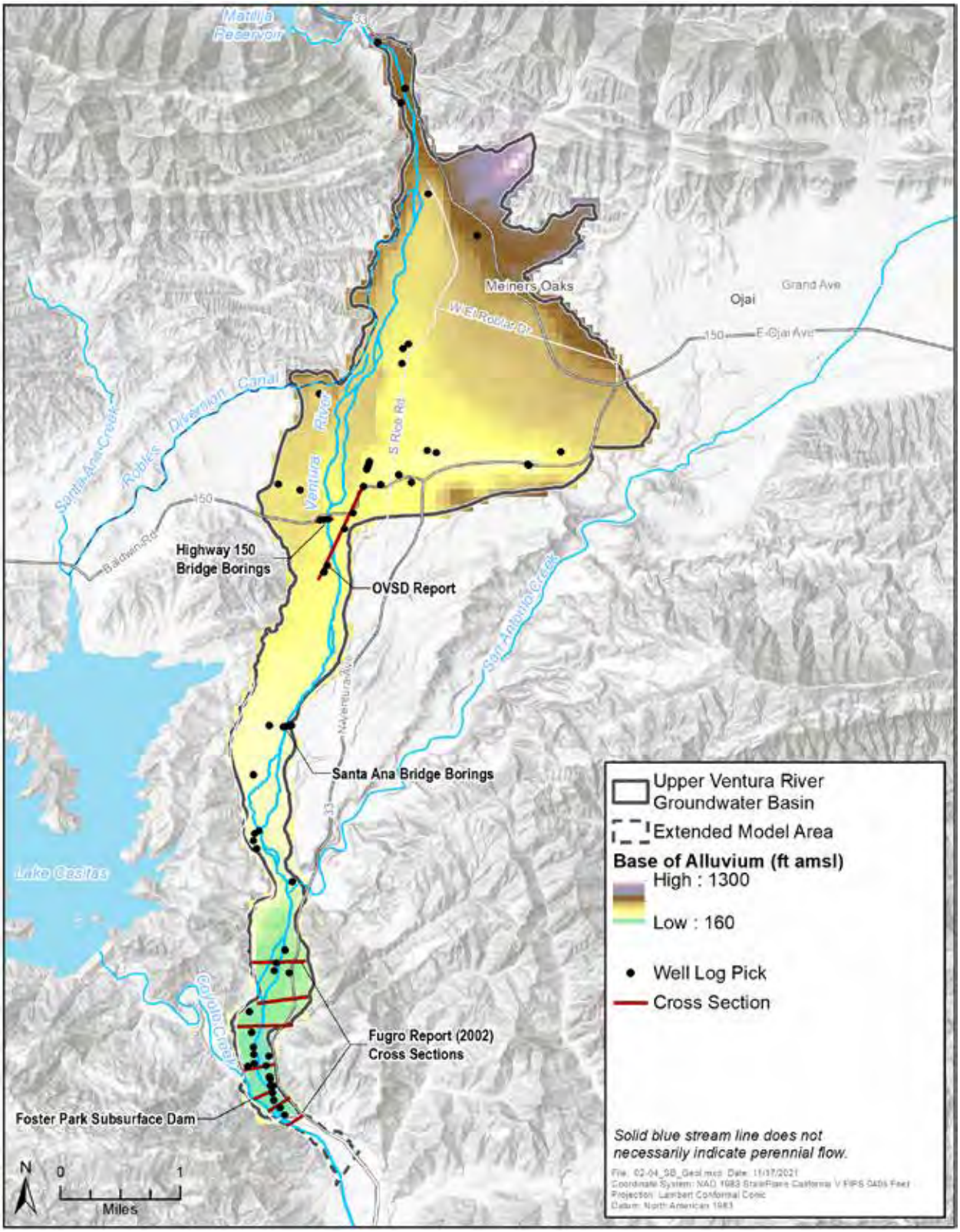

Figure 4.2. Original Bedrock Elevations from the Ventura River Instream Flow Program Modeling Study (DBSA, 2020) and Locations of Well Logs and Cross-sections Used to Refine Bedrock Elevations.

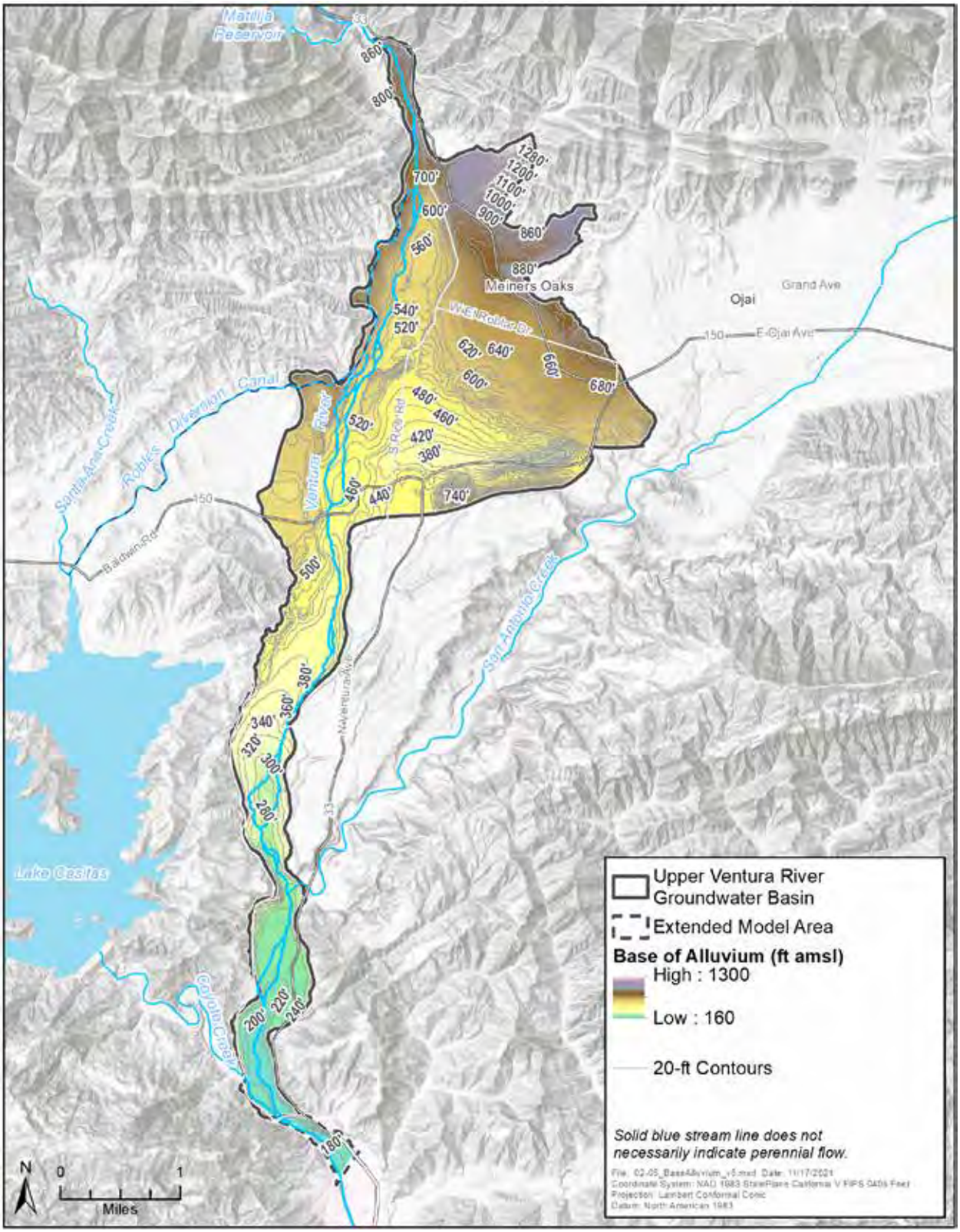

Figure 4.3. Bottom of the Basin Elevation Map

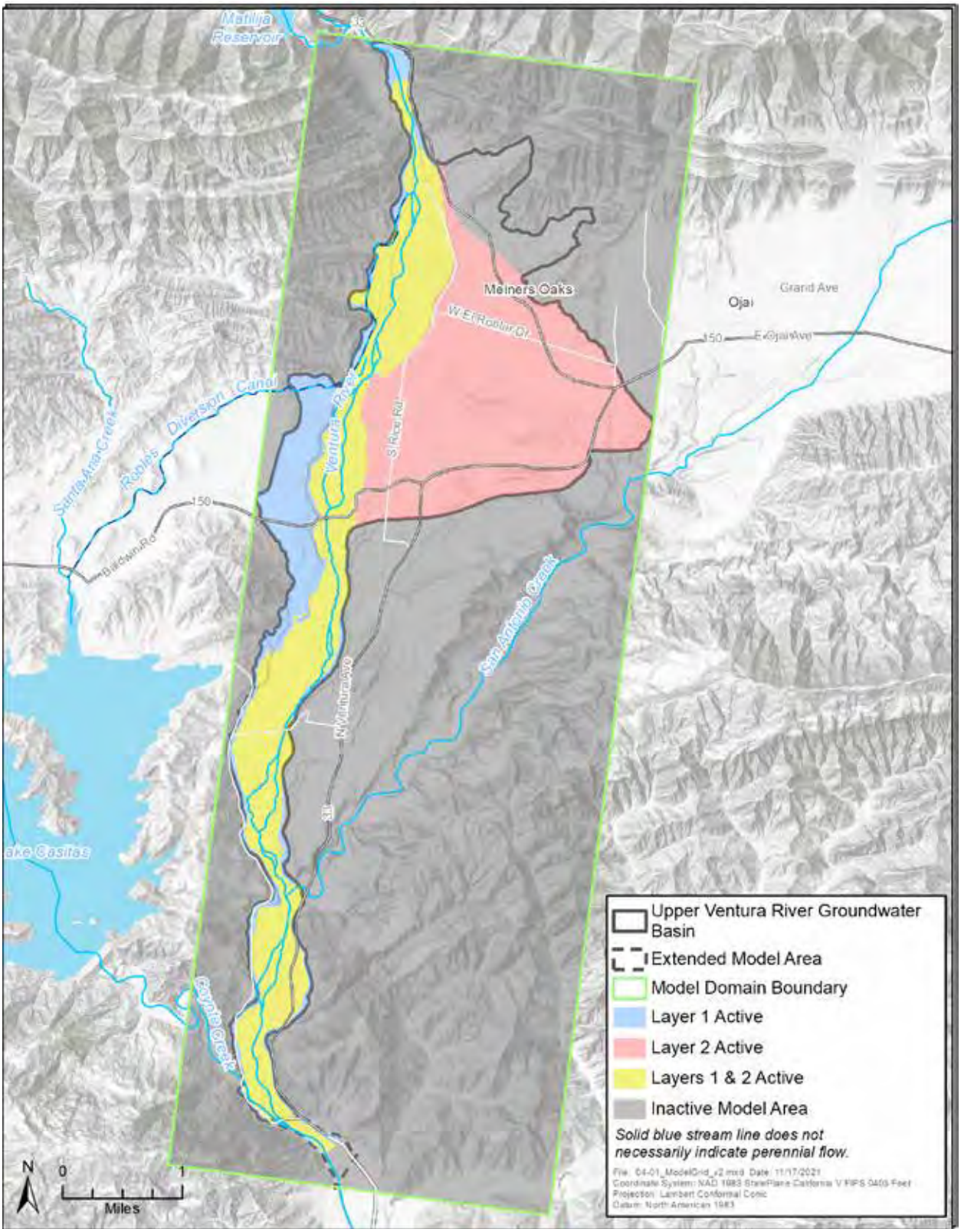

Figure 5.1. Model Grid.

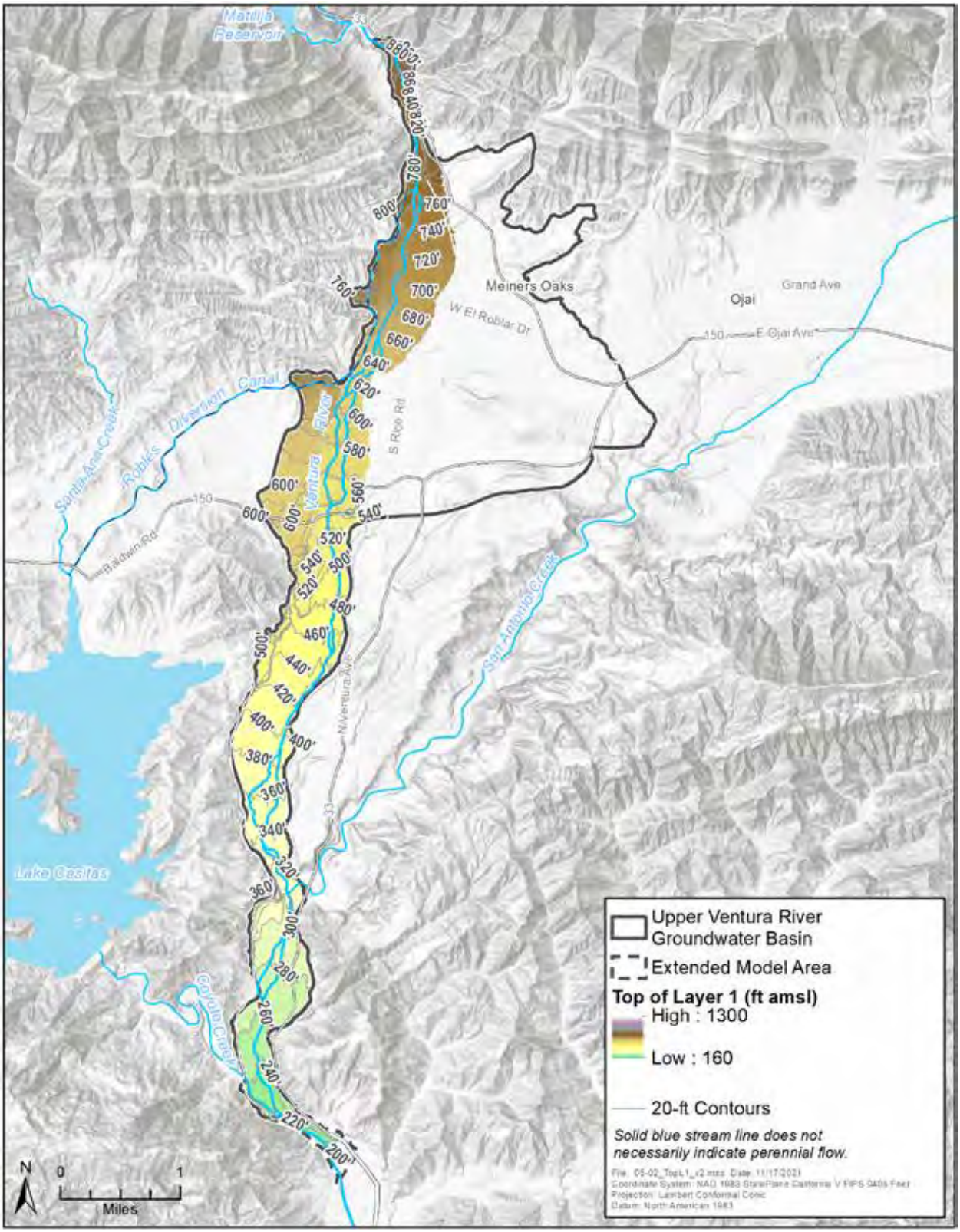

Figure 5.2. Top of Model Layer 1.

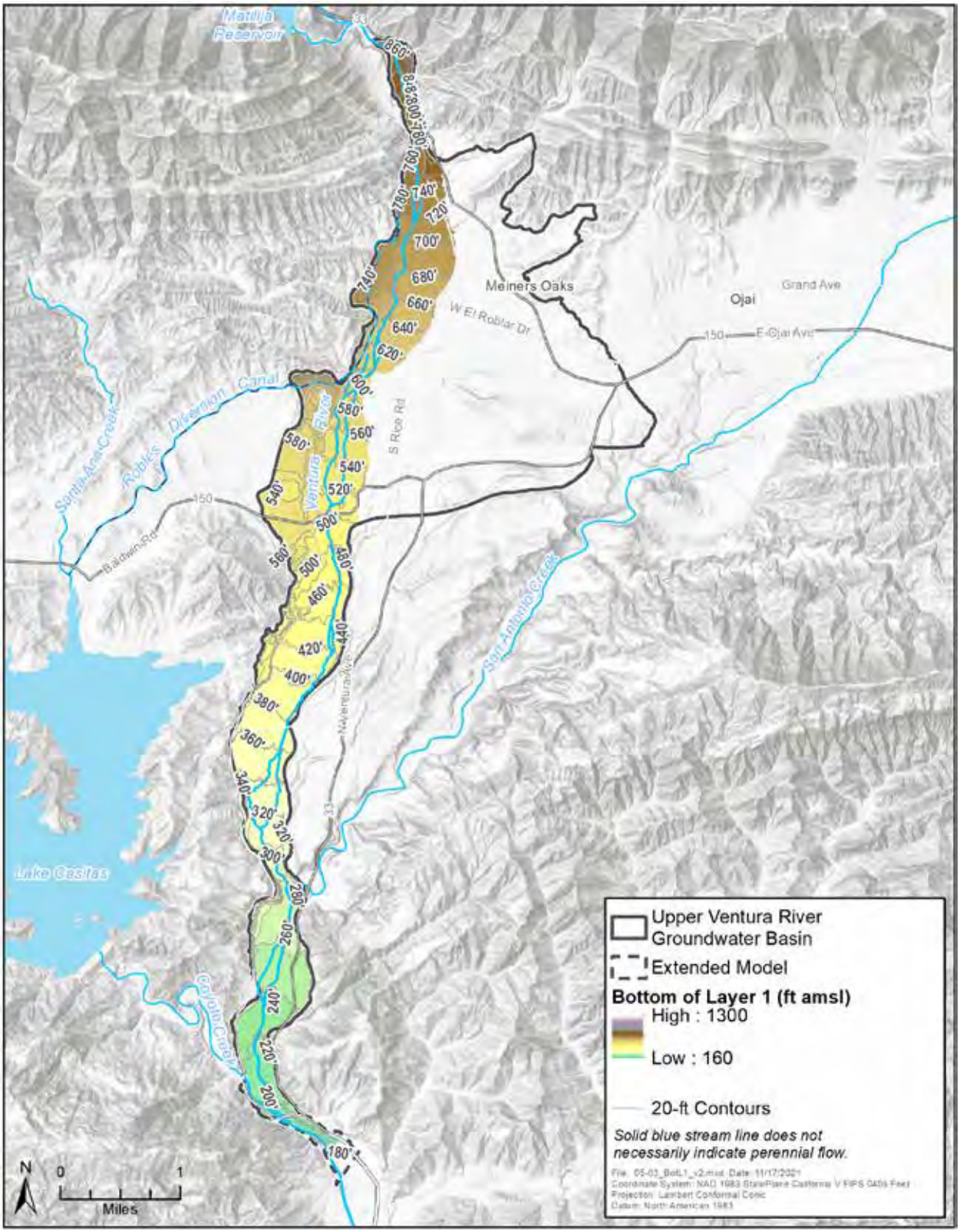

Figure 5.3. Base of Model Layer 1.

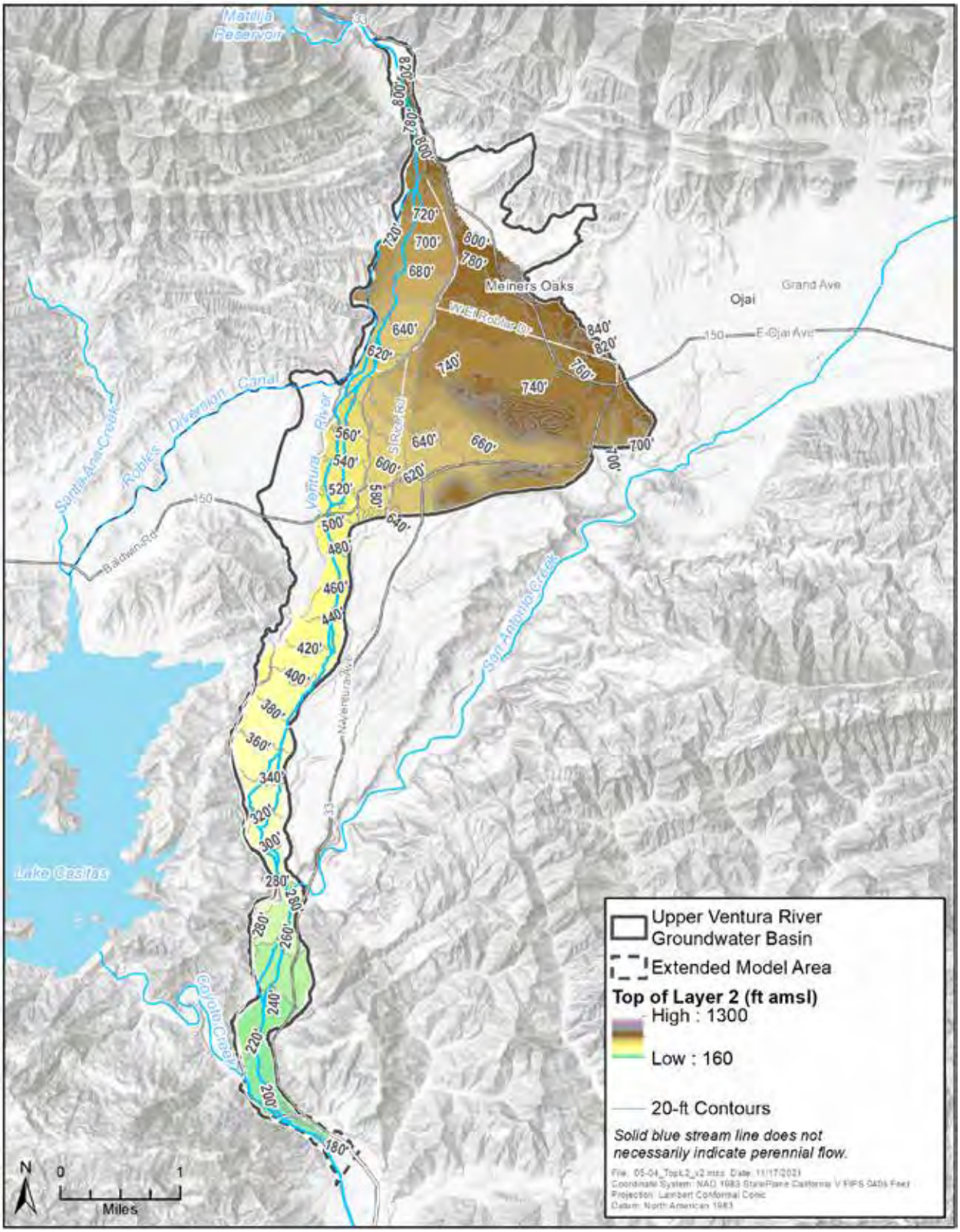

Figure 5.4. Top of Model Layer 2.

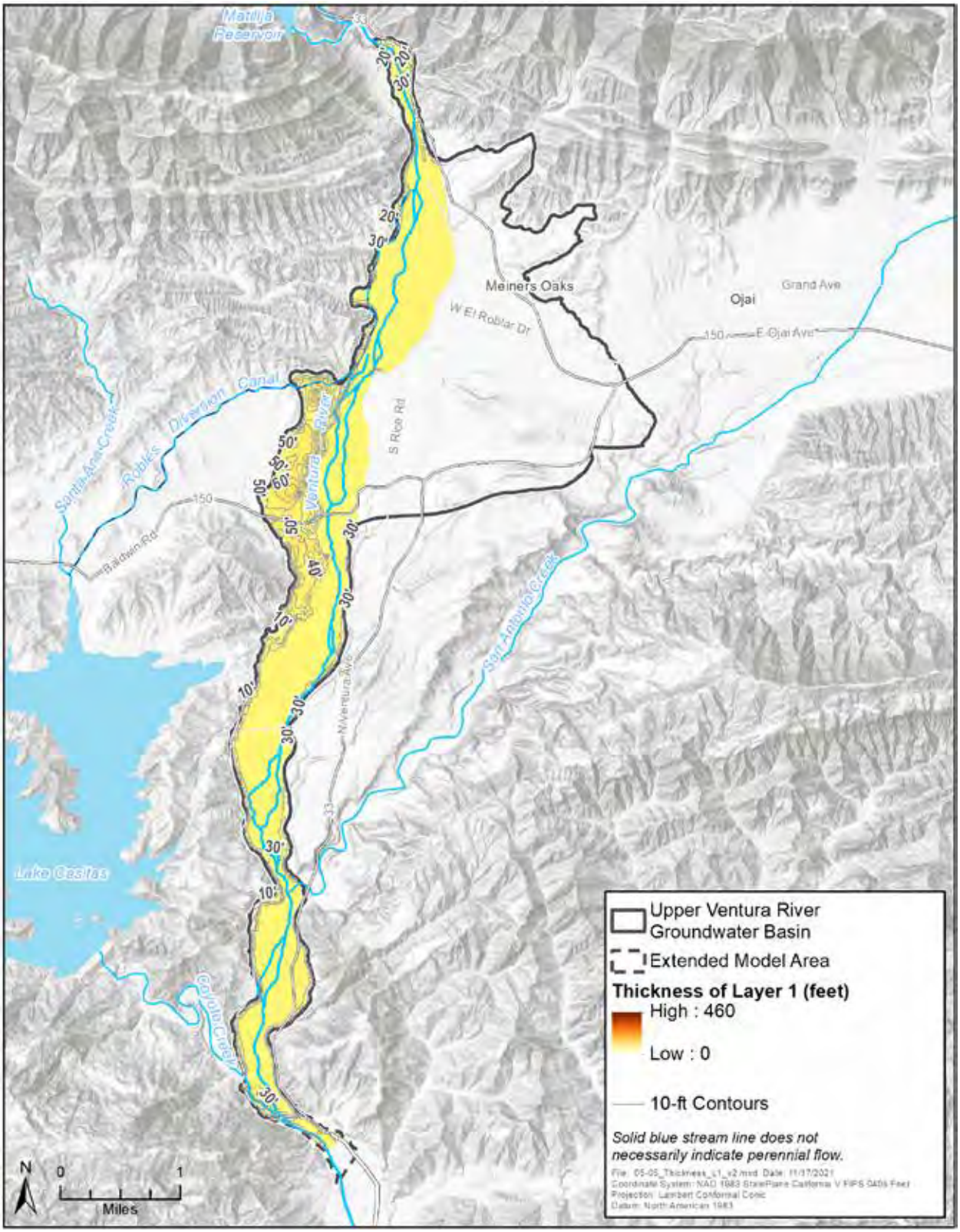

Figure 5.5. Model Layer 1 Thickness.

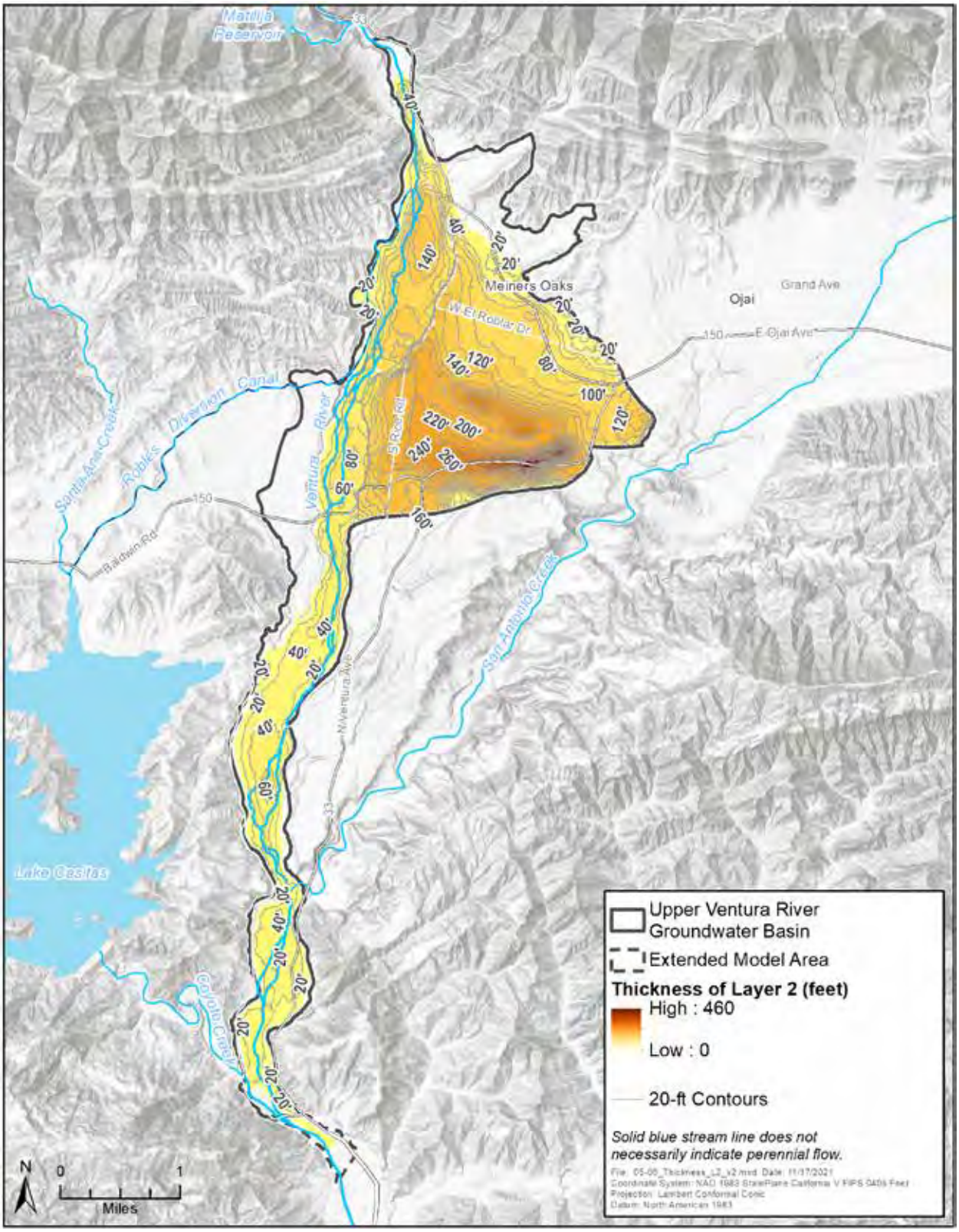

Figure 5.6. Model Layer 2 Thickness.

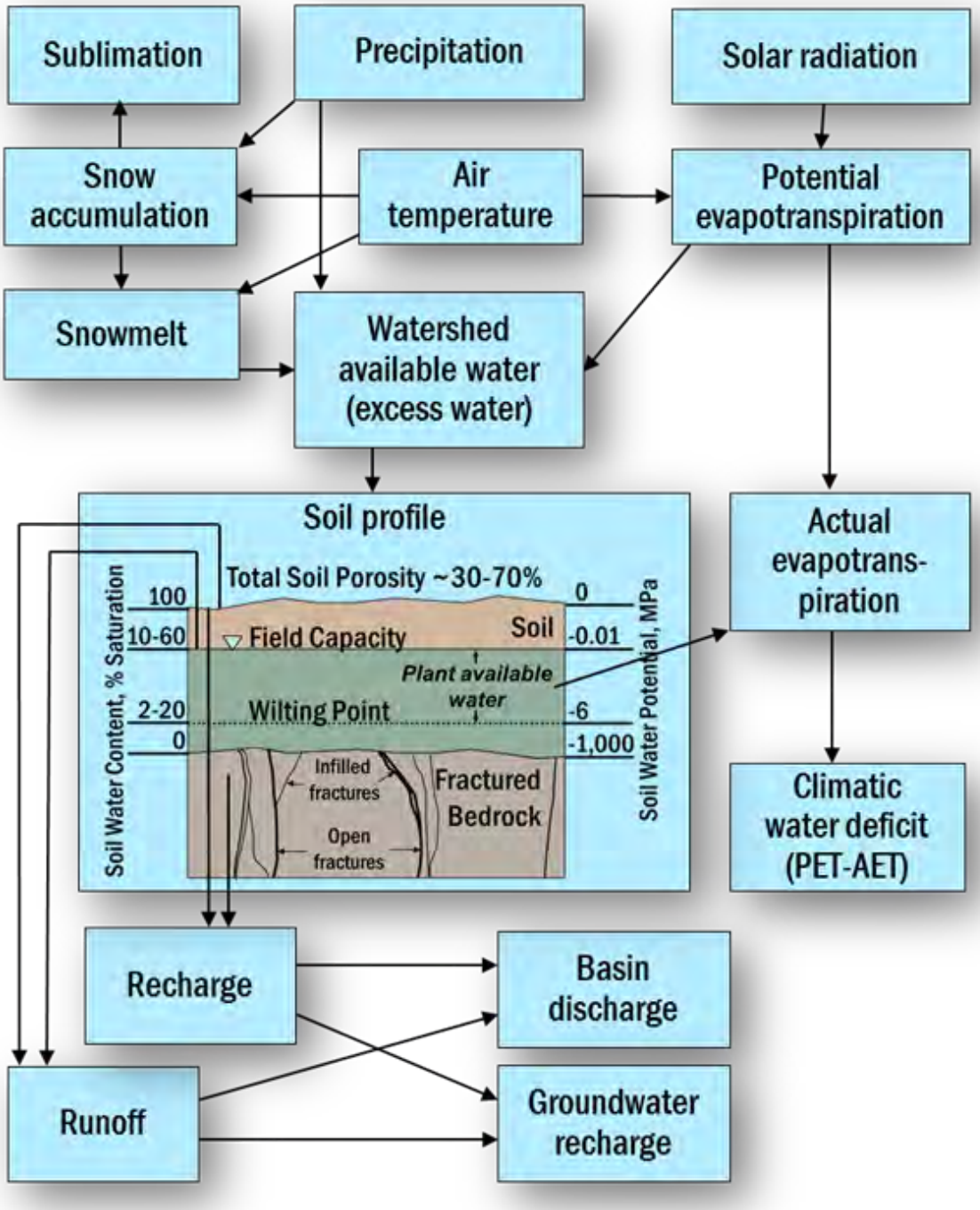

Figure 6.1. Schematic[1] of Components and Processes Simulated by the Basin Characterization Model (BCM) (from Flint and Flint, 2012; Thorne and others, 2012).

[1]Taken from https://ca.water.usgs.gov/projects/reg_hydro/basin-characterization-model.html

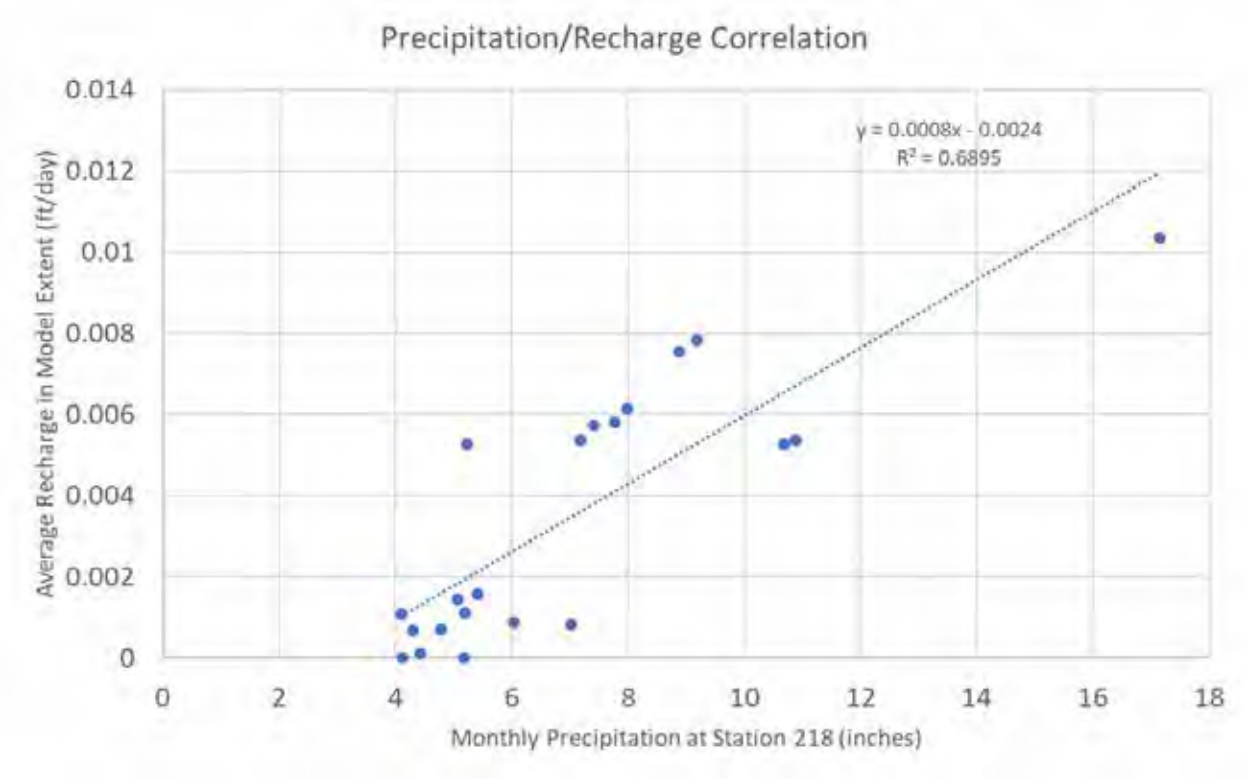

Figure 6.2. Relationship of Precipitation to BCM Recharge.

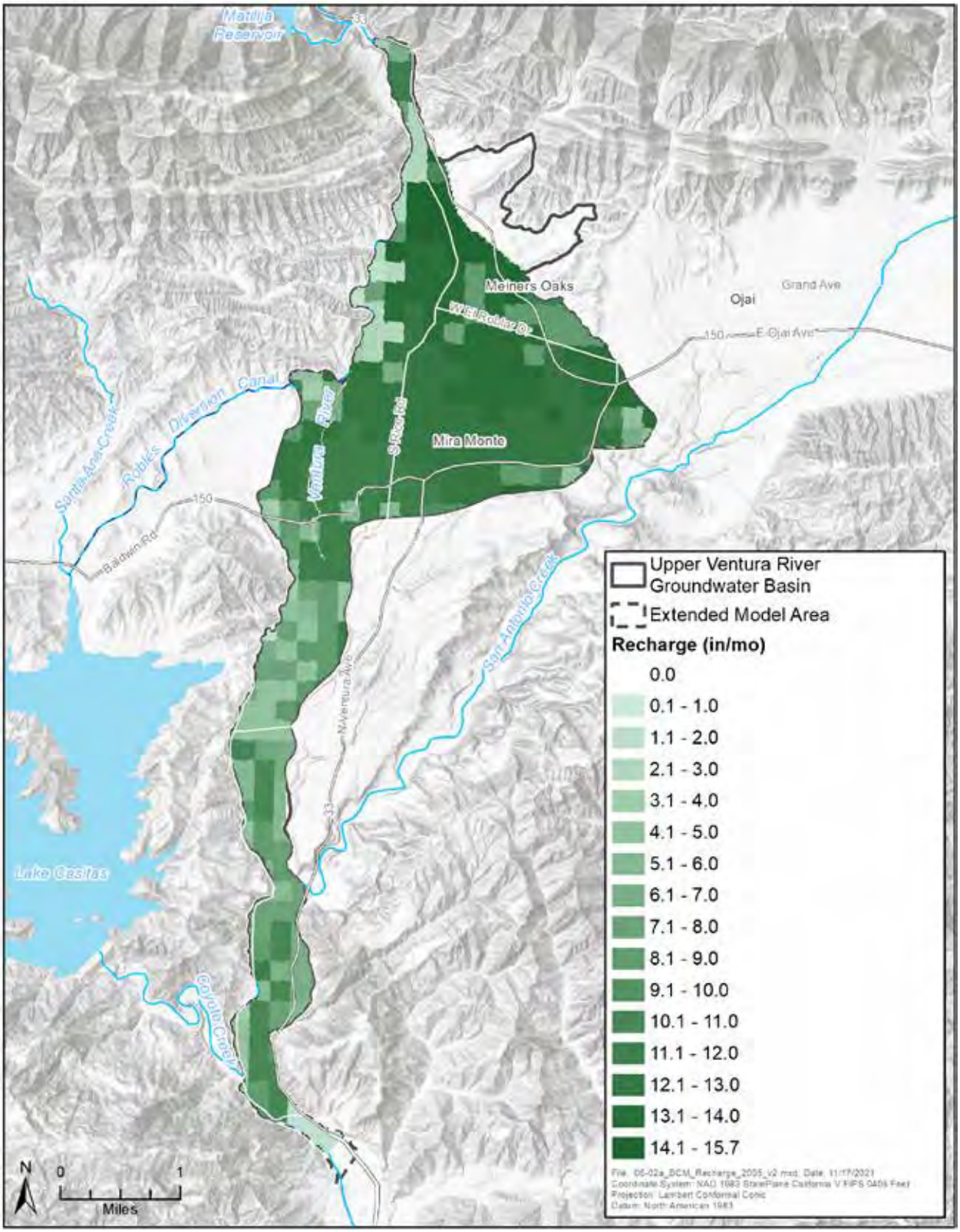

Figure 6.3a. BCM Recharge, January 2005.

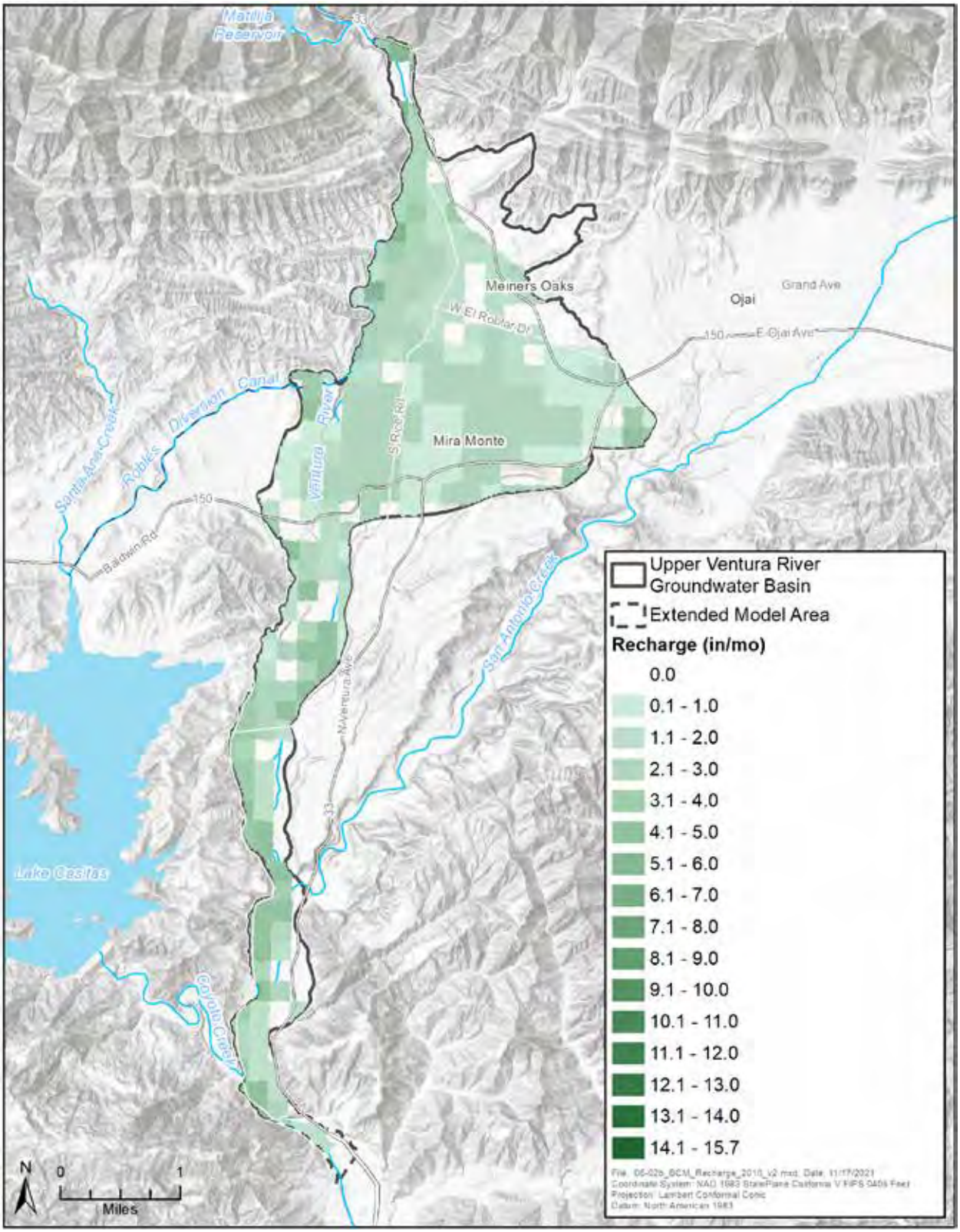

Figure 6.3b. BCM Recharge, January 2010.

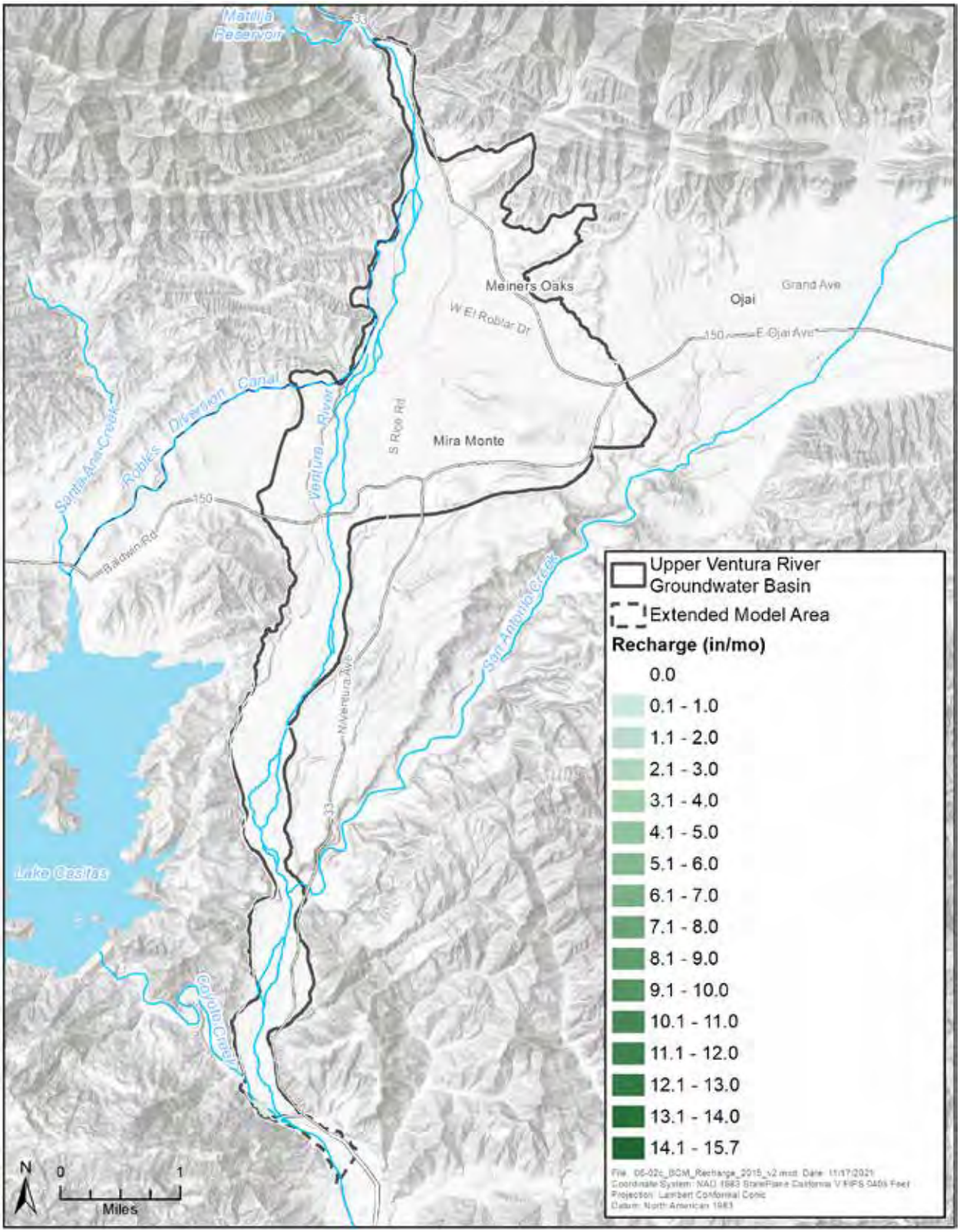

Figure 6.3c. BCM Recharge, January 2015.

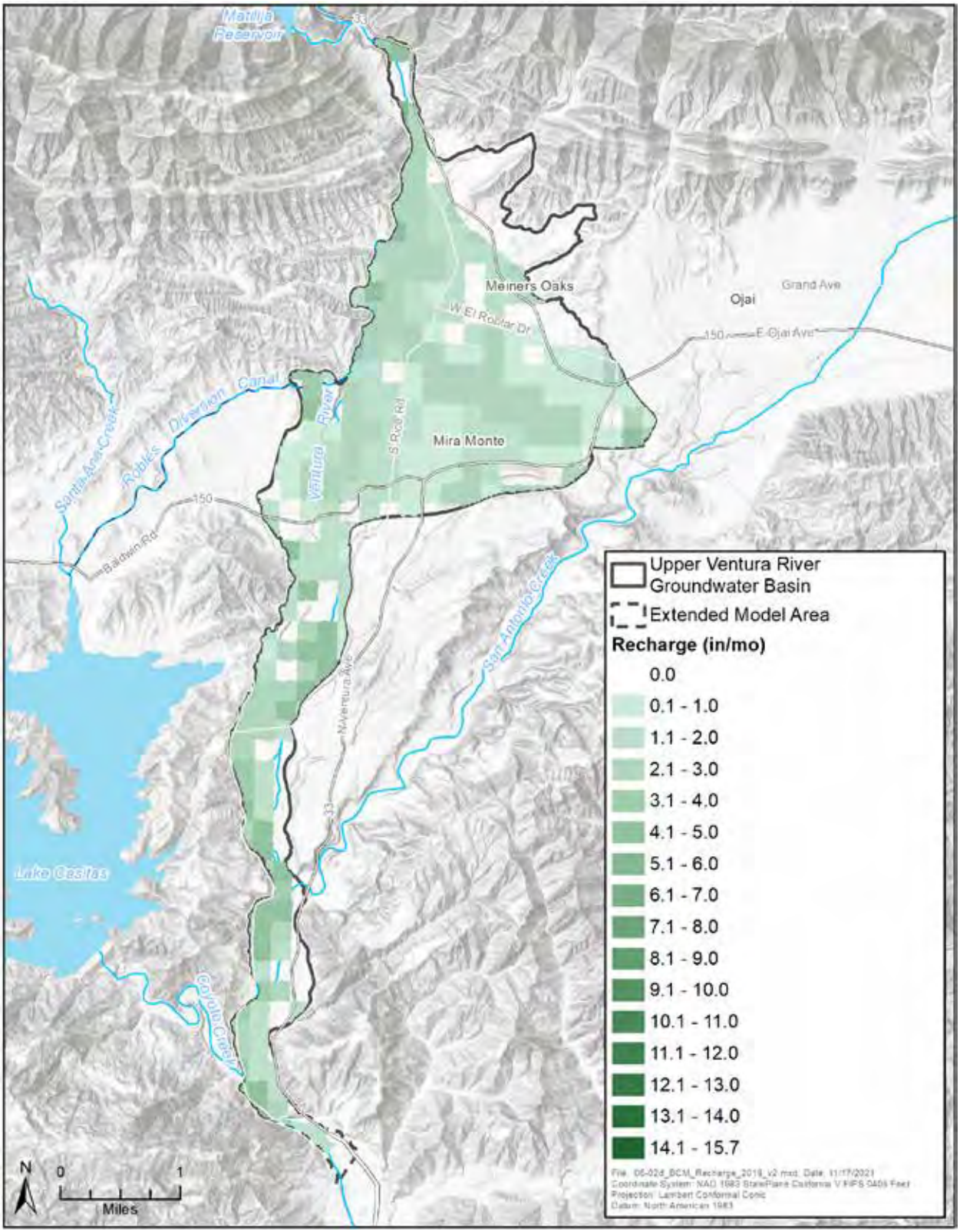

Figure 6.3d. BCM Recharge, January 2019.

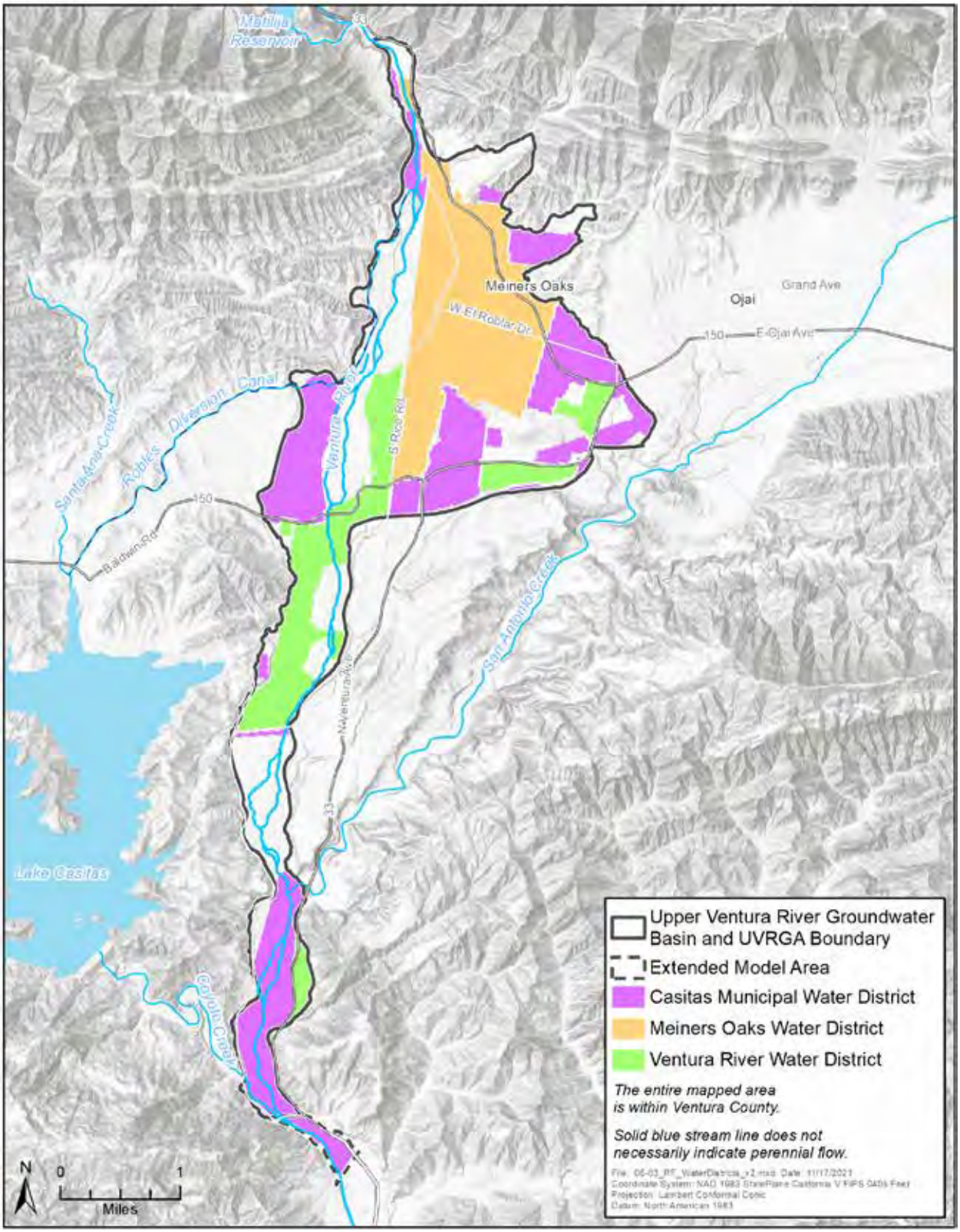

Figure 6.4. Water District Coverage used for M&I Return Flows.

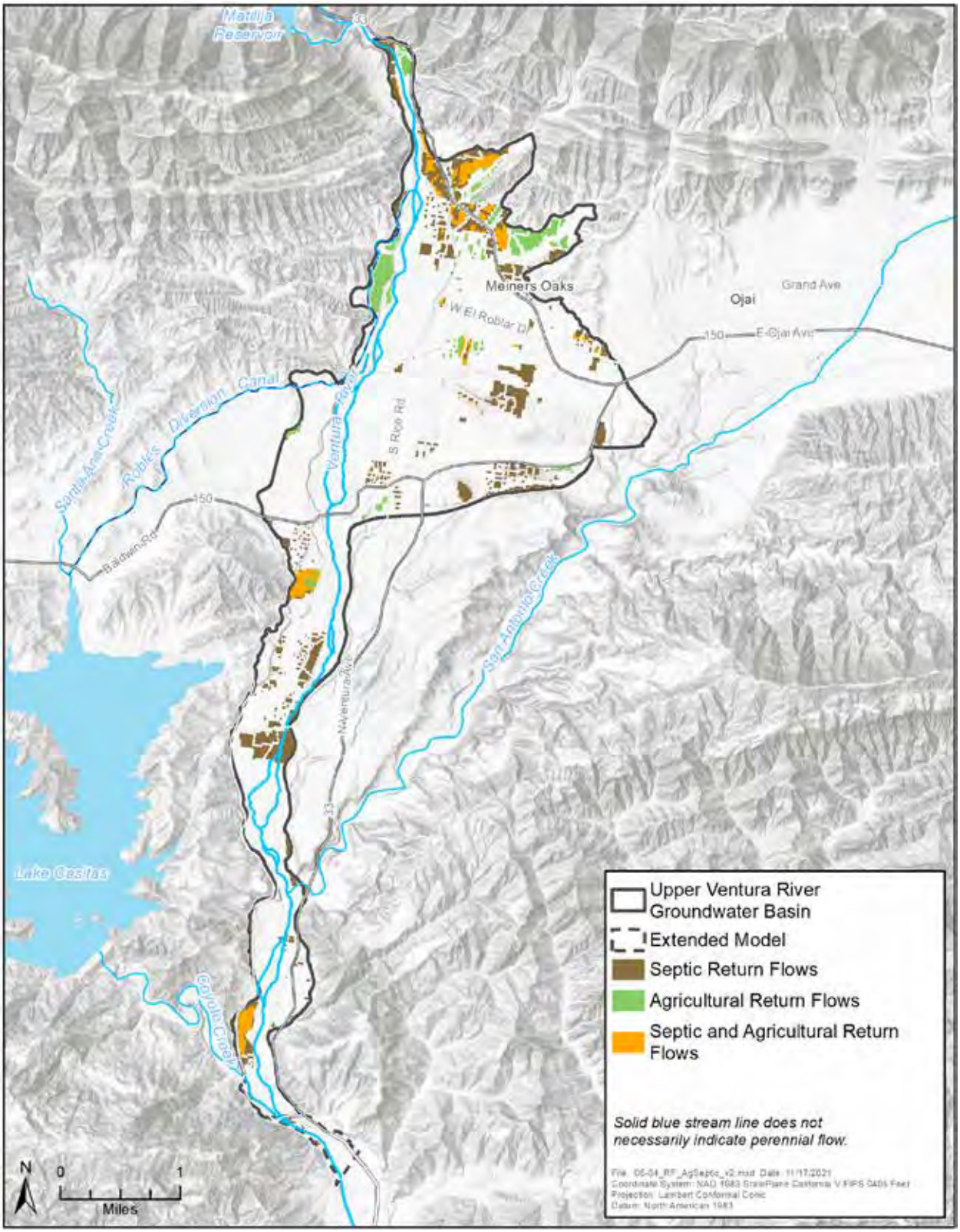

Figure 6.5. Ag Coverage and Septic Parcels used for Ag and Septic Return Flows.

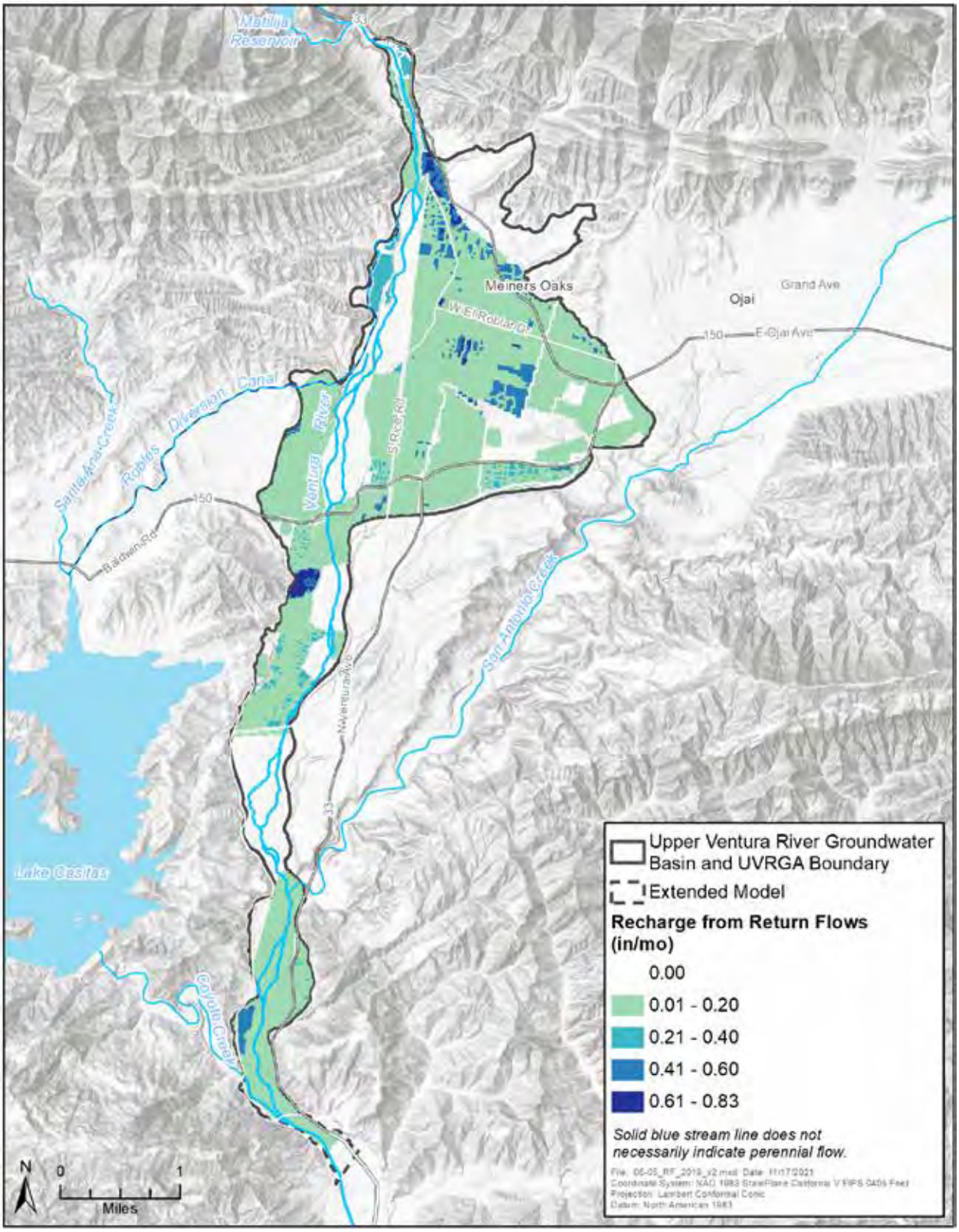

Figure 6.6. Total Return Flows for Example Historical Period (January 2019).

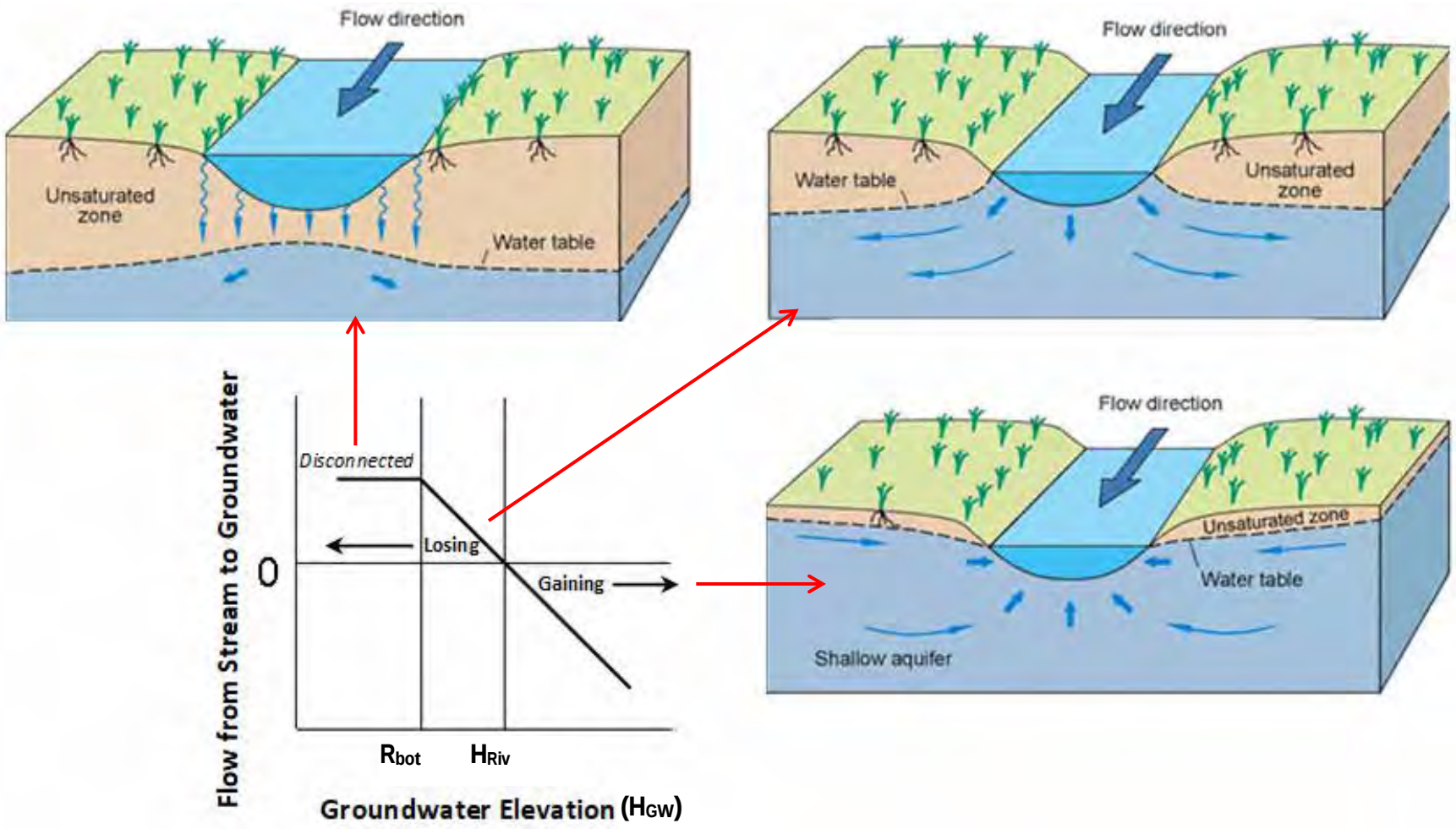

Figure 7.1. Surface-water/Groundwater Interaction Scenarios and the Relationship between Flow, Stage, and Groundwater Elevations.

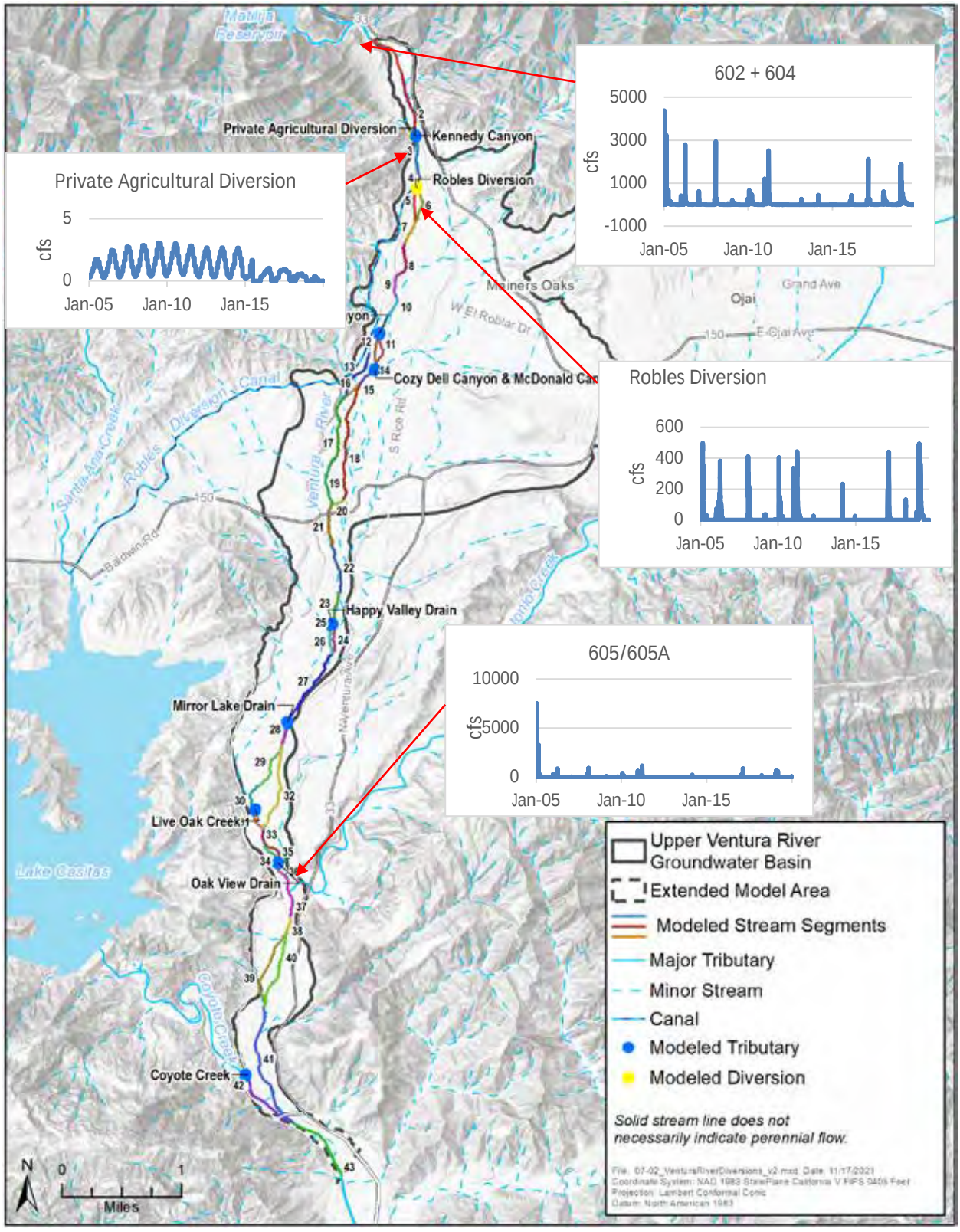

Figure 7.2. Map of Upper Ventura River by Segment with Diversion/Tributary and Hydrographs for Matilija Inflows and Diversions.

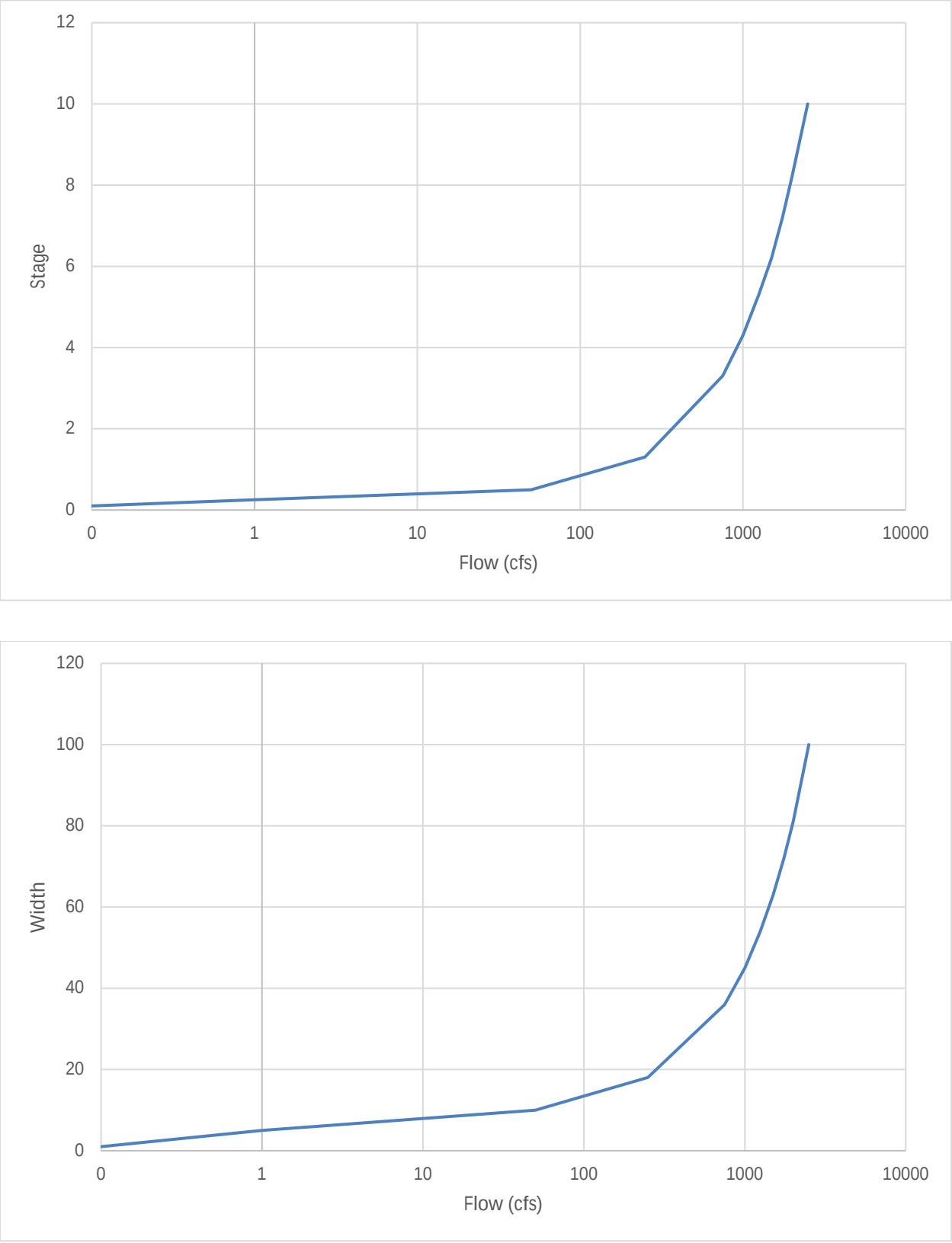

Figure 7.3. Flow-stage-width relationships for the Ventura River.

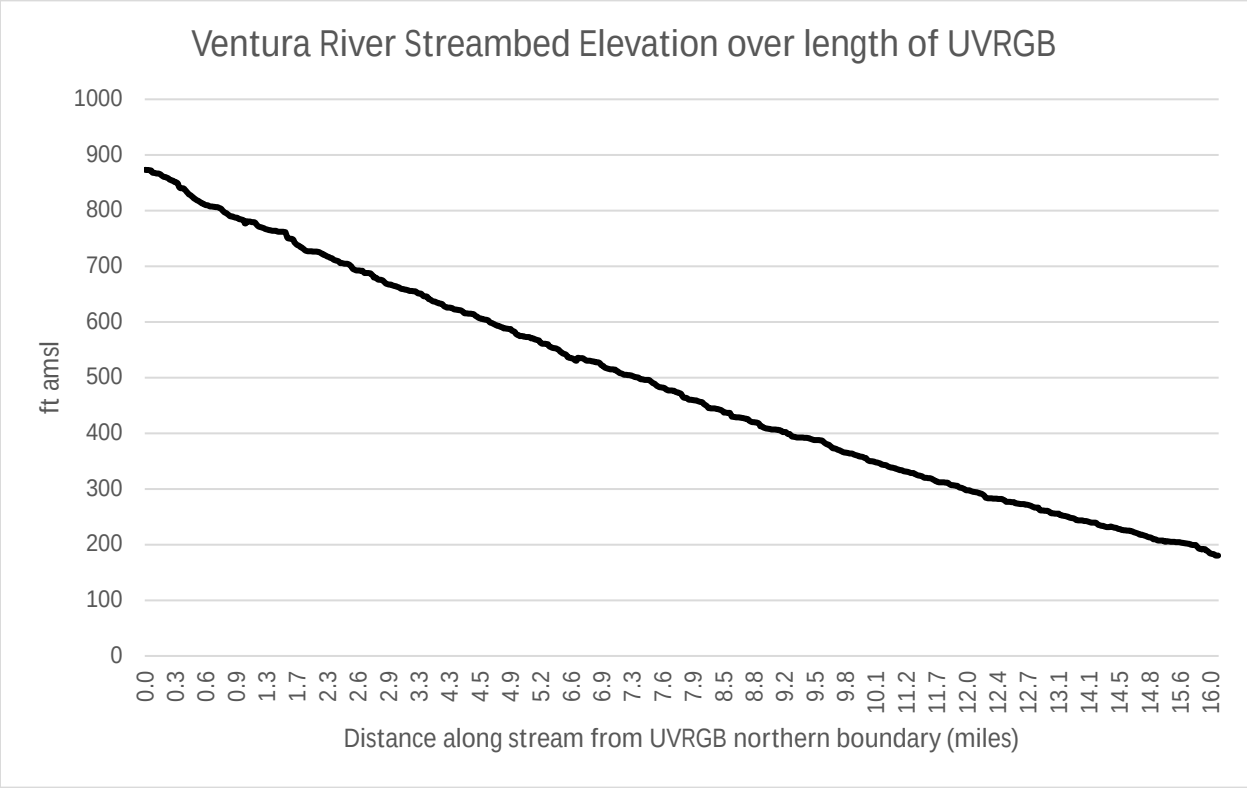

Figure 7.4. Upper Ventura Streambed Elevations Cross-Section.

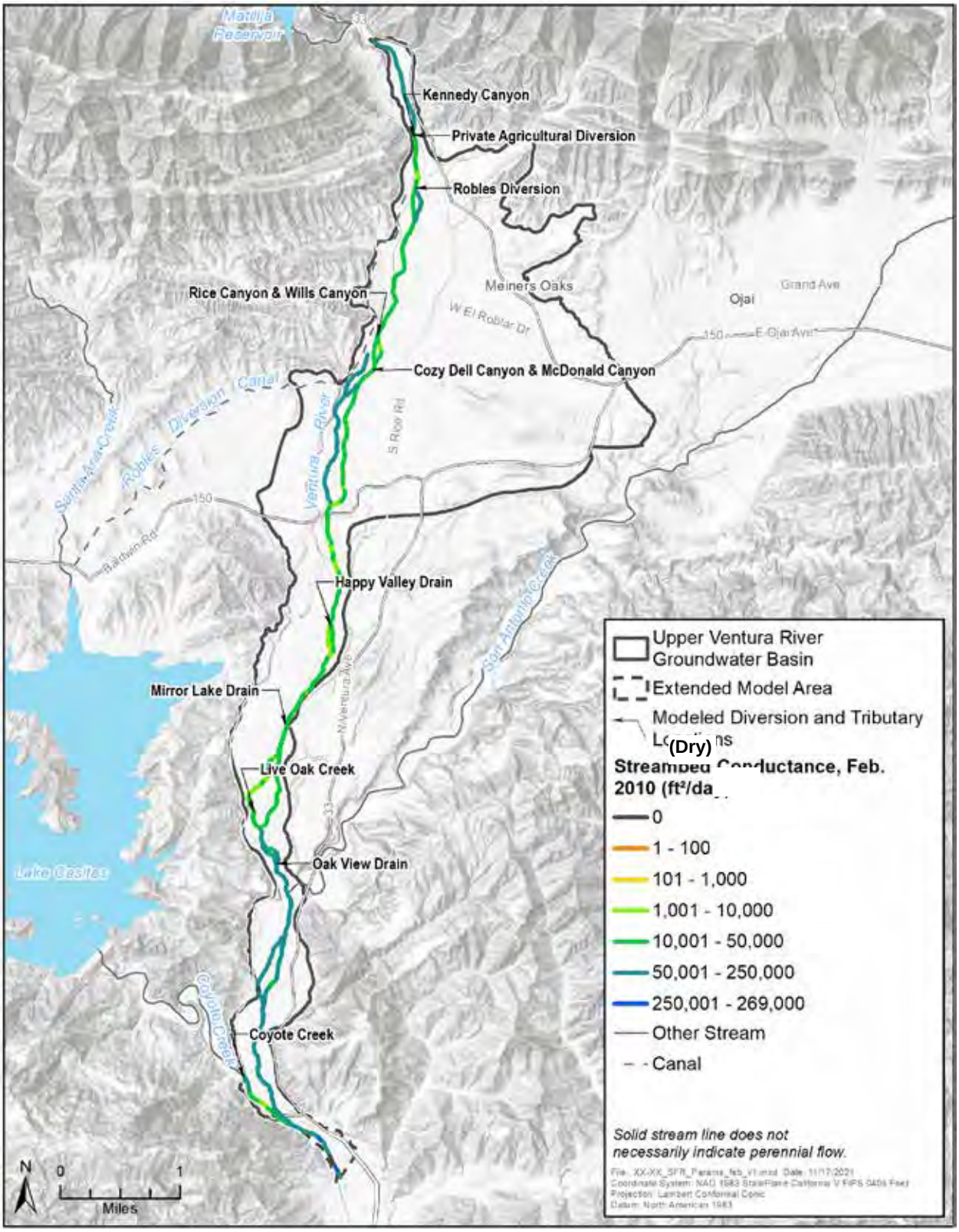

Figure 7.5a. Streambed Conductance, February 2010.

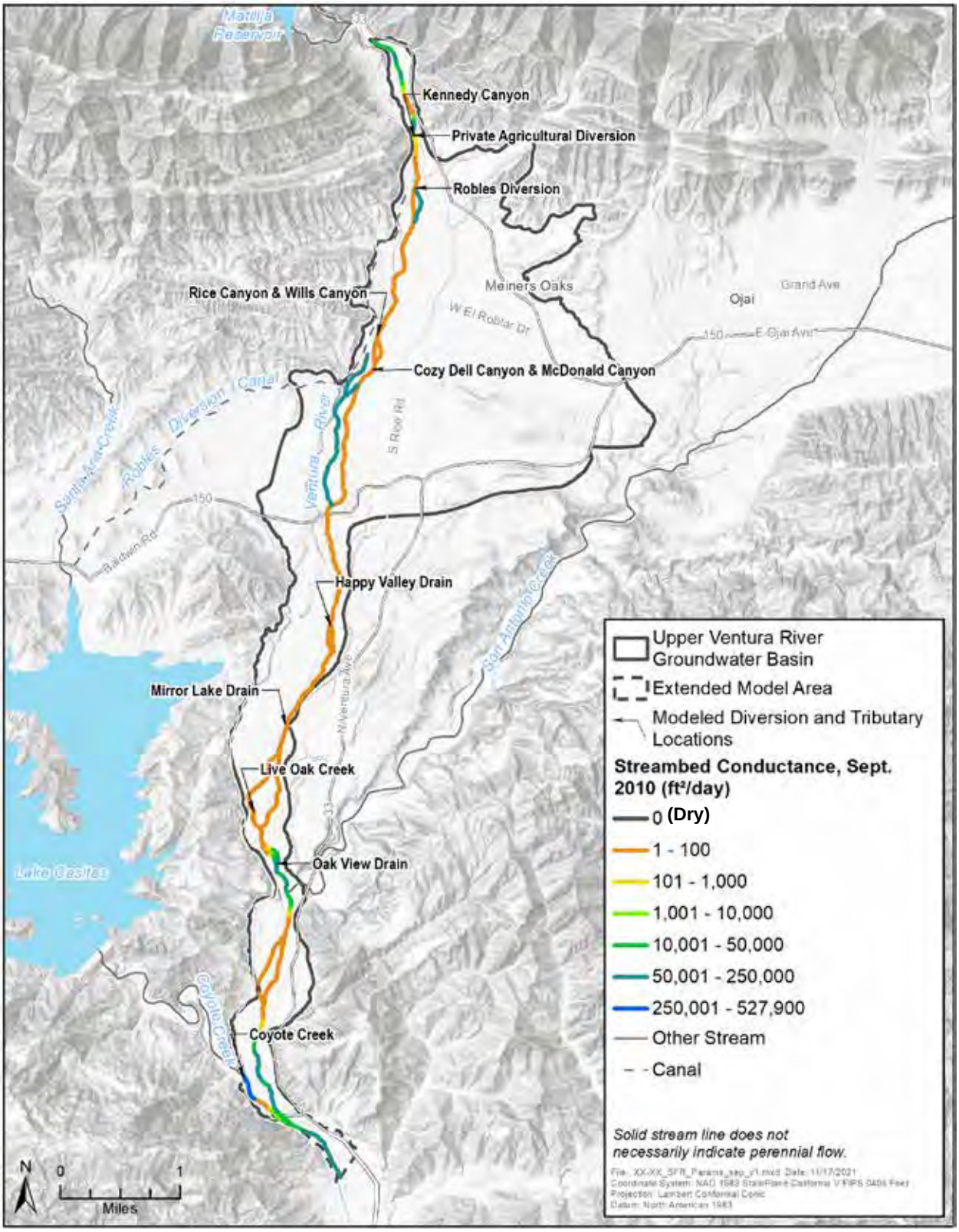

Figure 7.5b. Streambed Conductance, September 2010.

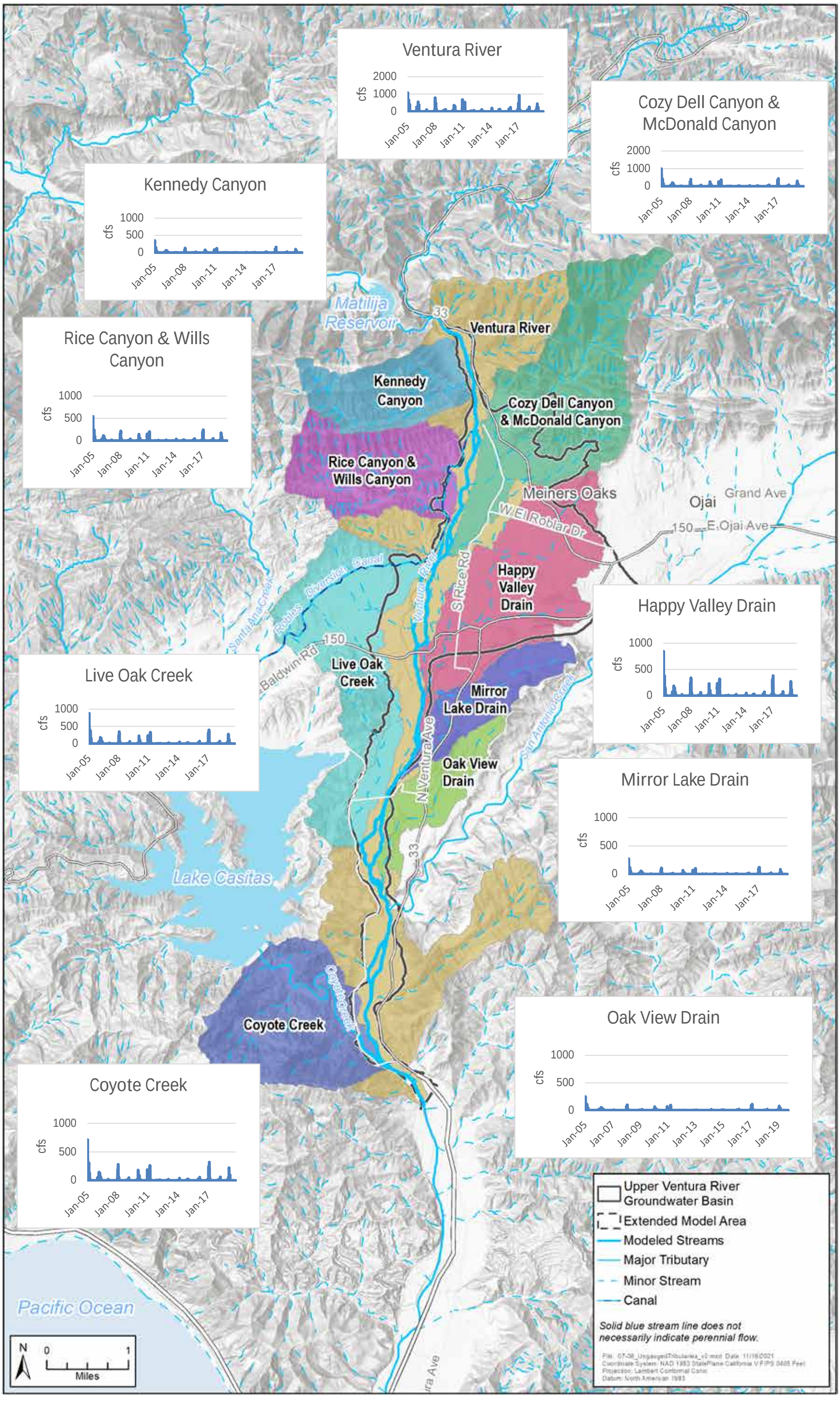

Figure 7.6. Map of Basin Areas for Ungauged Tributaries with Hydrographs for Each Tributary.

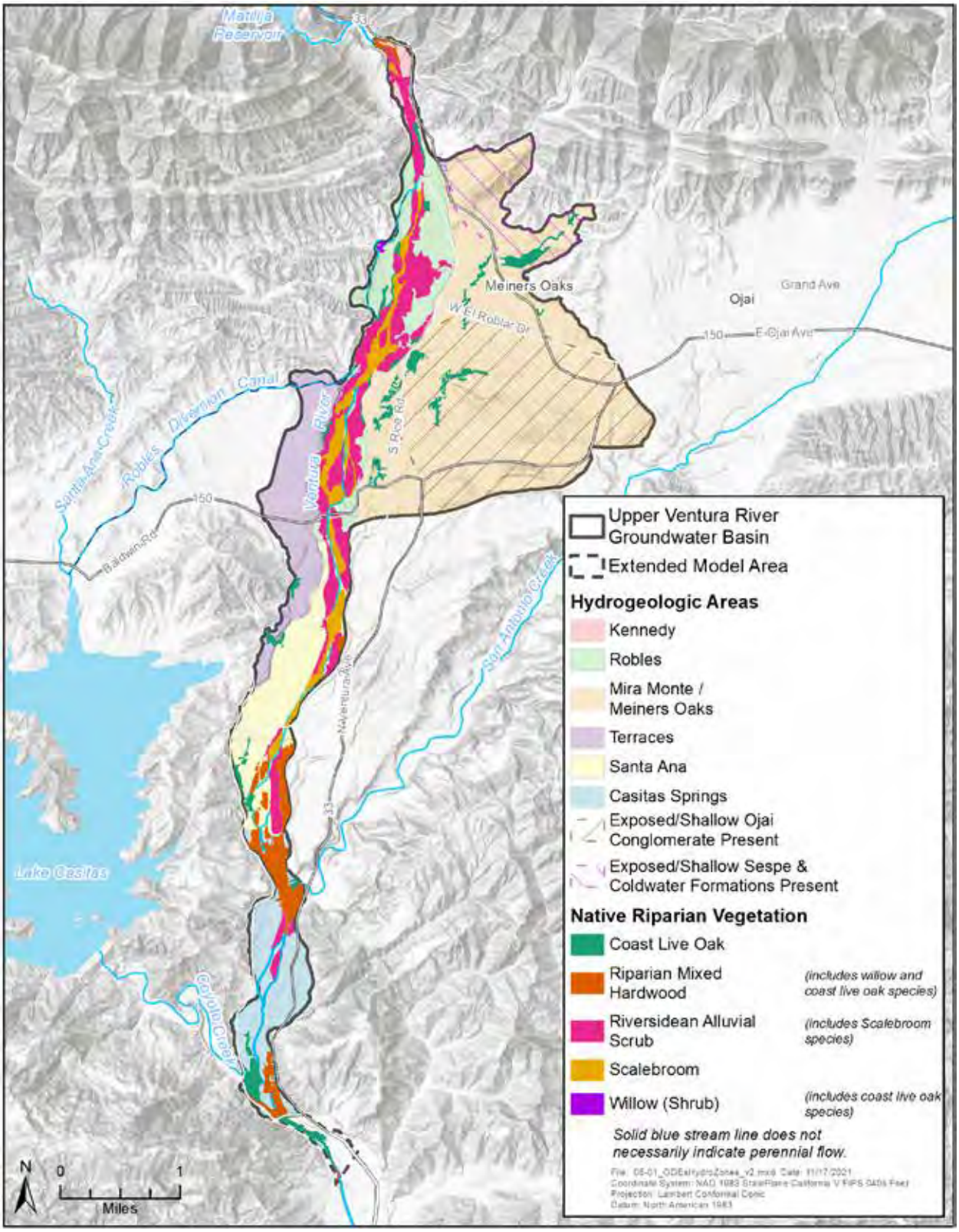

Figure 8.1. Native Riparian Vegetation and Hydrogeologic Areas.

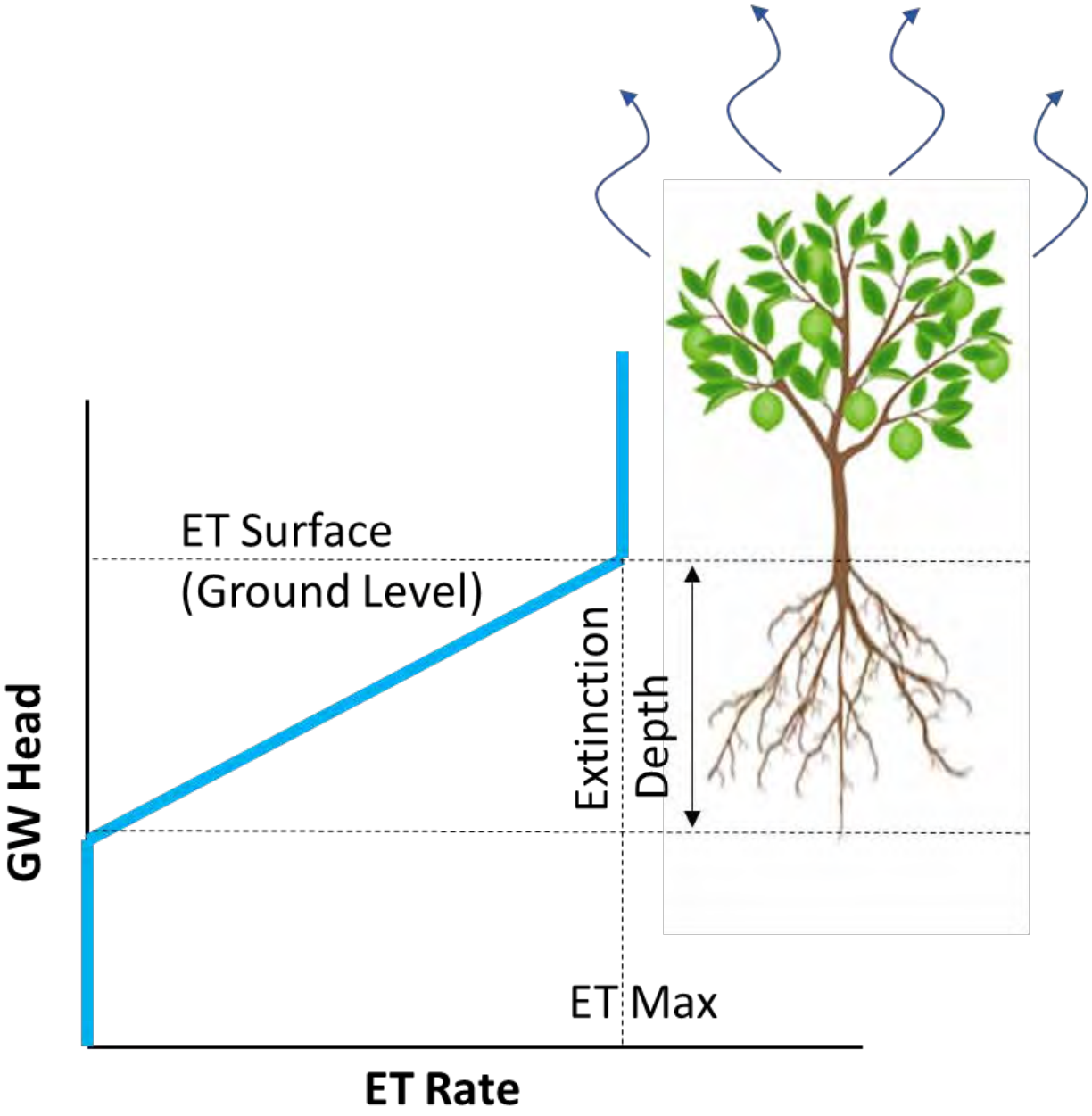

Figure 8.2. Schematic Showing Relationship between Groundwater Table, ET Rate, ET Extinction Depth, and ET Surface.

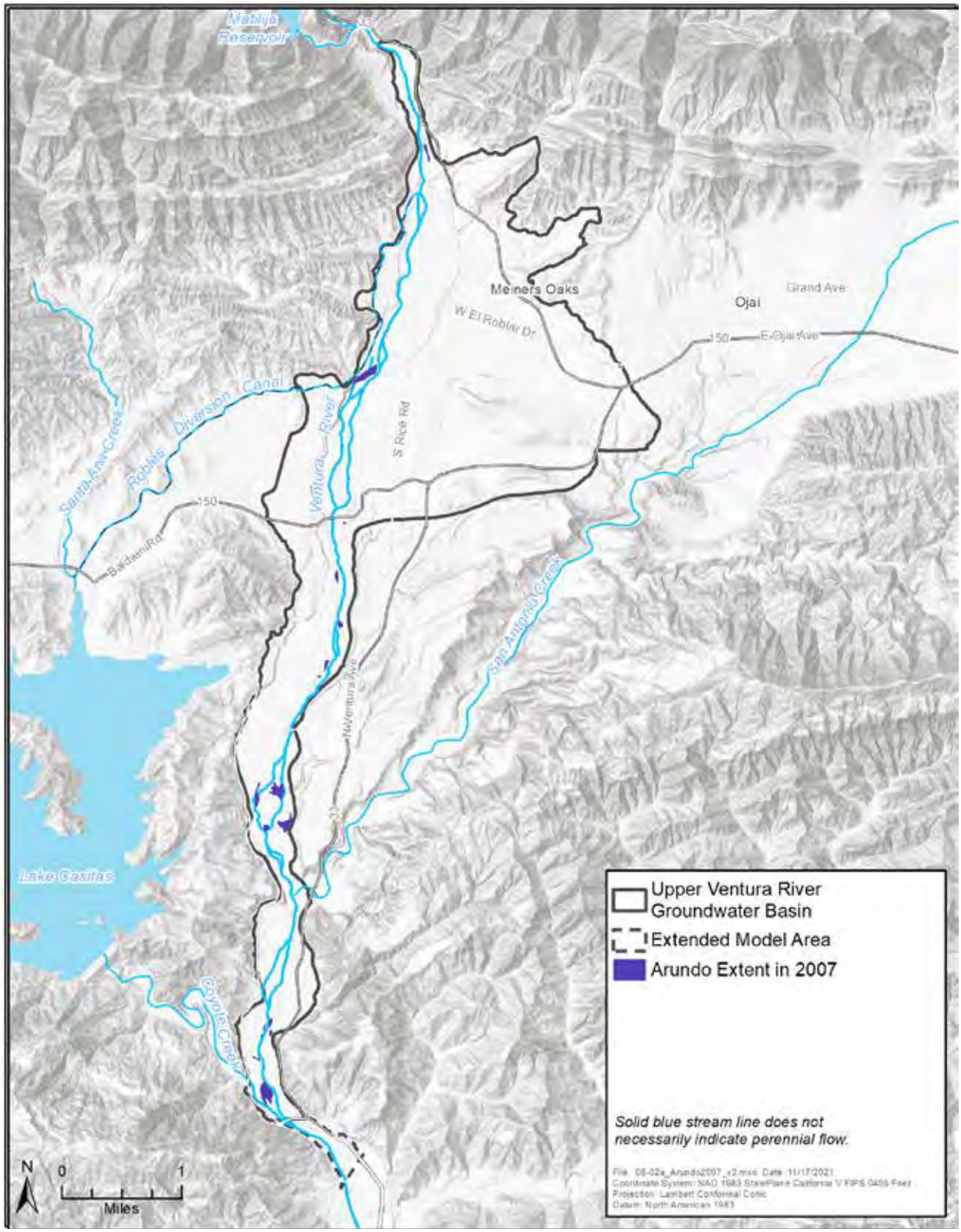

Figure 8.3a. Arundo, 2007.

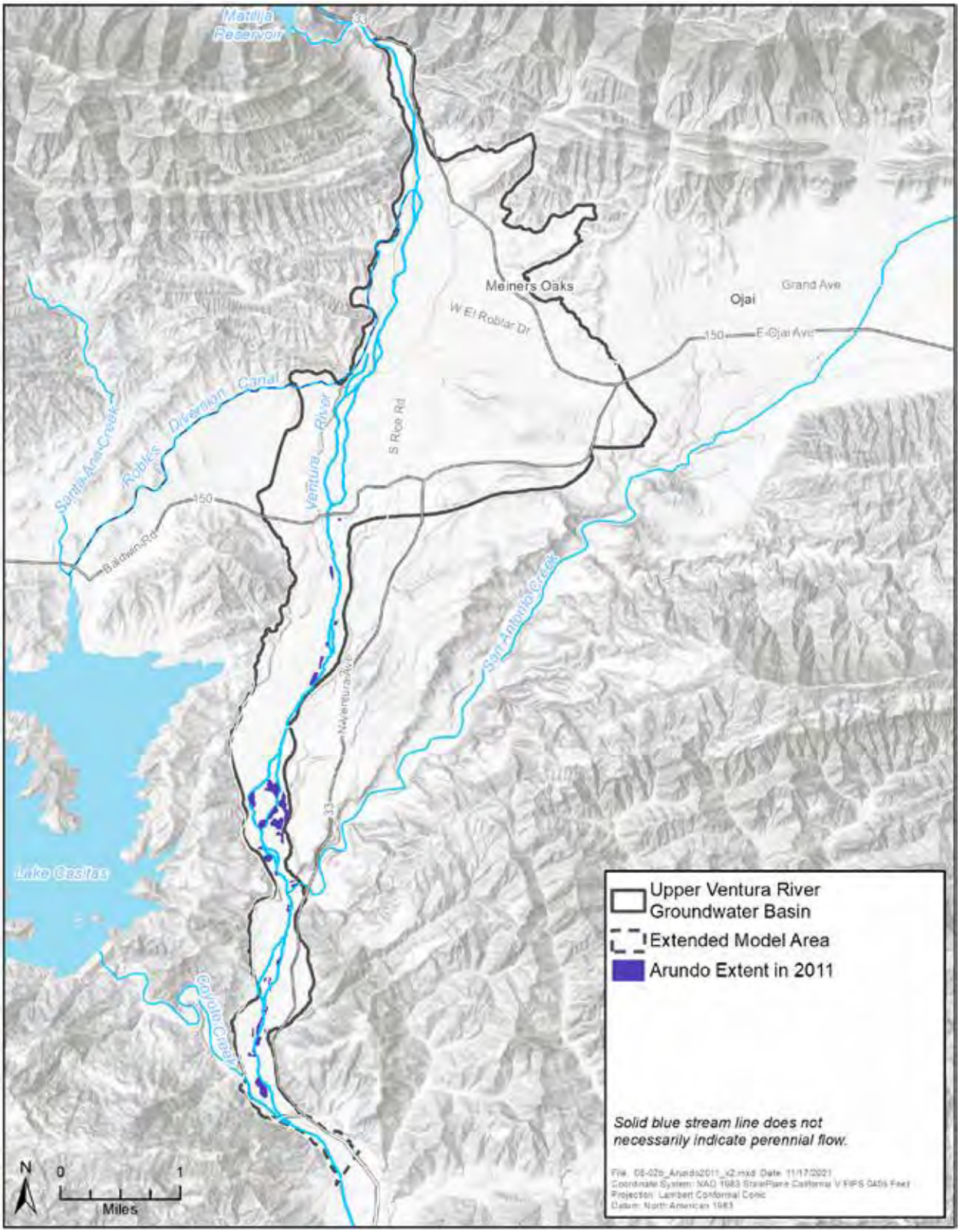

Figure 8.3b. Arundo, 2011.

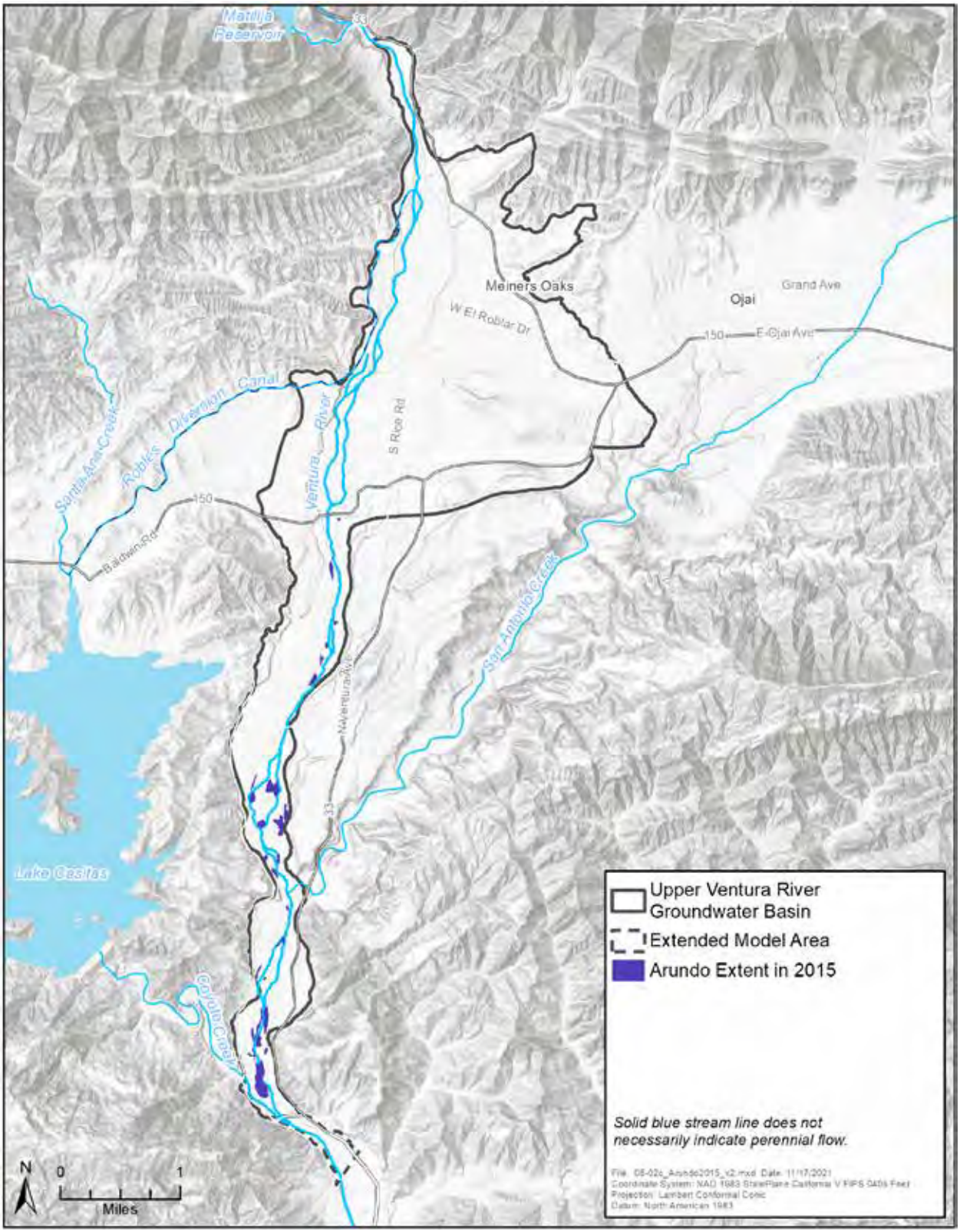

Figure 8.3 c. Arundo, 2015.

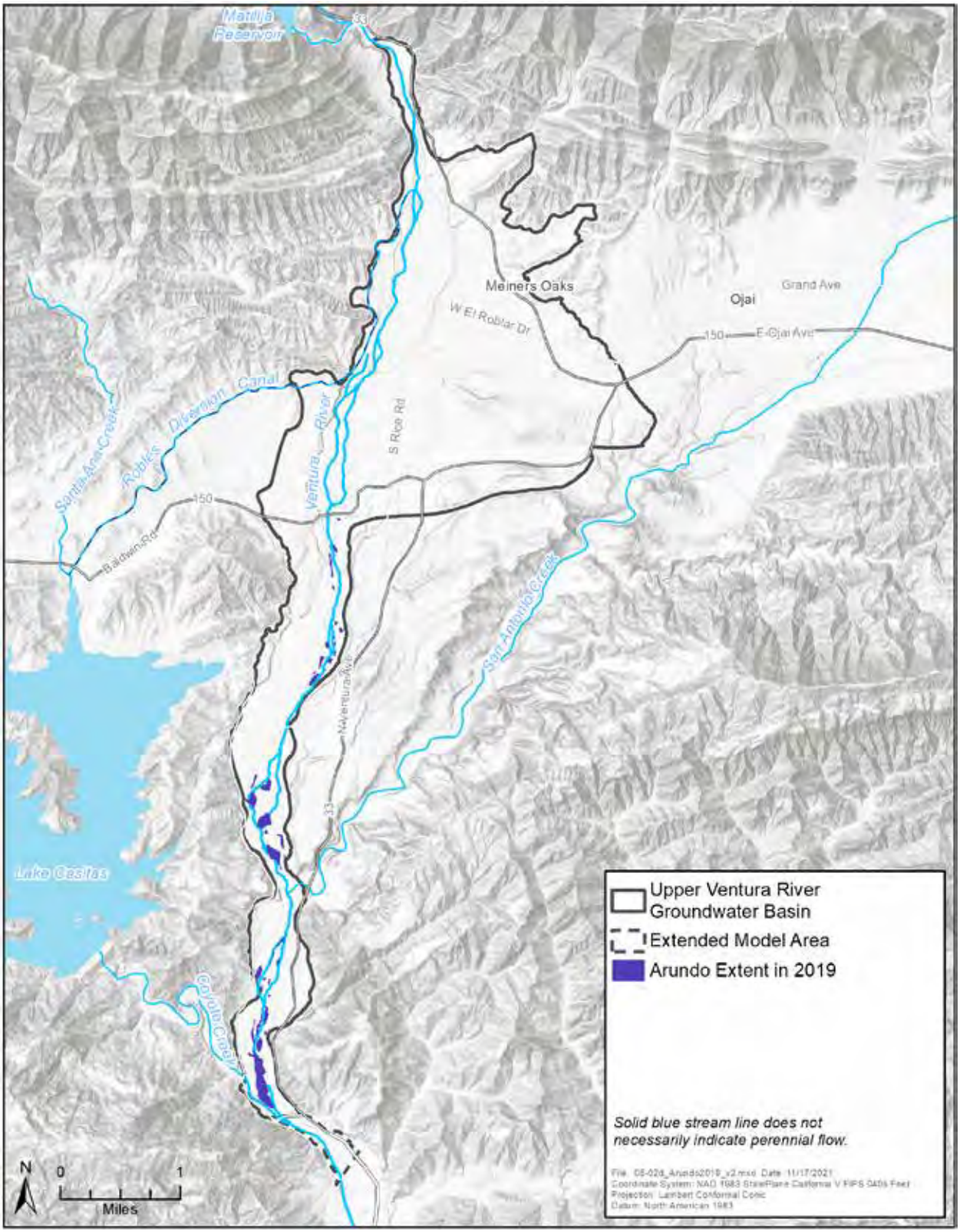

Figure 8.3d. Arundo, 2019.

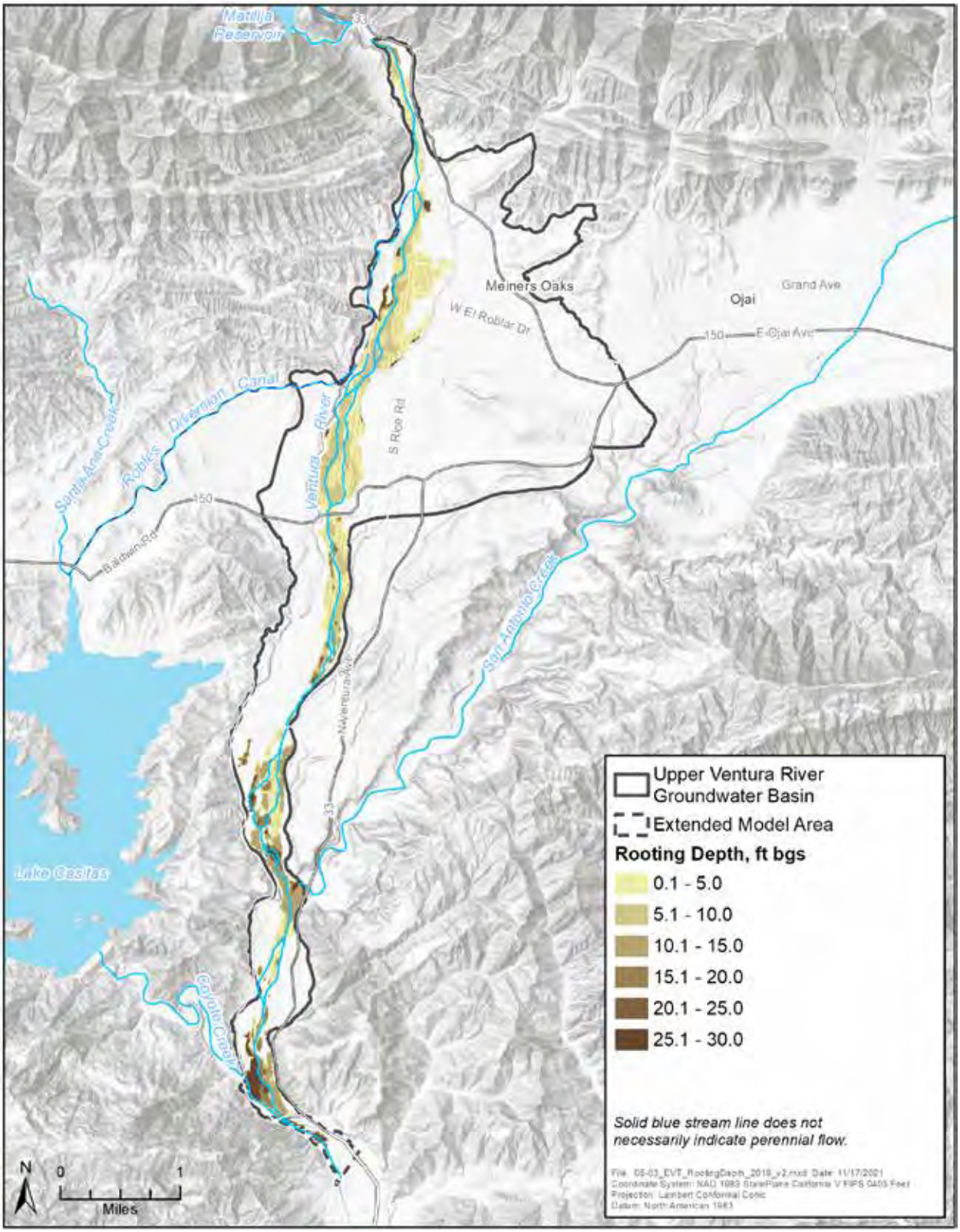

Figure 8.4. Modeled Rooting Depth for Example Historical Period (January 2019).

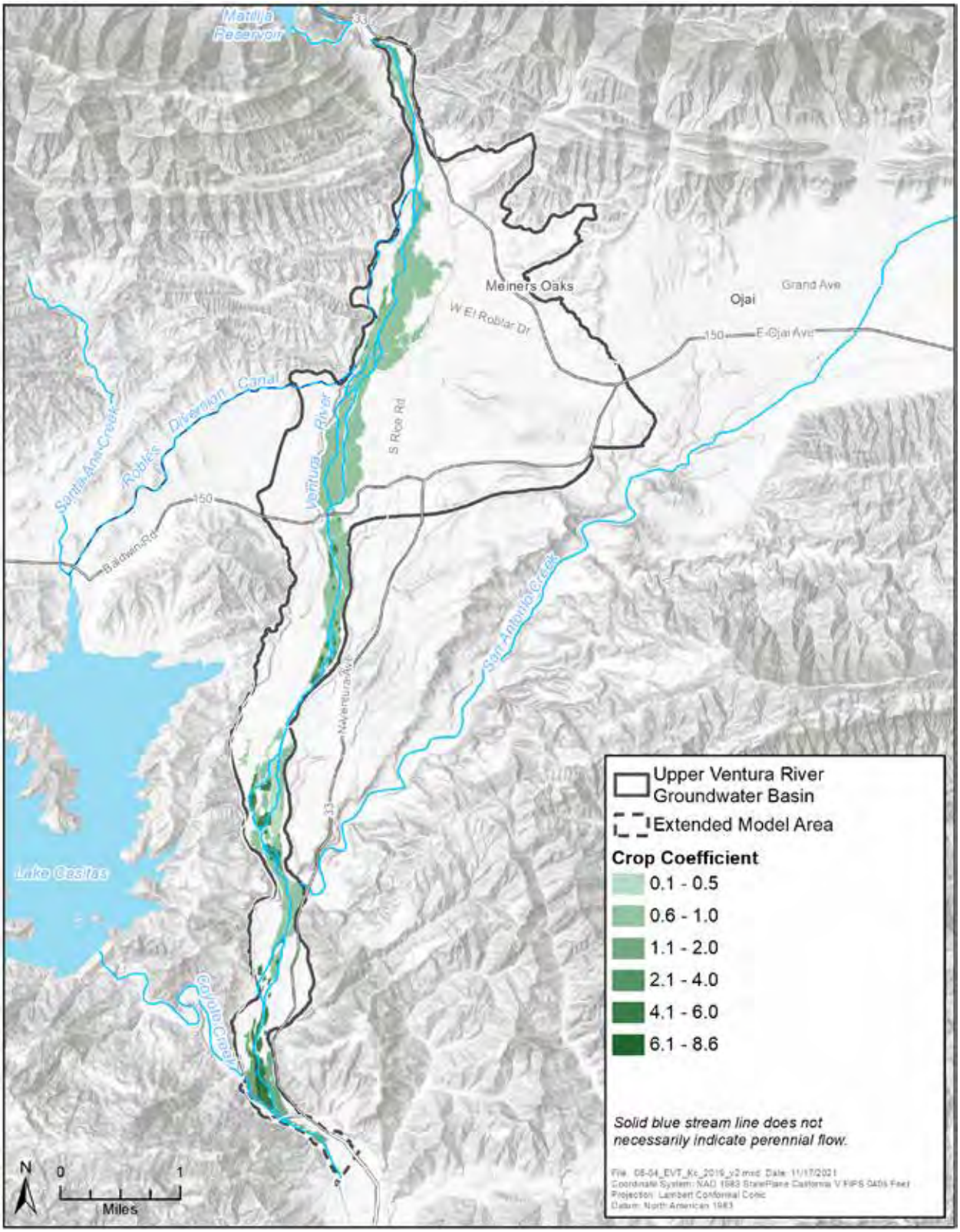

Figure 8.5. Modeled Crop Coefficient for Representative Historical Period (January 2019).

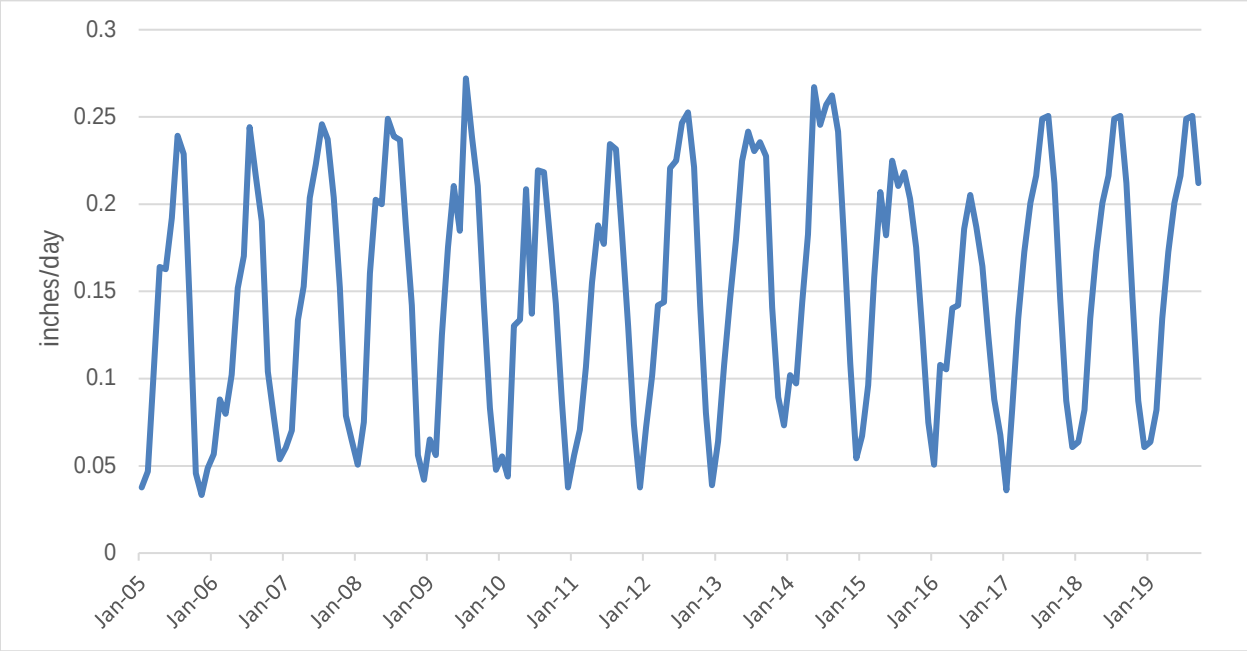

Figure 8.6. Reference ET Time-Series for Historical Period.

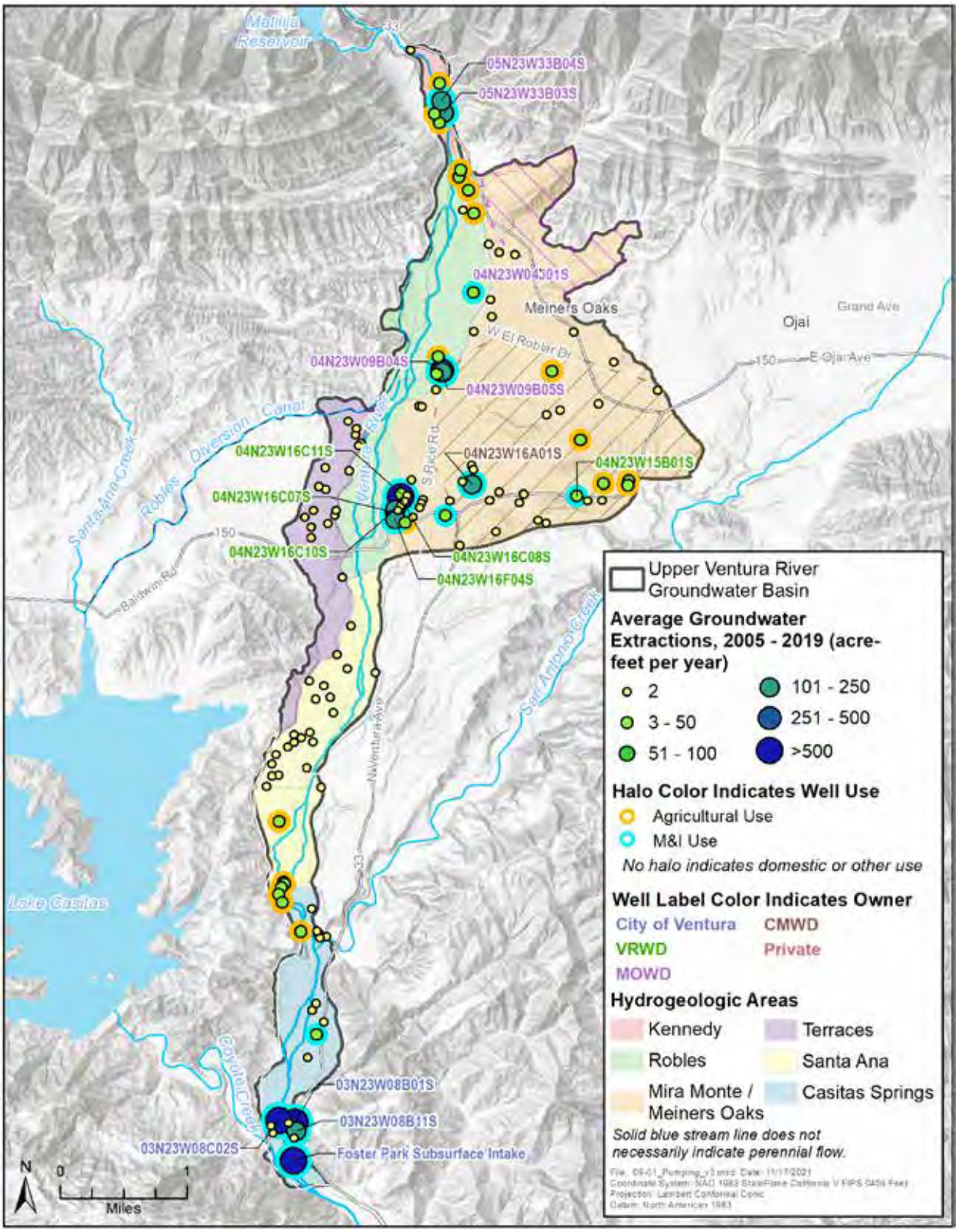

Figure 9.1. Pumping Wells with General Rates.

Figure 9.2. Pumping Data Availability.

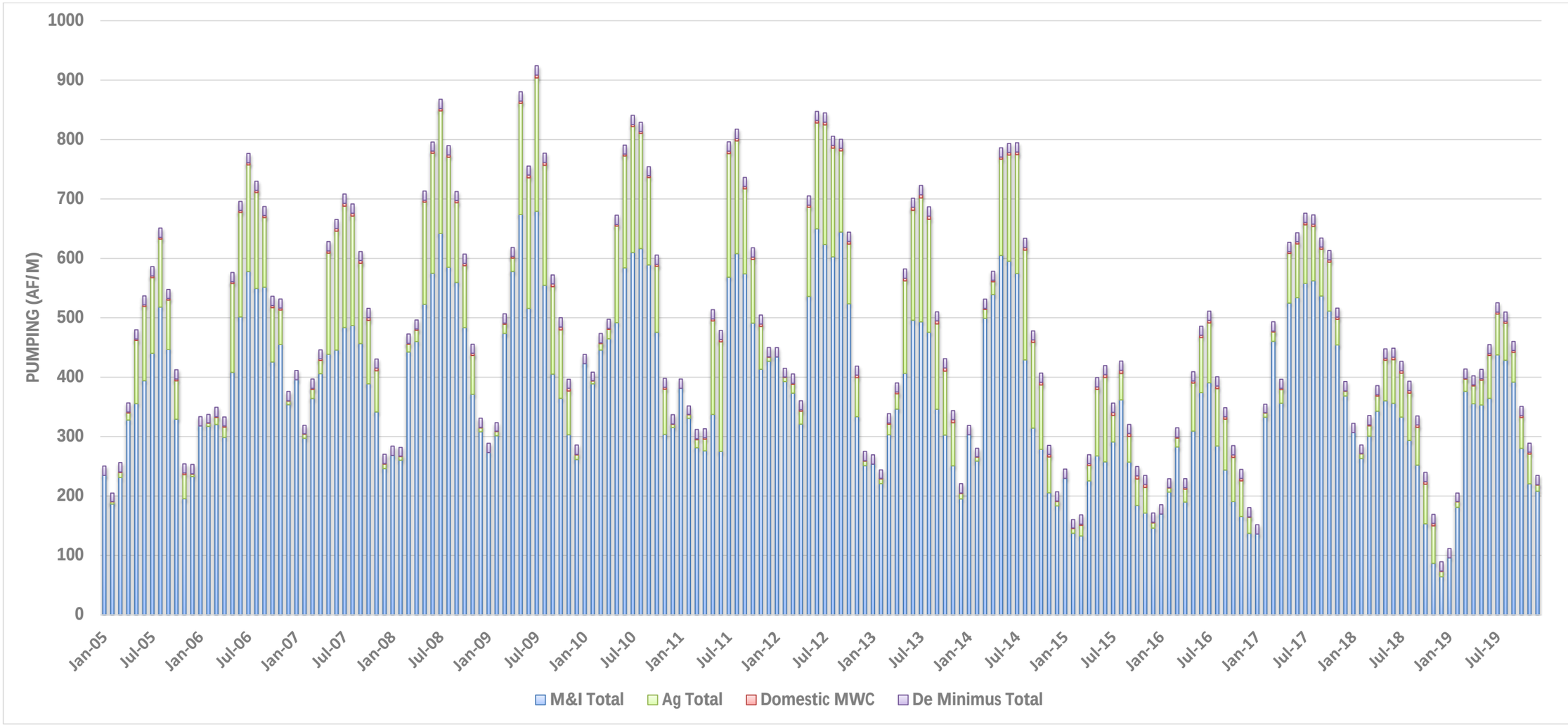

Figure 9.3. Modeled Historical Pumping by Category.

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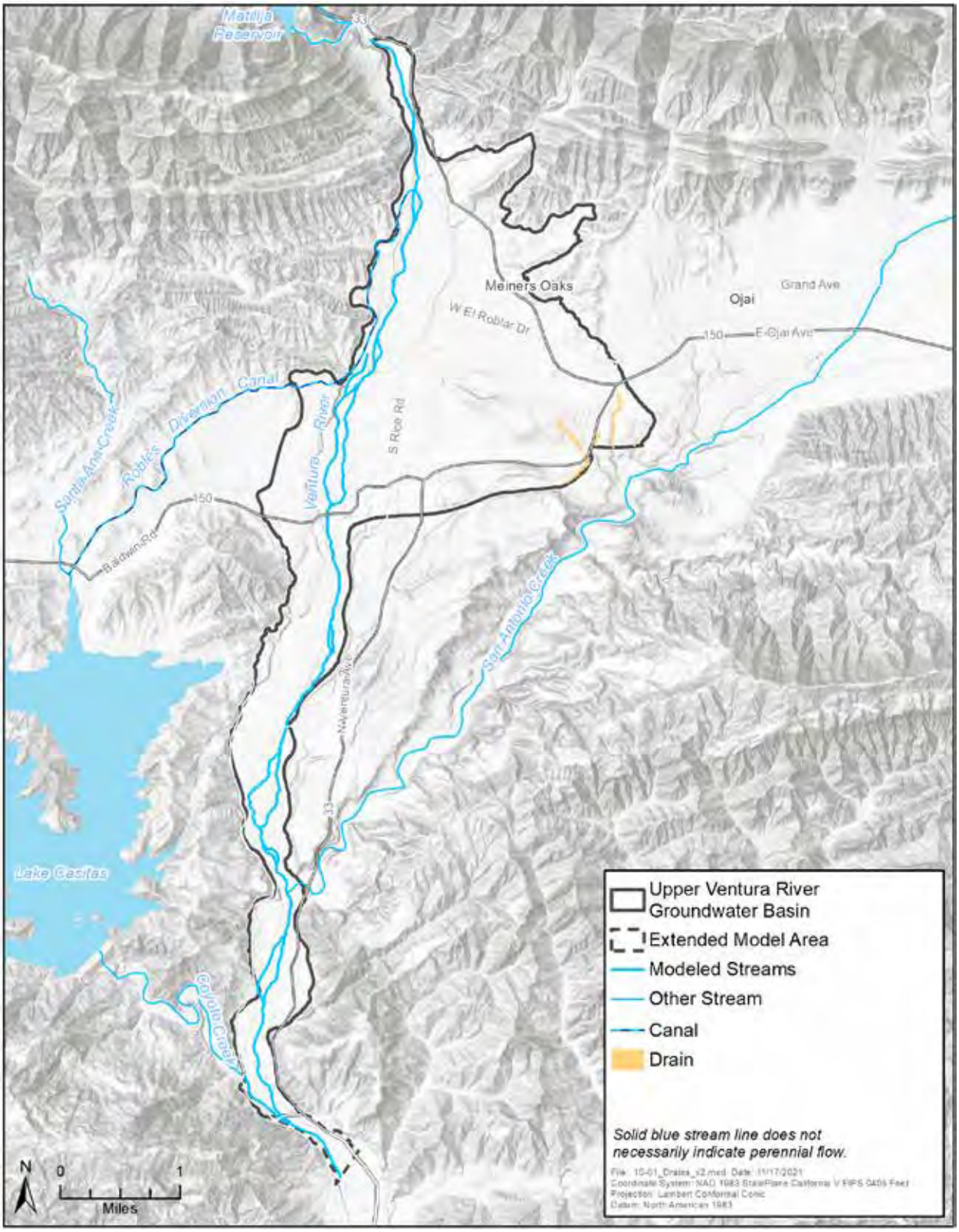


Figure 10.1. Drain Locations.

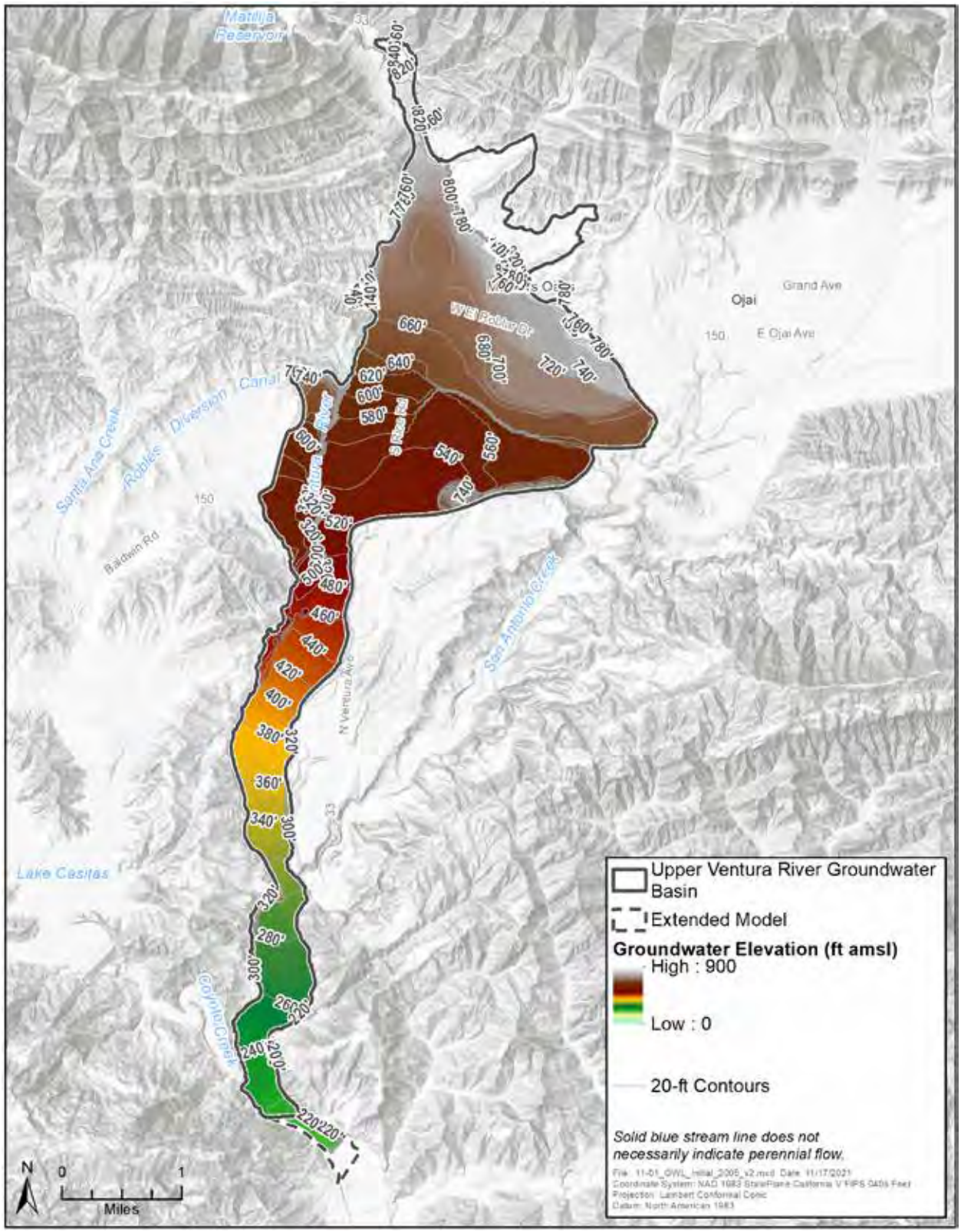


Figure 11.1. Water Level Contours, Initial Head, January 2005.

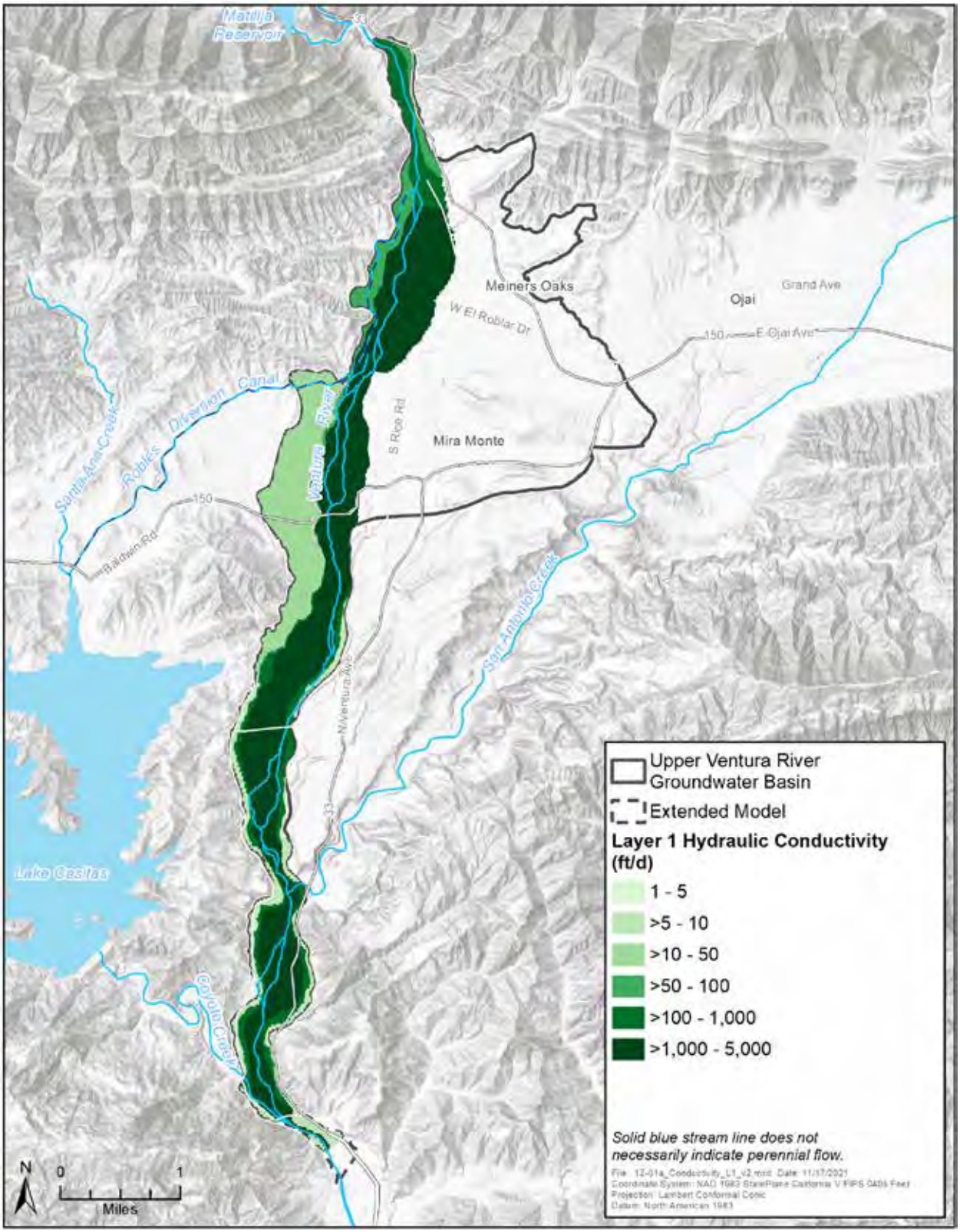


Figure 12.1a. Layer 1 Hydraulic Conductivity.

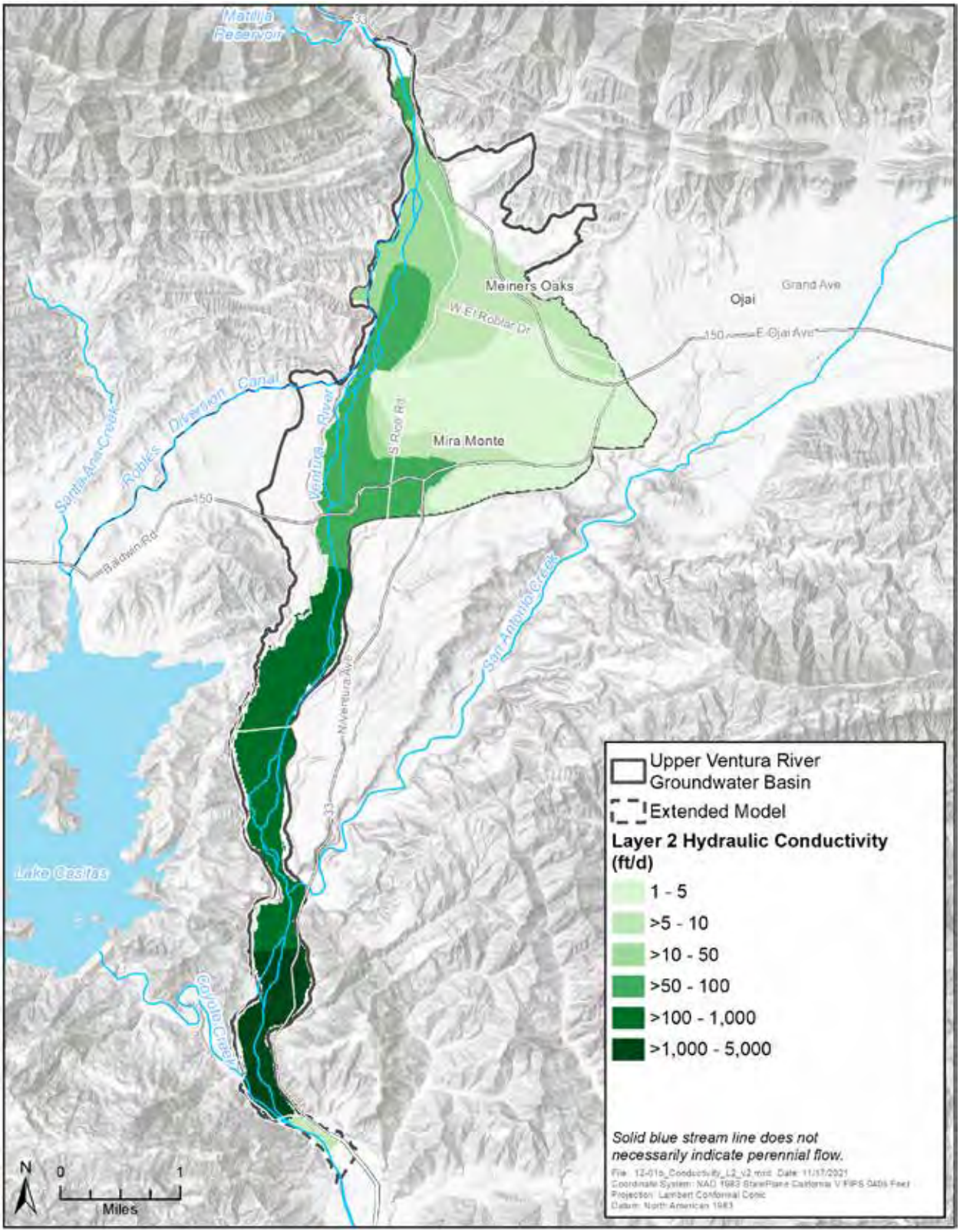


Figure 12.1b. Layer 2 Hydraulic Conductivity.

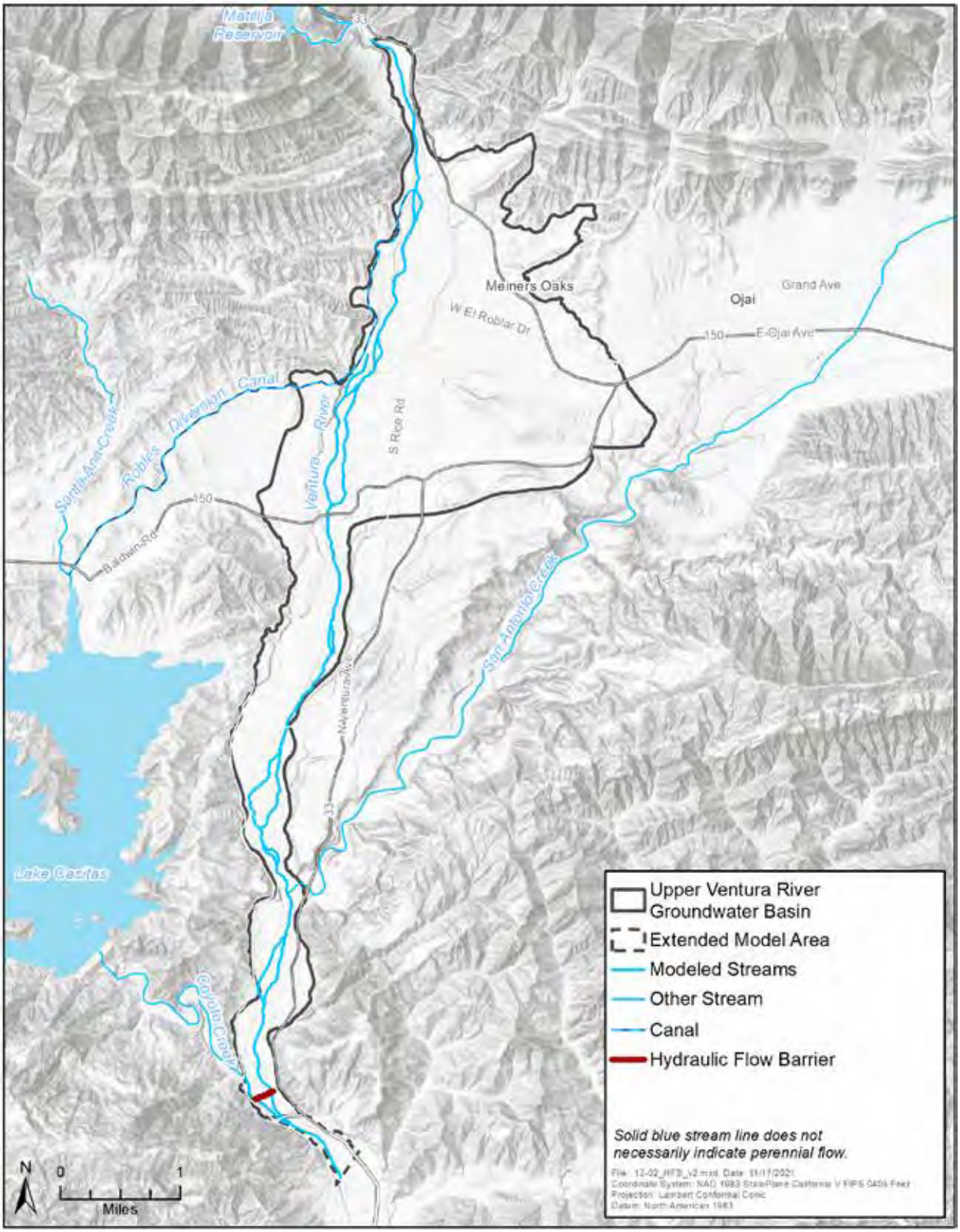


Figure 12.2. Hydraulic Flow Barriers (HFBs) for Subsurface Dam.

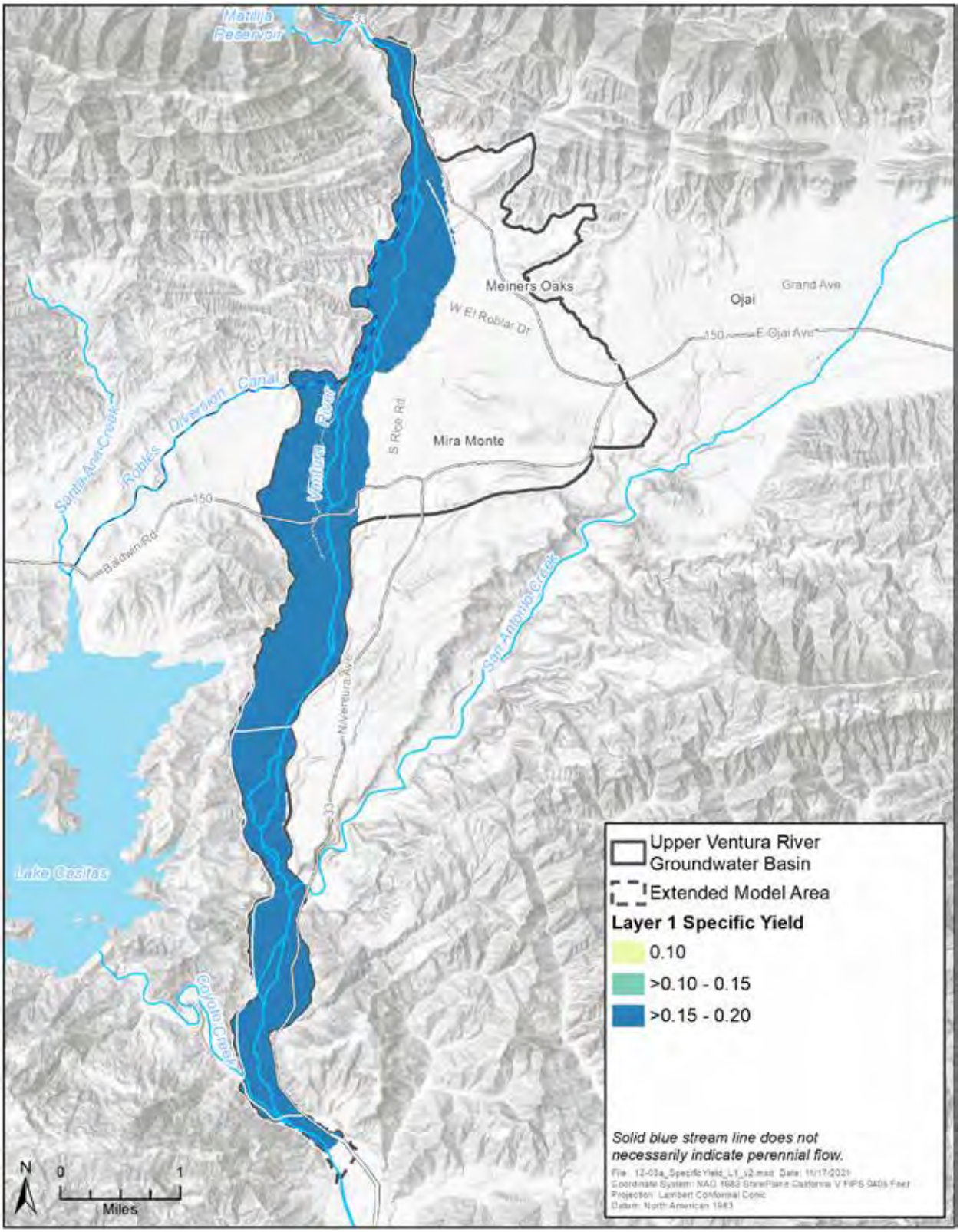


Figure 12.3a. Layer 1 Specific Yield.

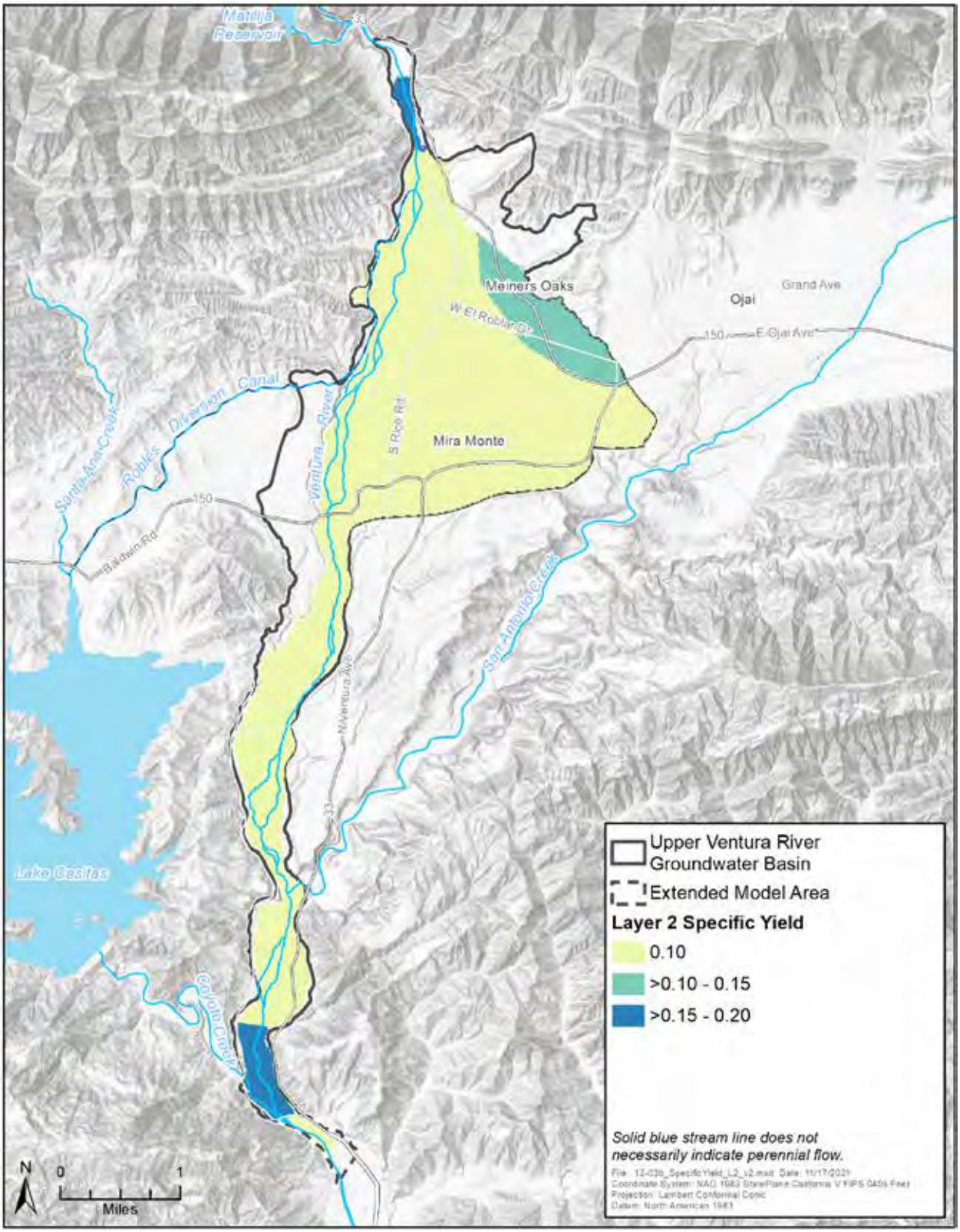


Figure 12.3b. Layer 2 Specific Yield.

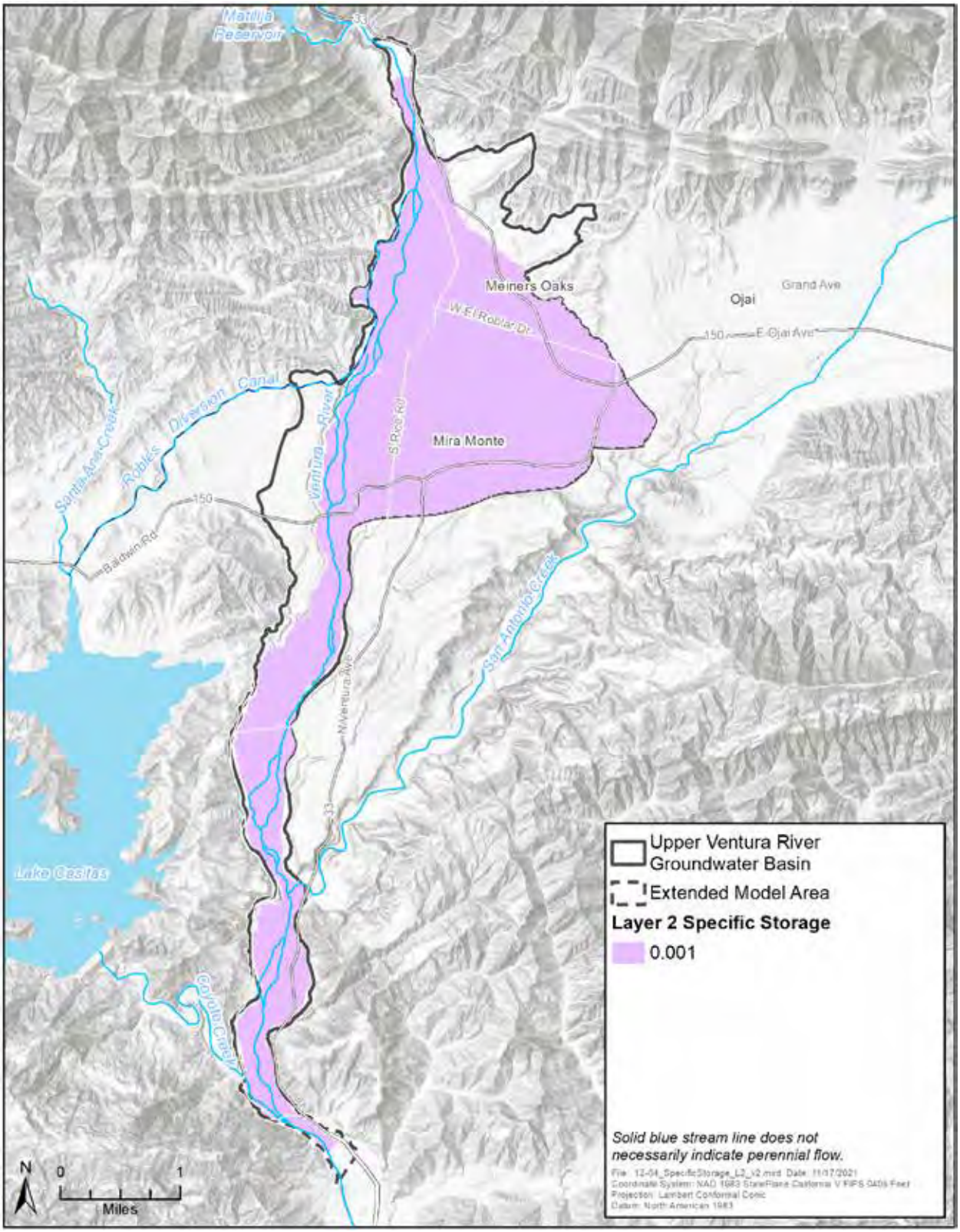


Figure 12.4. Layer 2 Specific Storage.

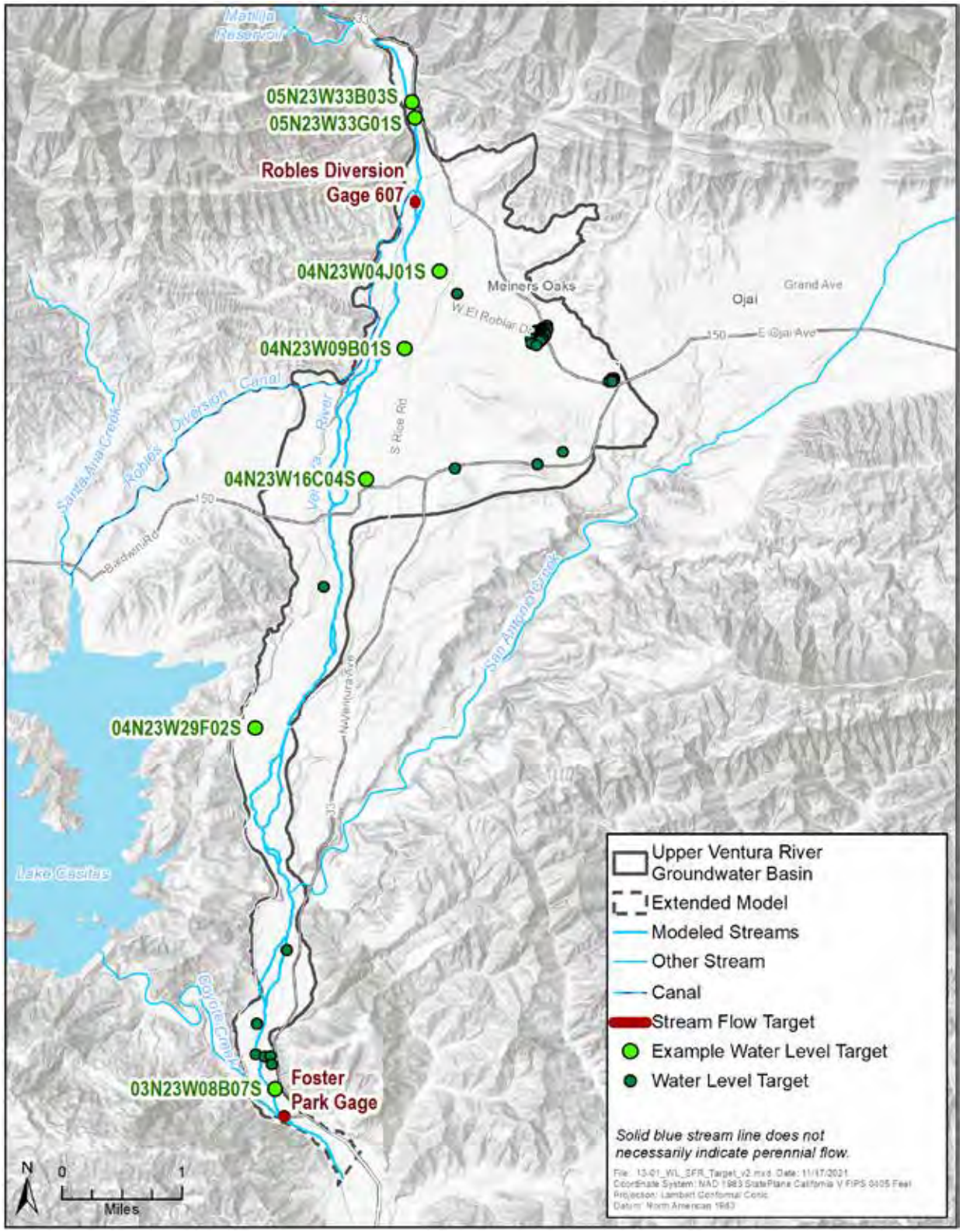


Figure 13.1. Groundwater Level and Stream Flow Targets.

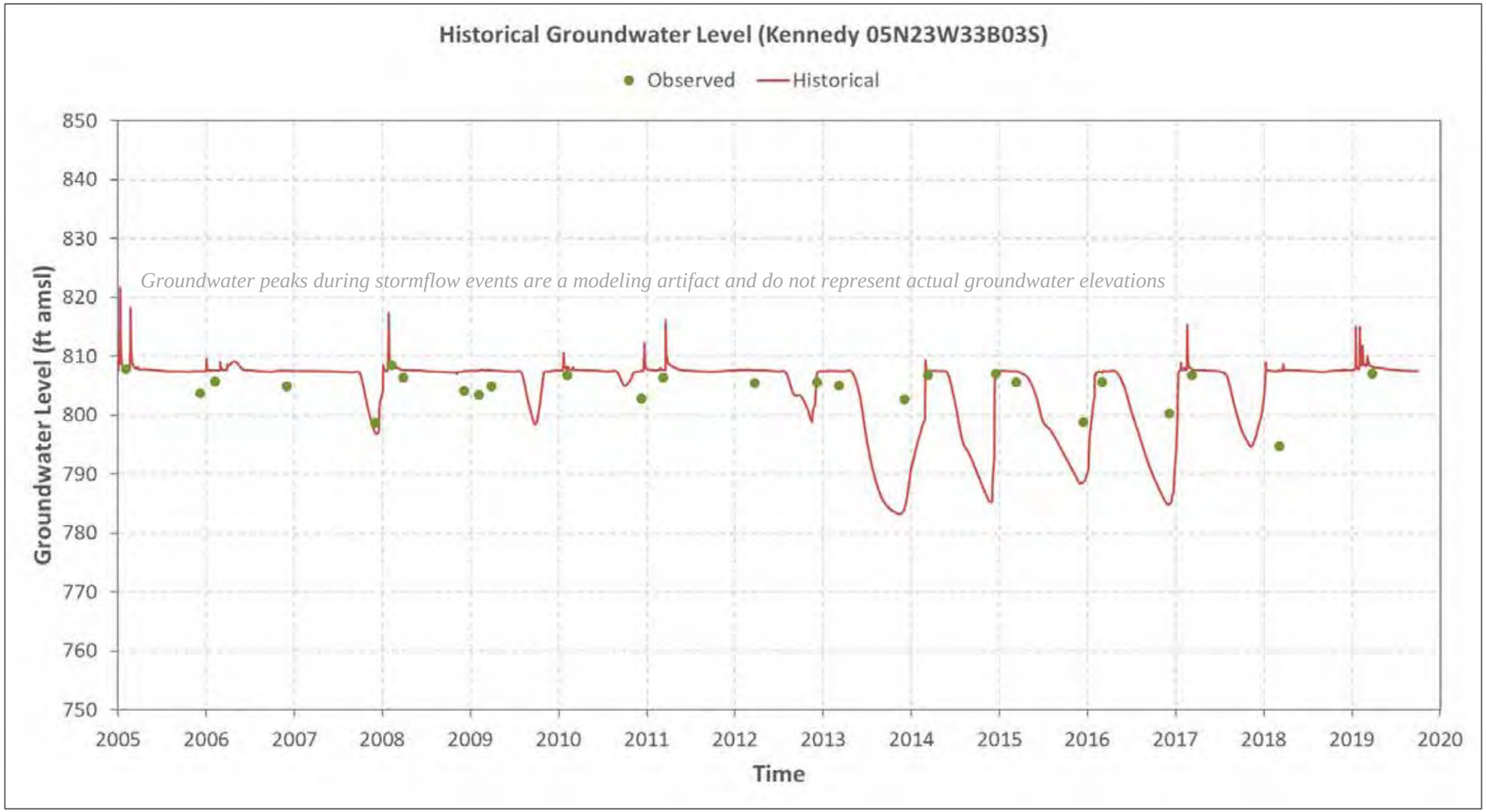


Figure 13.2a. GWL hydrograph (Historical) – Kennedy 05N23W33B03S.

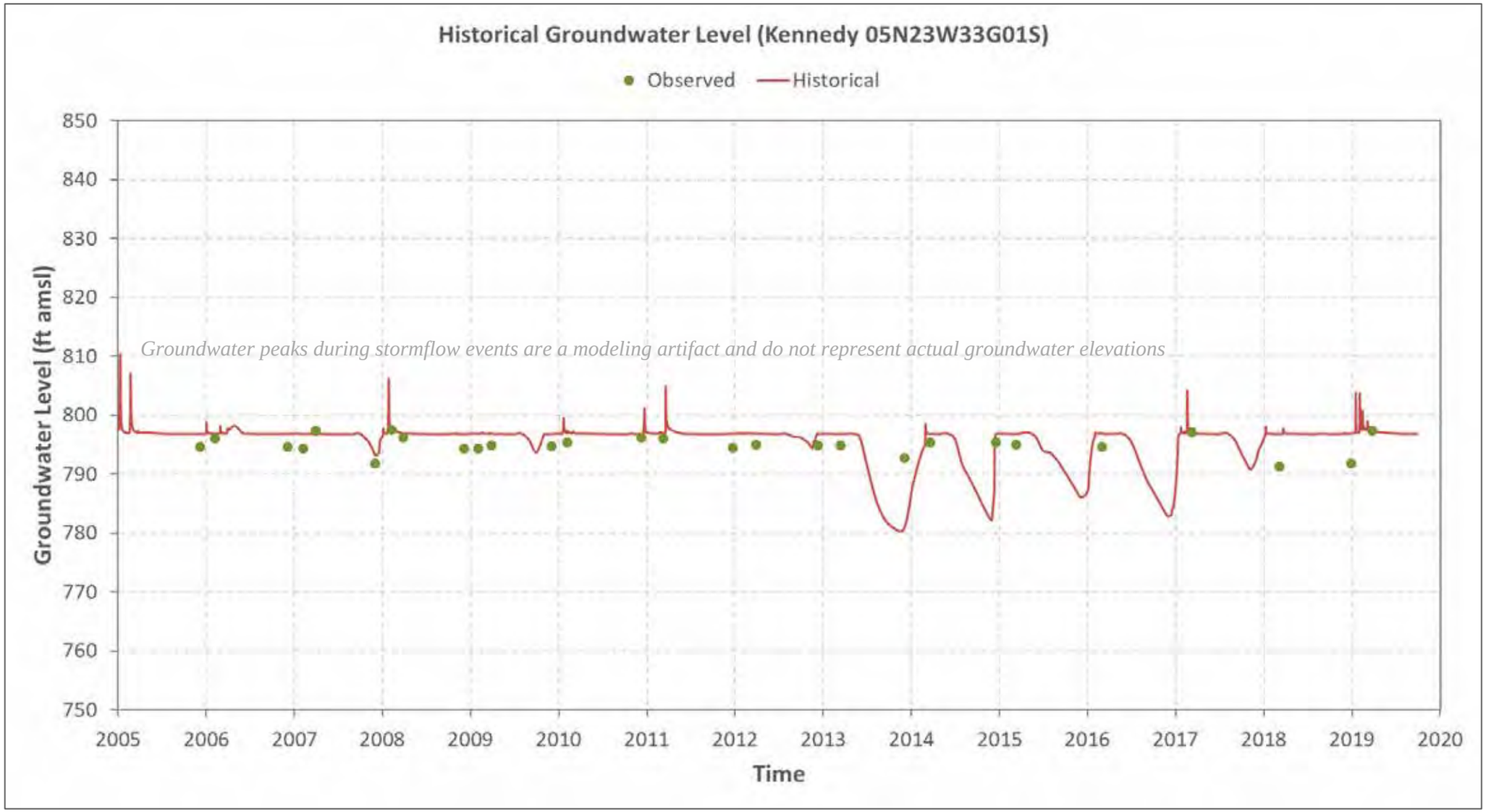


Figure 13.2b. GWL hydrograph (Historical) – Kennedy 05N23W33G01S.

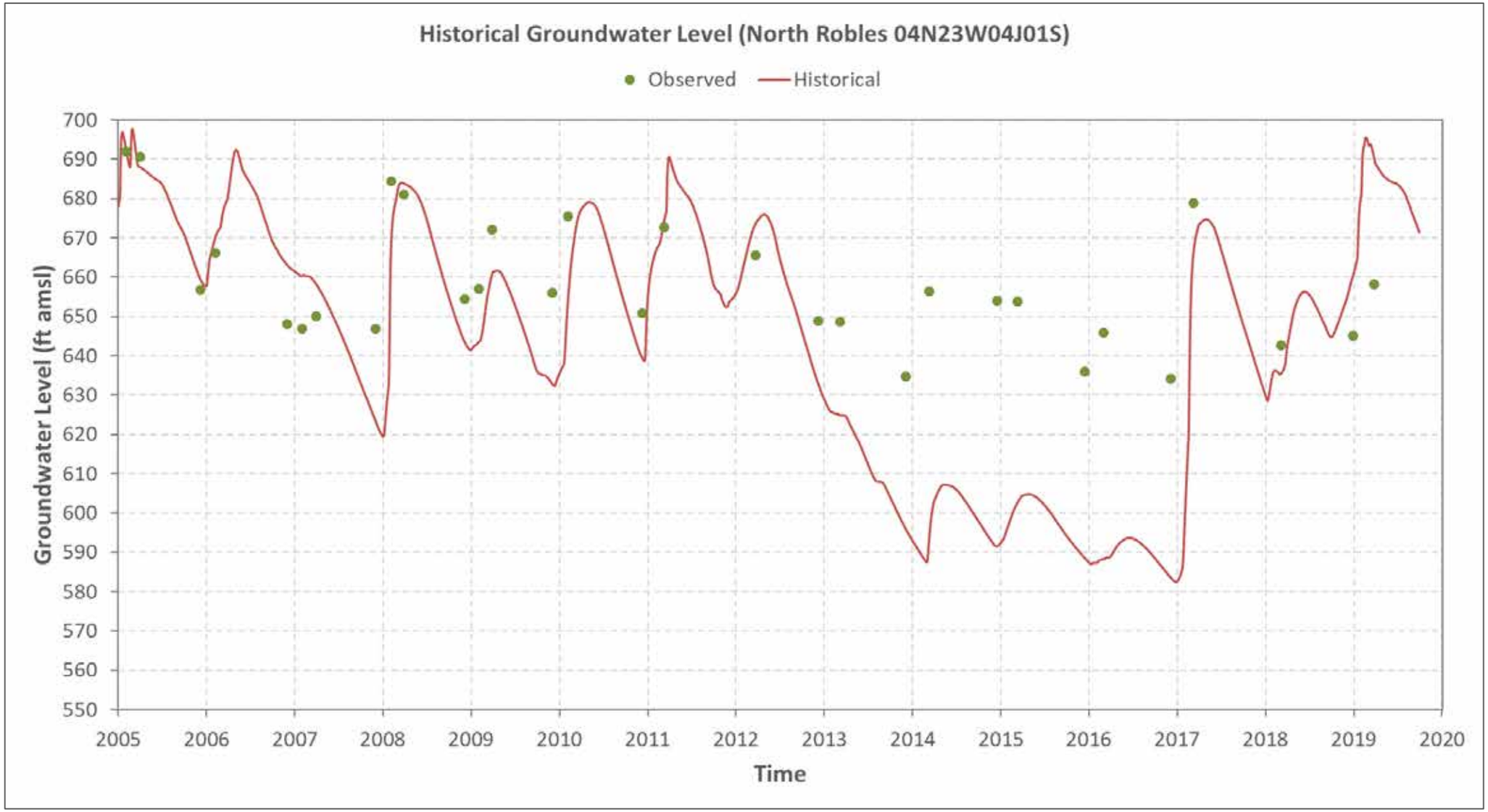


Figure 13.2c. GWL hydrograph (Historical) – North Robles 04N23W04J01S.

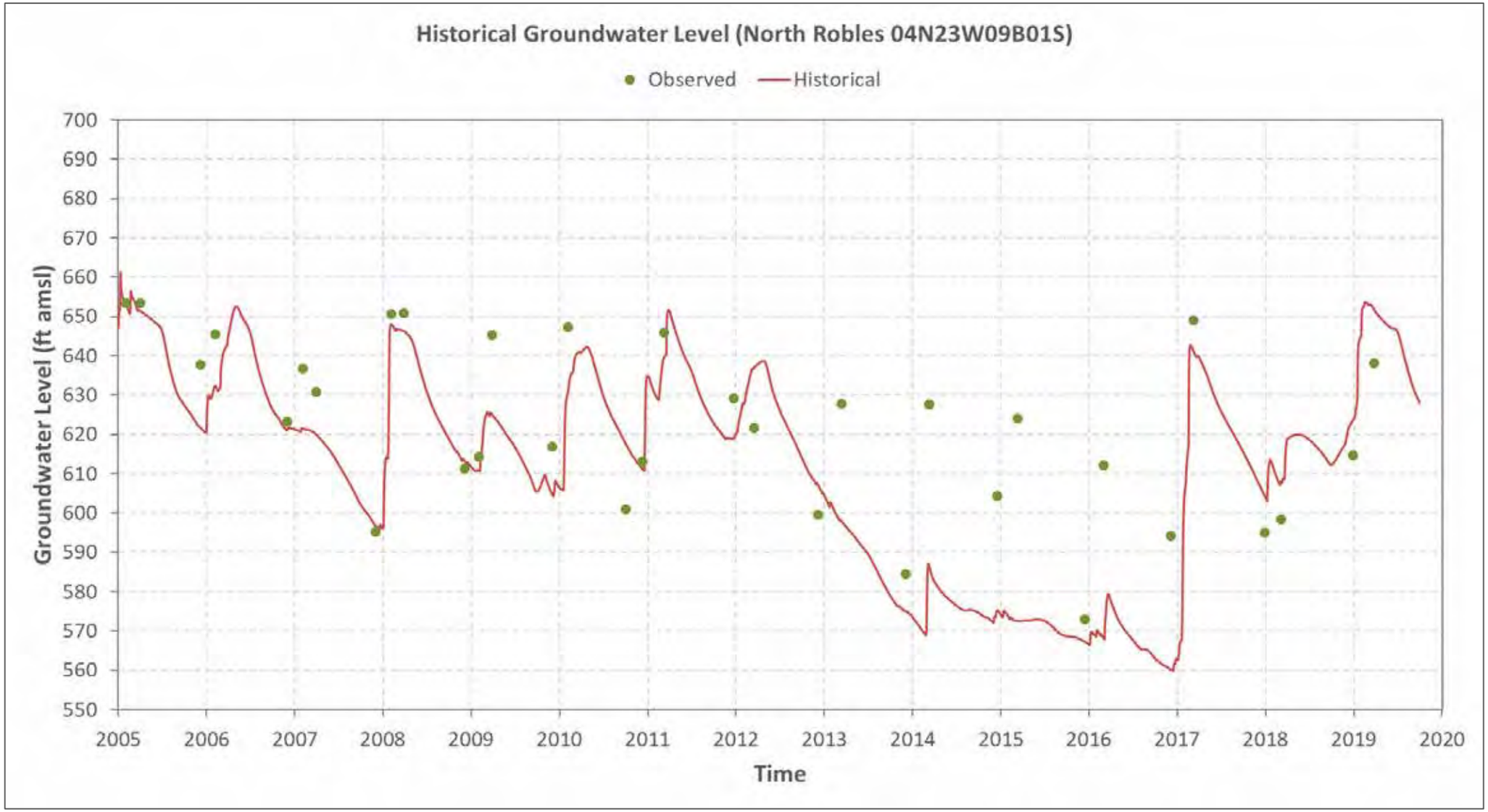


Figure 13.2d. GWL hydrograph (Historical) – North Robles 04N23W09B01S.

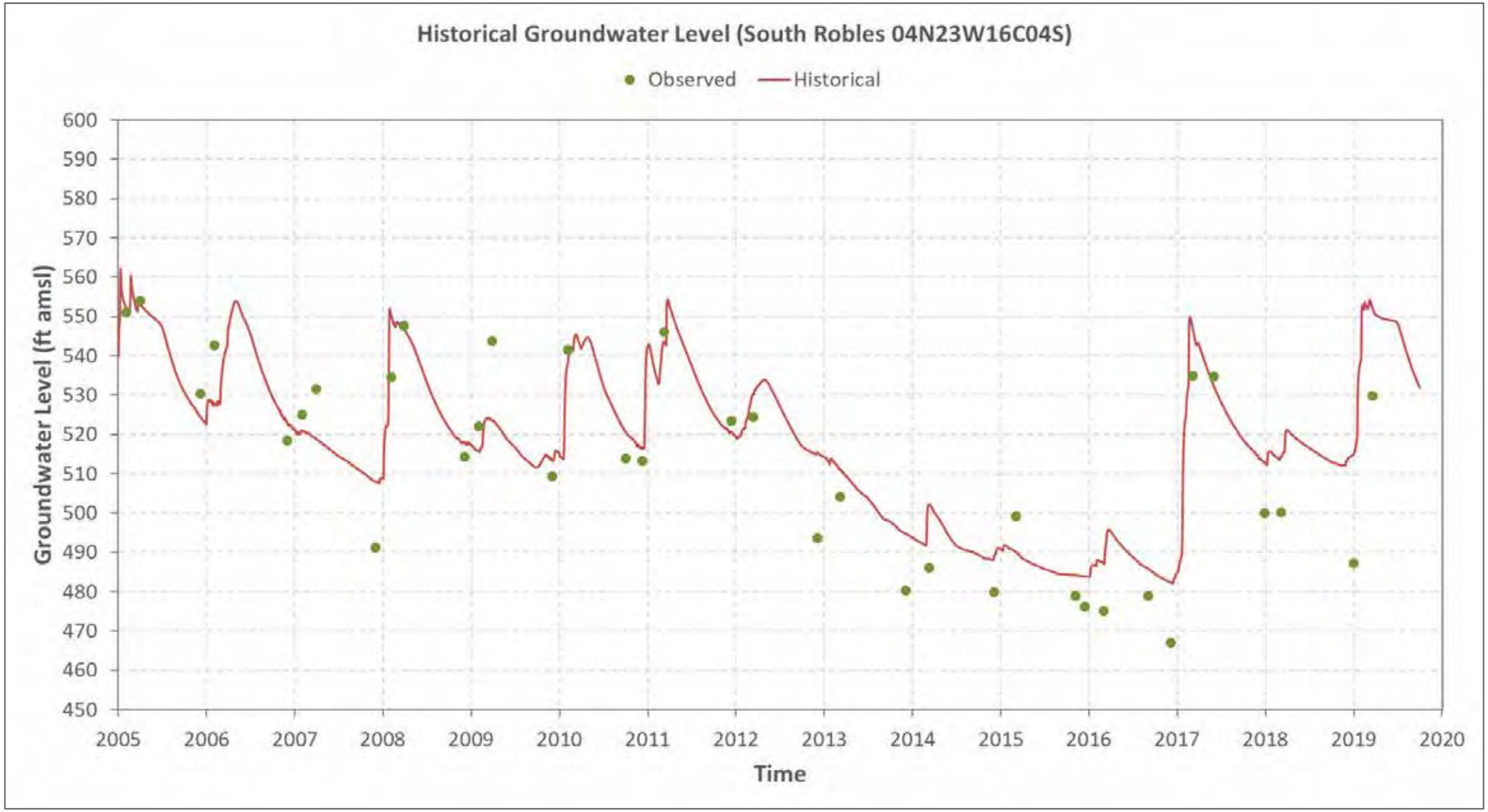


Figure 13.2e. GWL hydrograph (Historical) – South Robles 04N23W16C04S.

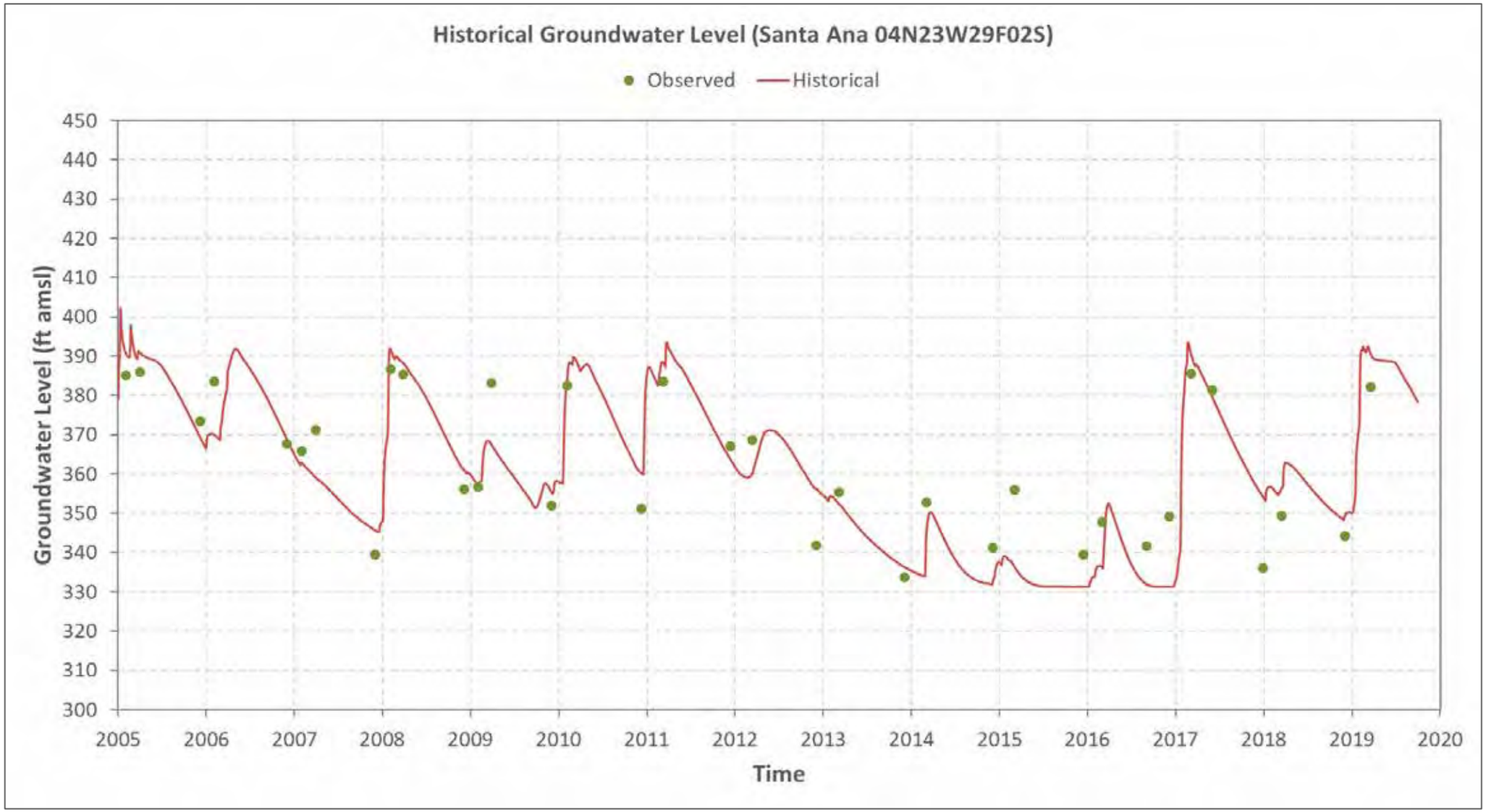


Figure 13.2f. GWL hydrograph (Historical) – Santa Ana 04N23W29F02S.

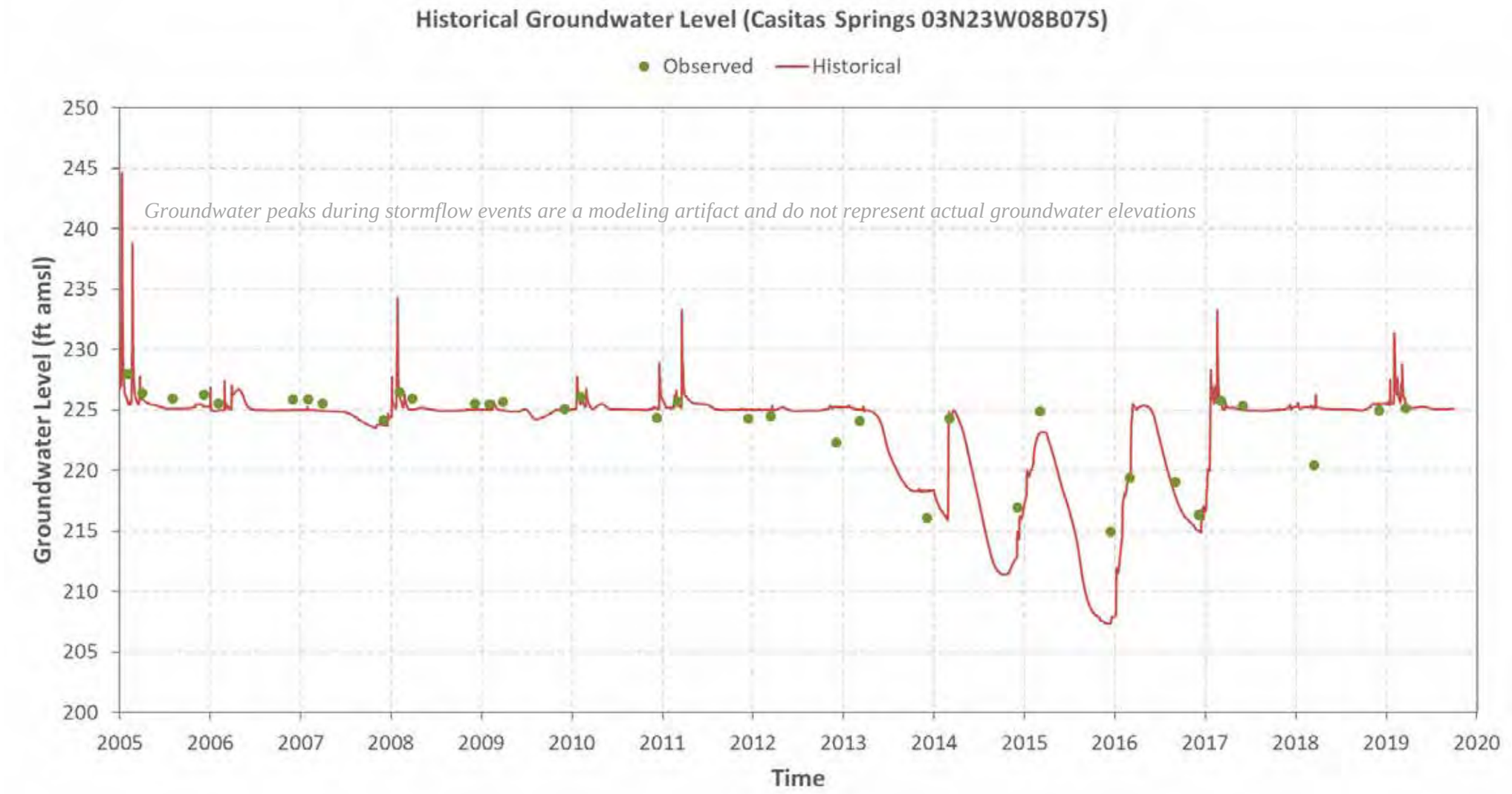


Figure 13.2g. GWL hydrograph (Historical) – Casitas Springs 03N23W08B07S

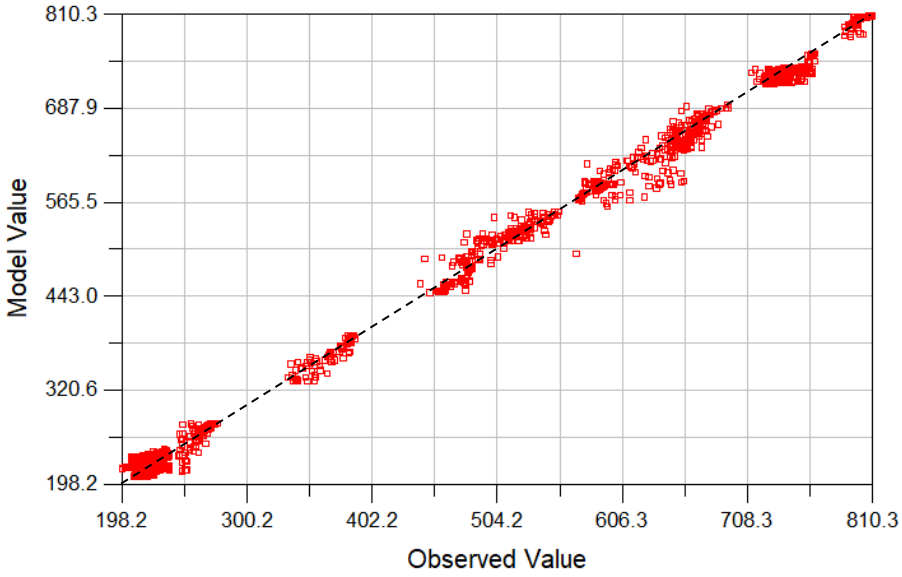


Figure 13.3. Observed and Simulated Groundwater Levels.

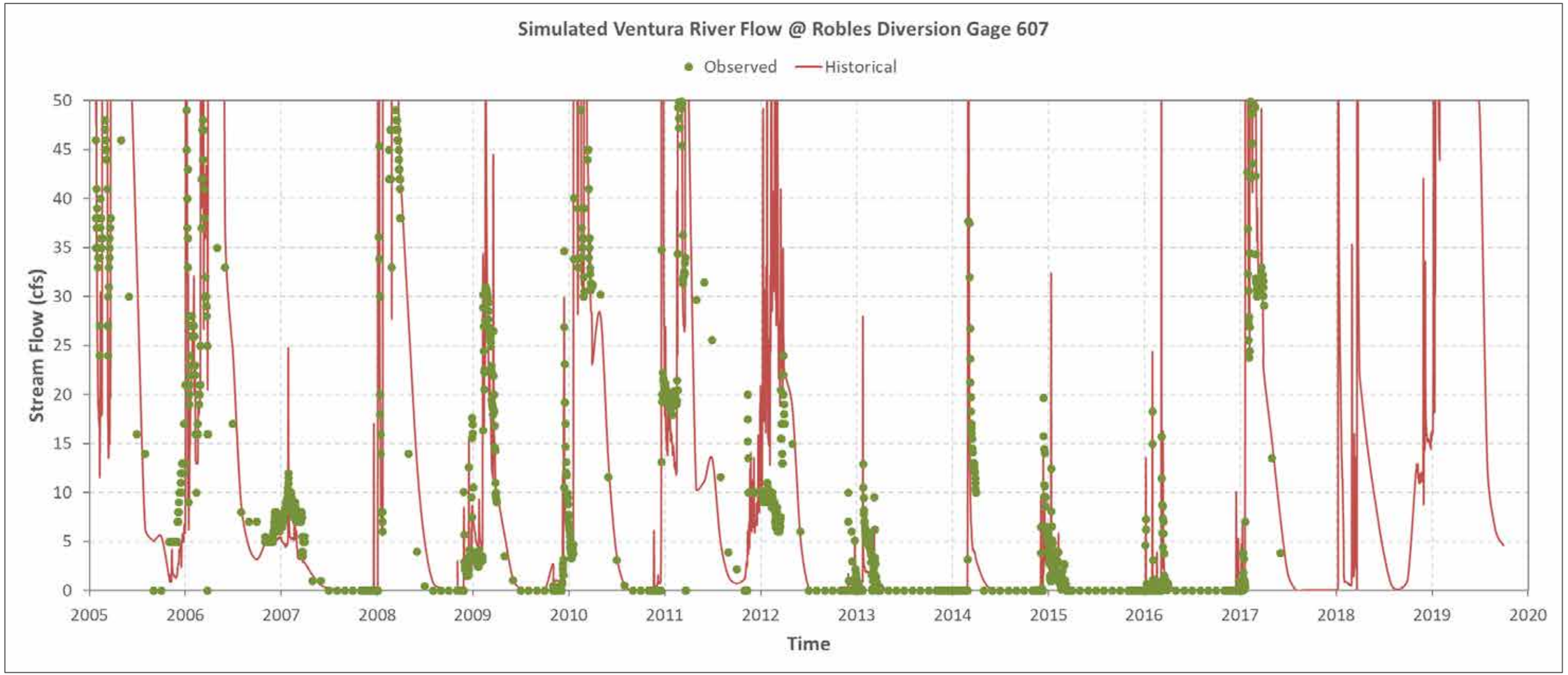


Figure 13.4a. Streamflow hydrograph (Historical) – Robles Diversion Gage 607.

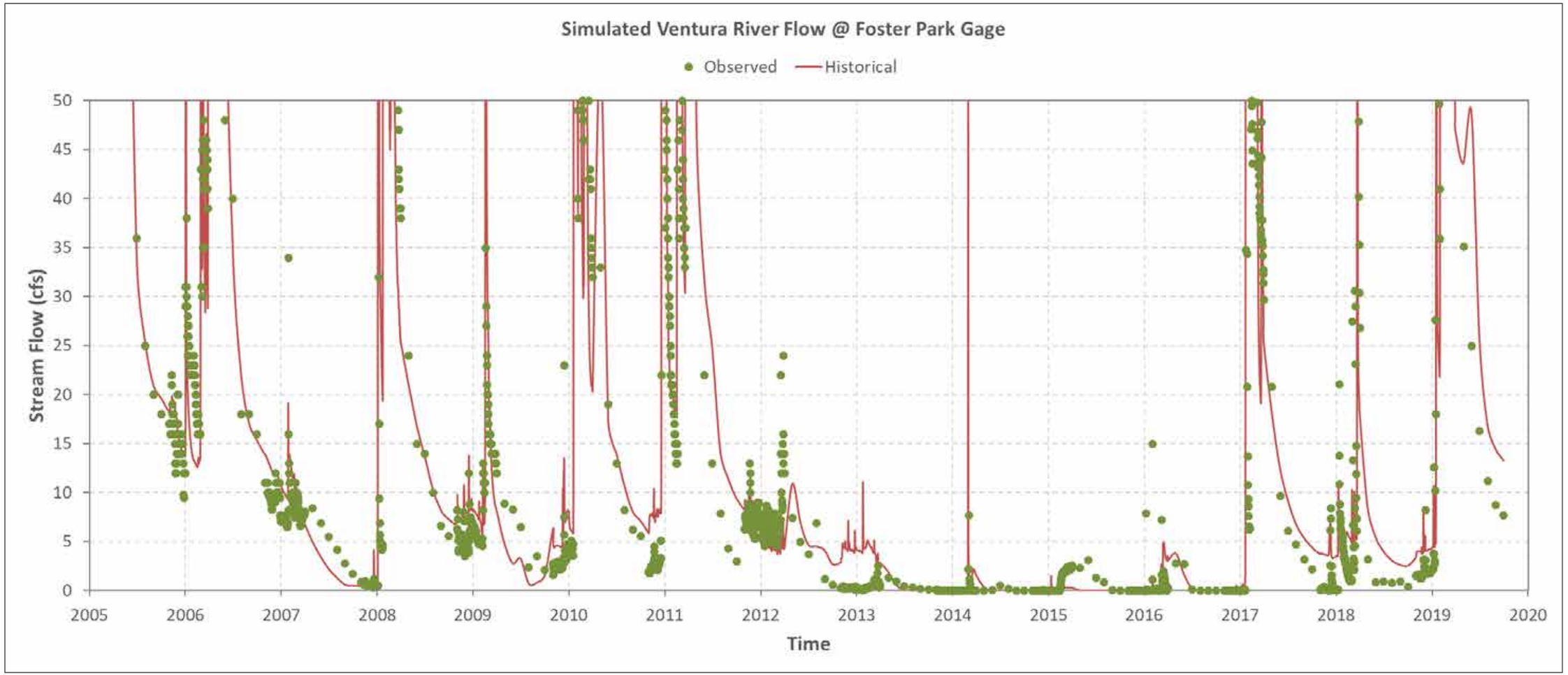


Figure 13.4b. Streamflow hydrograph (Historical) – Foster Park Gage.

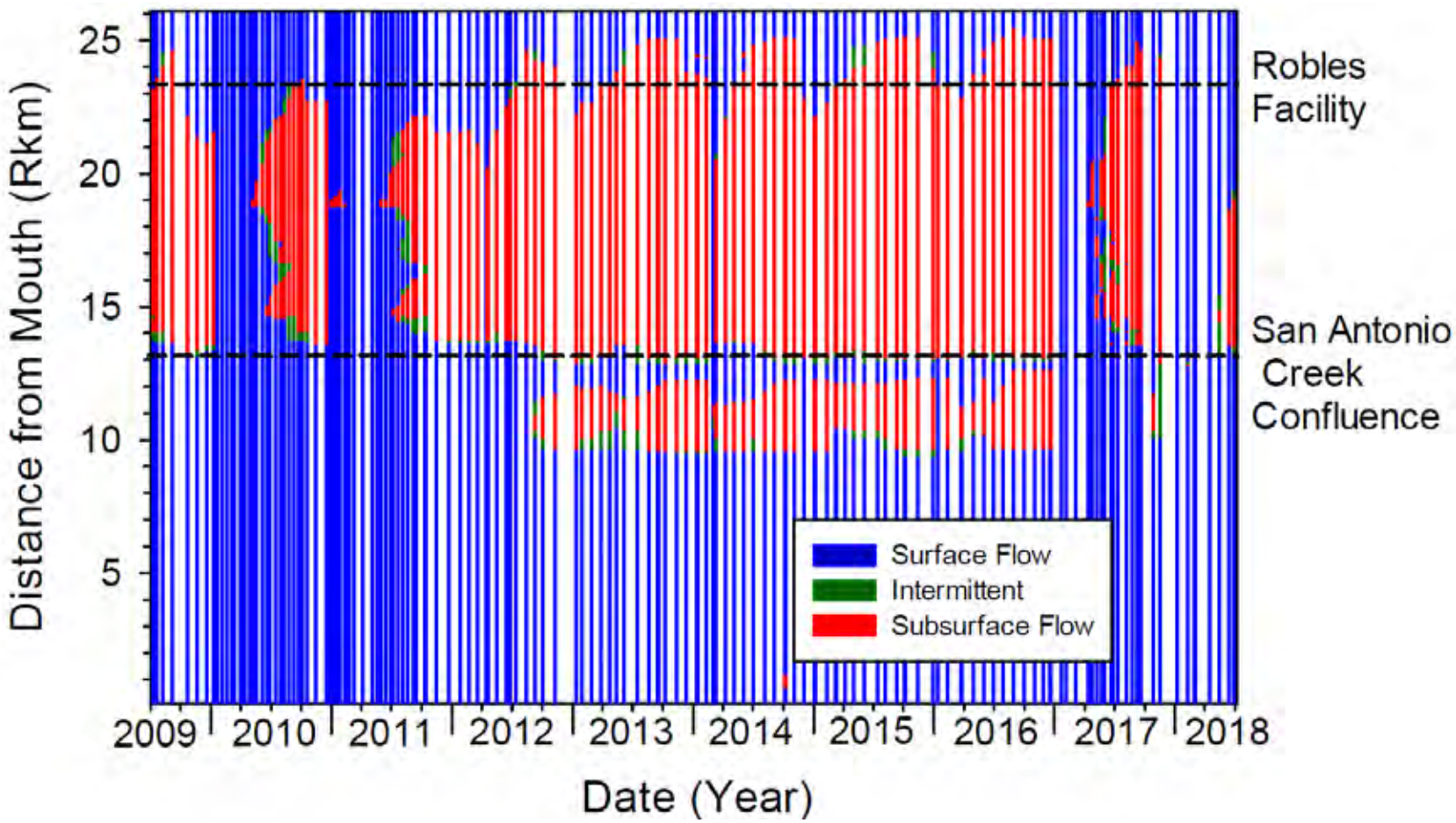
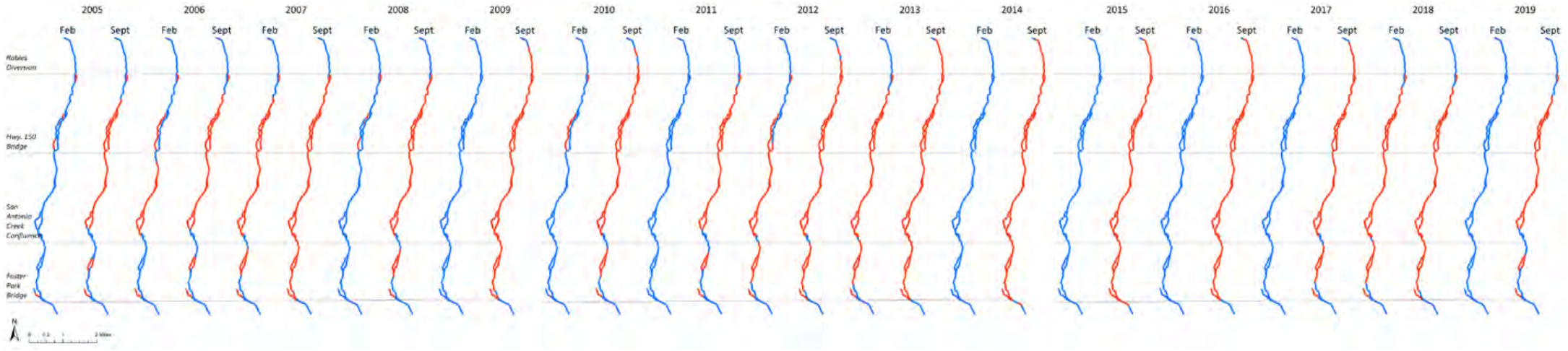


Figure 13.5. Mapping of Ventura River Flow Conditions Based on Surface Flow Monitoring from 2009 to 2018.



Please see text for discussion of model resolution at very low flow conditions, which impacts the mapping displayed in this figure.

Figure 13.6. Modeled SFR Flow Condition (February and September, 2005 – 2019). Blue Indicates Flows Greater than 0.01 cfs; Red Indicates Flows Less than 0.01 cfs.

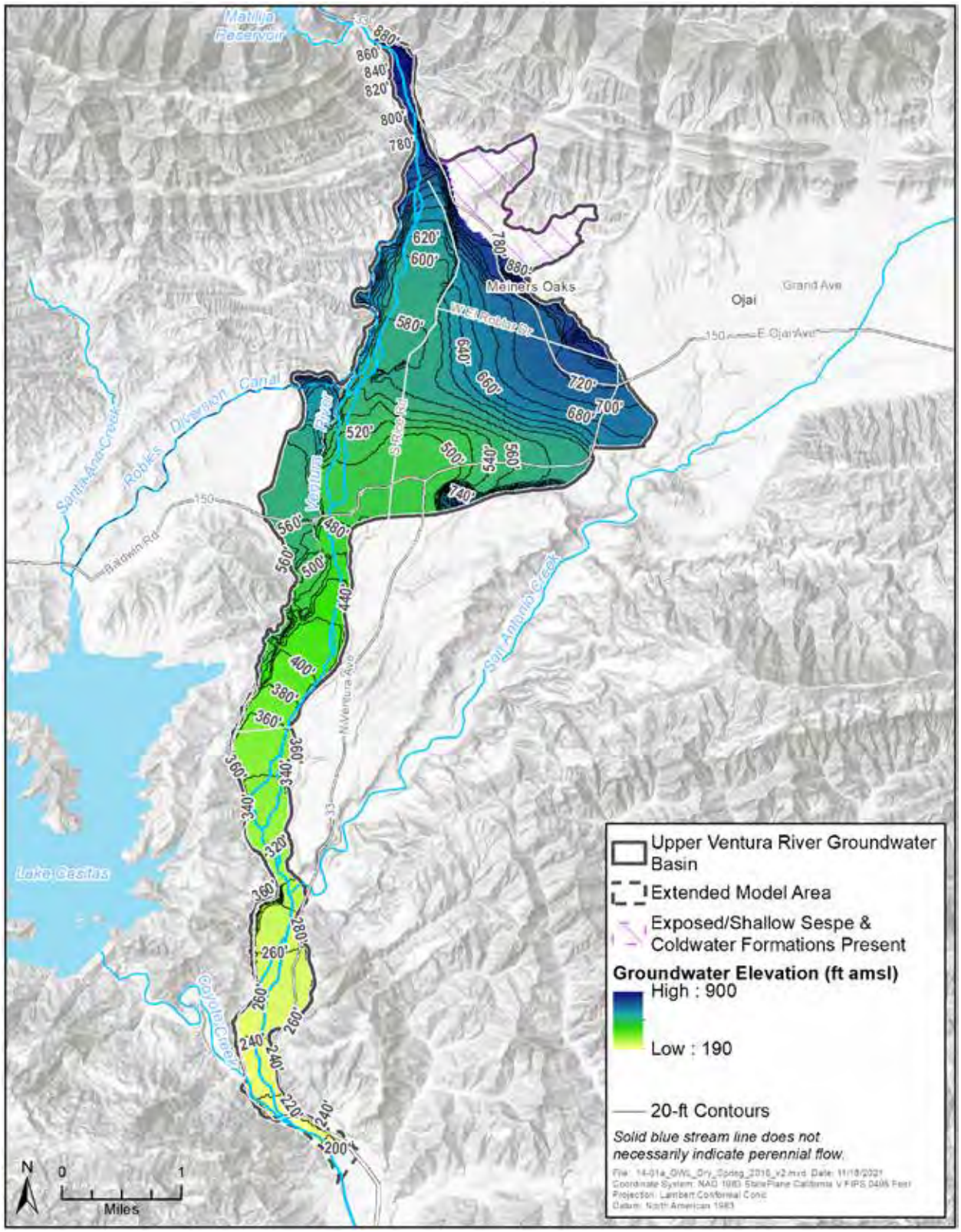


Figure 14.1a. Water Level Contours, Spring 2016.

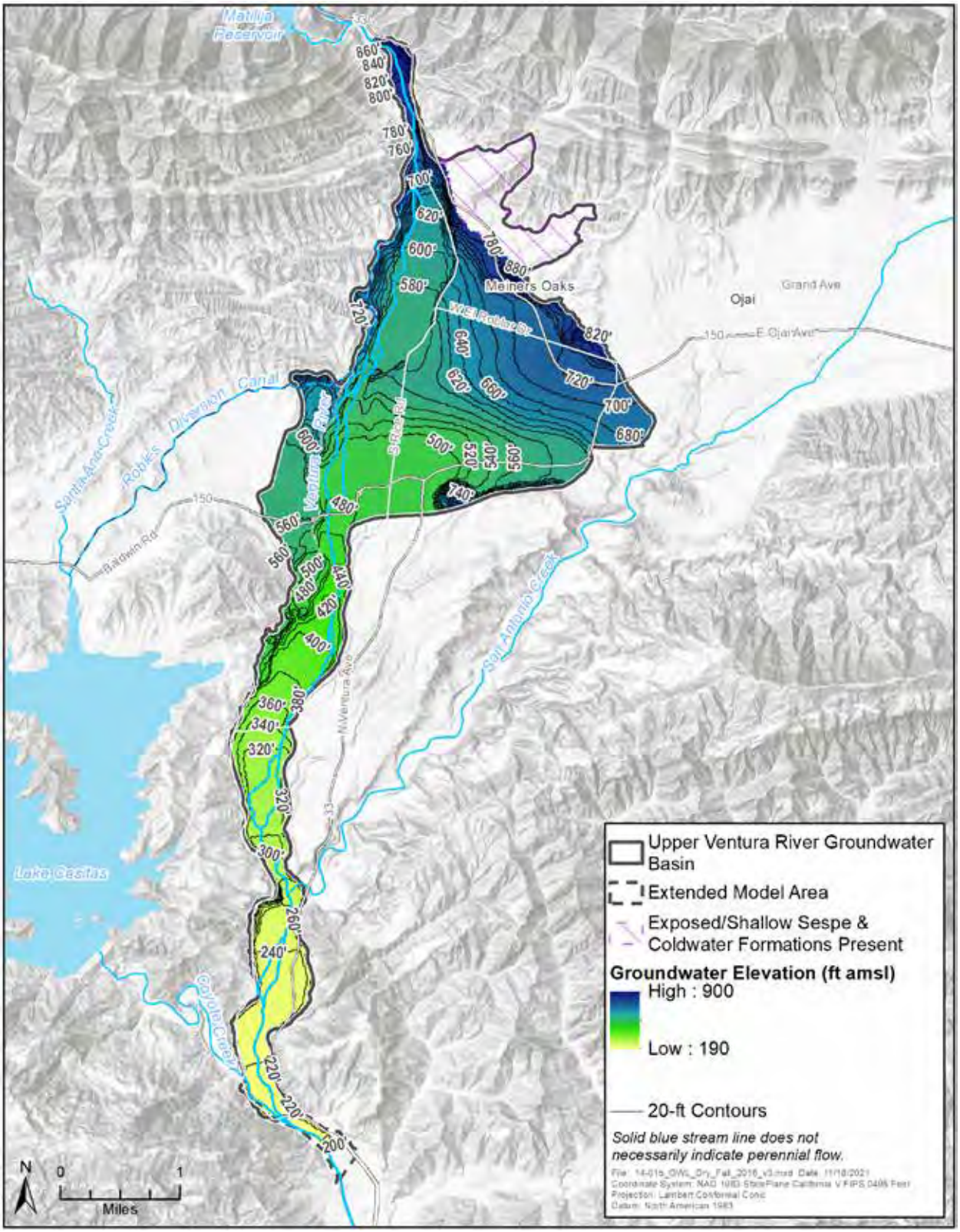


Figure 14.1b. Water Level Contours, Fall 2016.

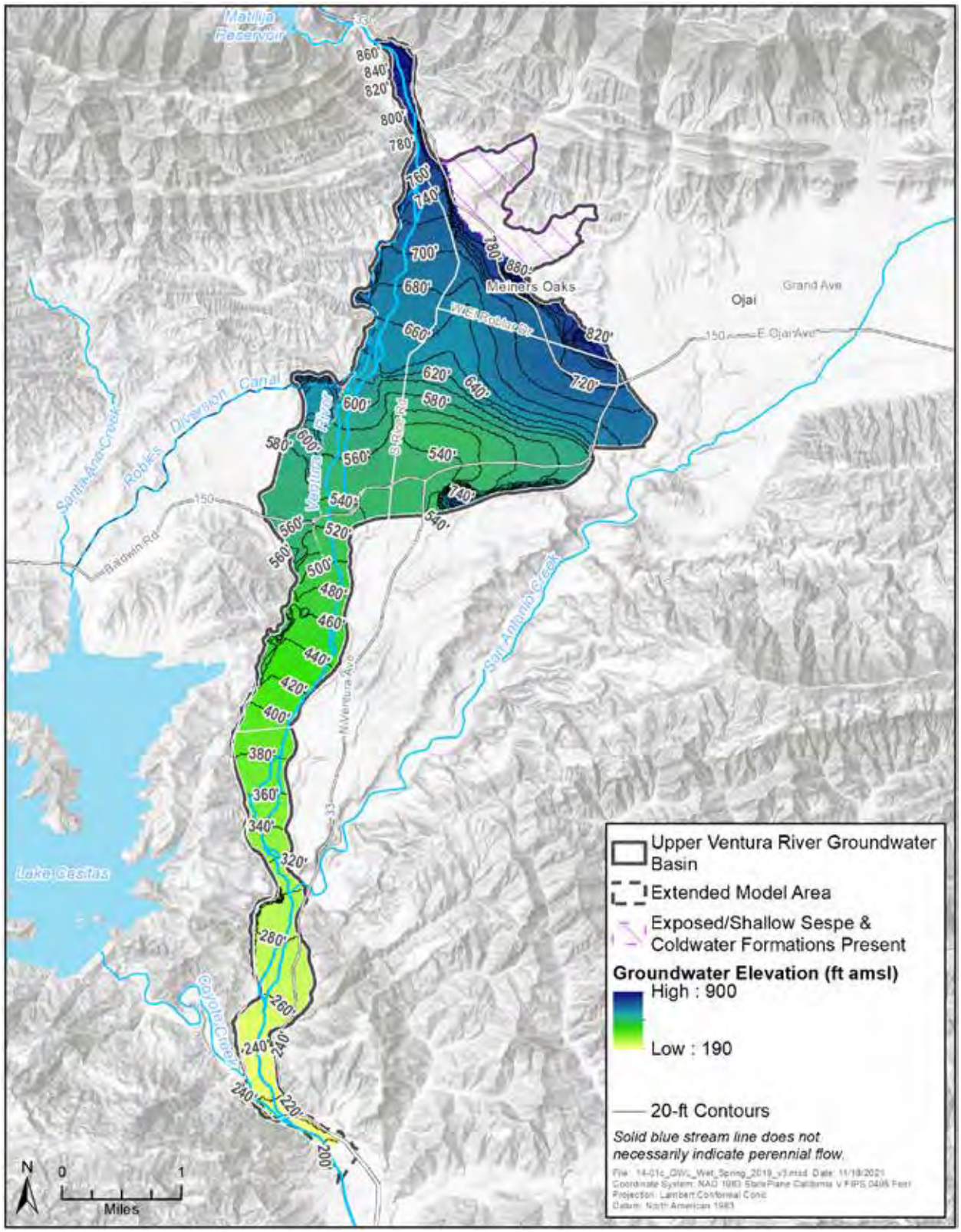


Figure 14.1c. Water Level Contours, Spring 2019.

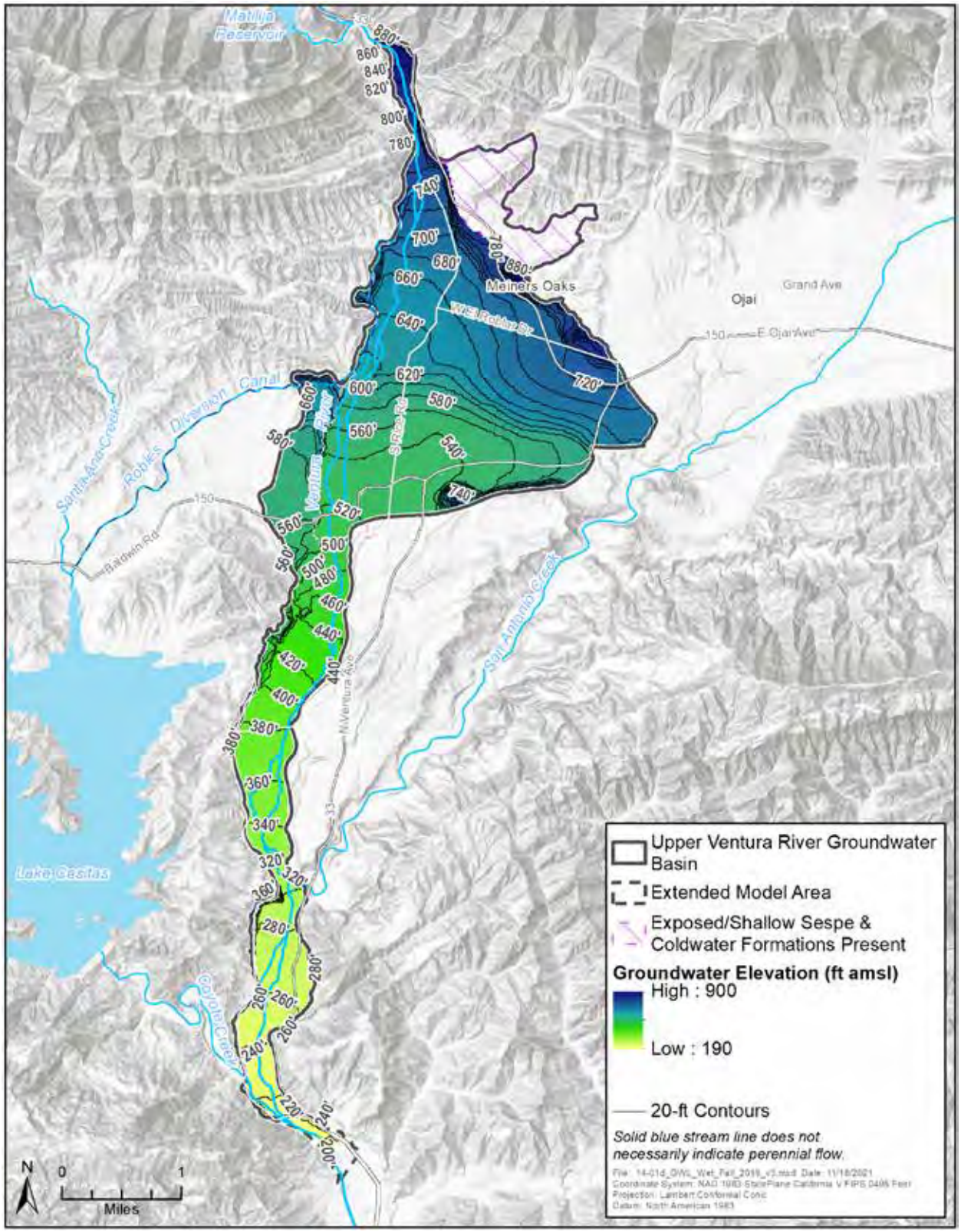


Figure 14.1d. Water Level Contours, Fall 2019.

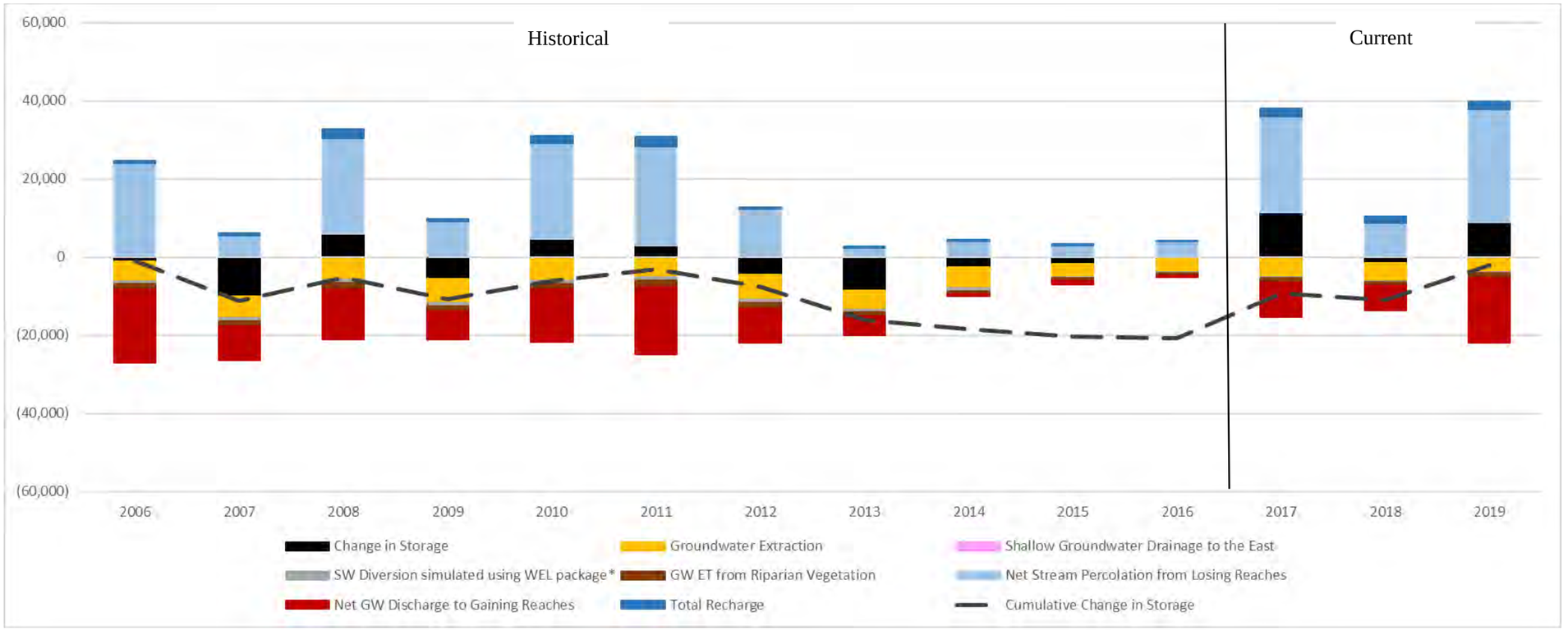


Figure 14.2. Historical and Current Groundwater Inflows and Outflows to/from UVRGB Basin (acre-feet per year).

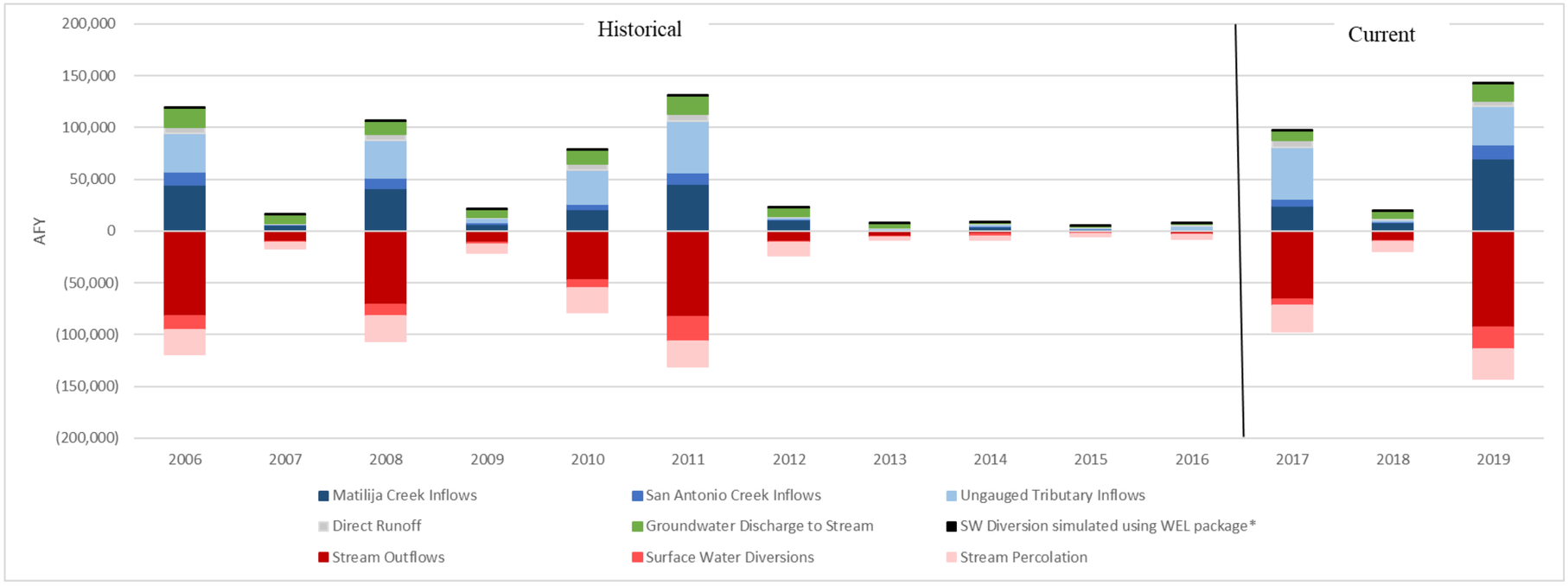


Figure 14.3. Historical and Current Surface Water Inflows and Outflows to/from UVRGB Basin (acre-feet per year).

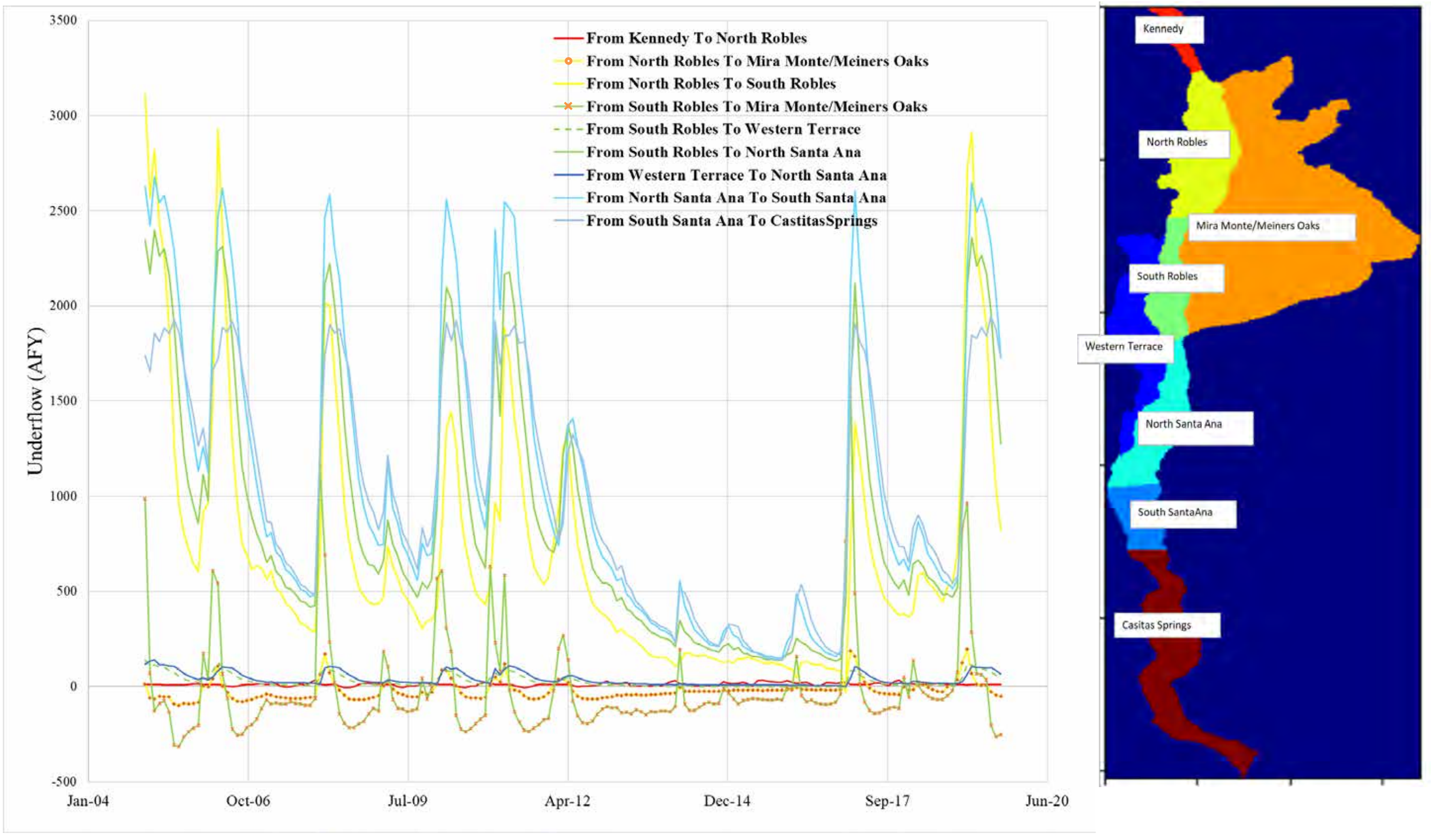


Figure 14.4. Underflows from and within Hydrogeologic Areas.

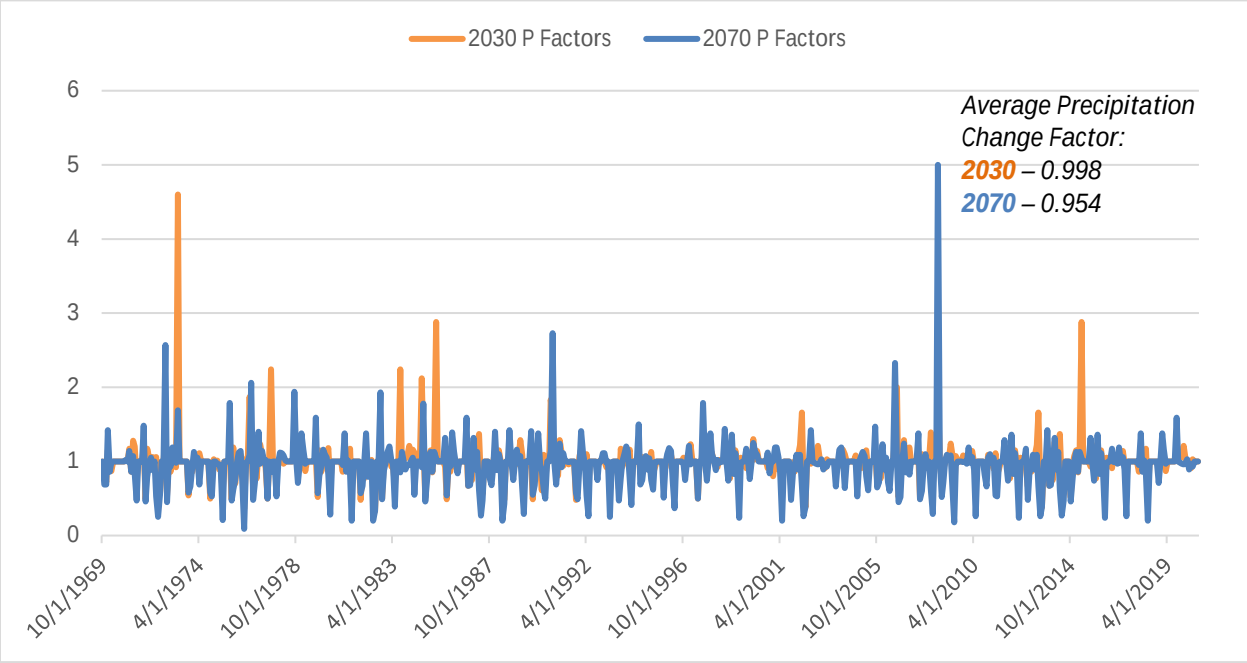


Figure 15.1a. Monthly Precipitation Scaling Factors for Climate Change Scenarios.

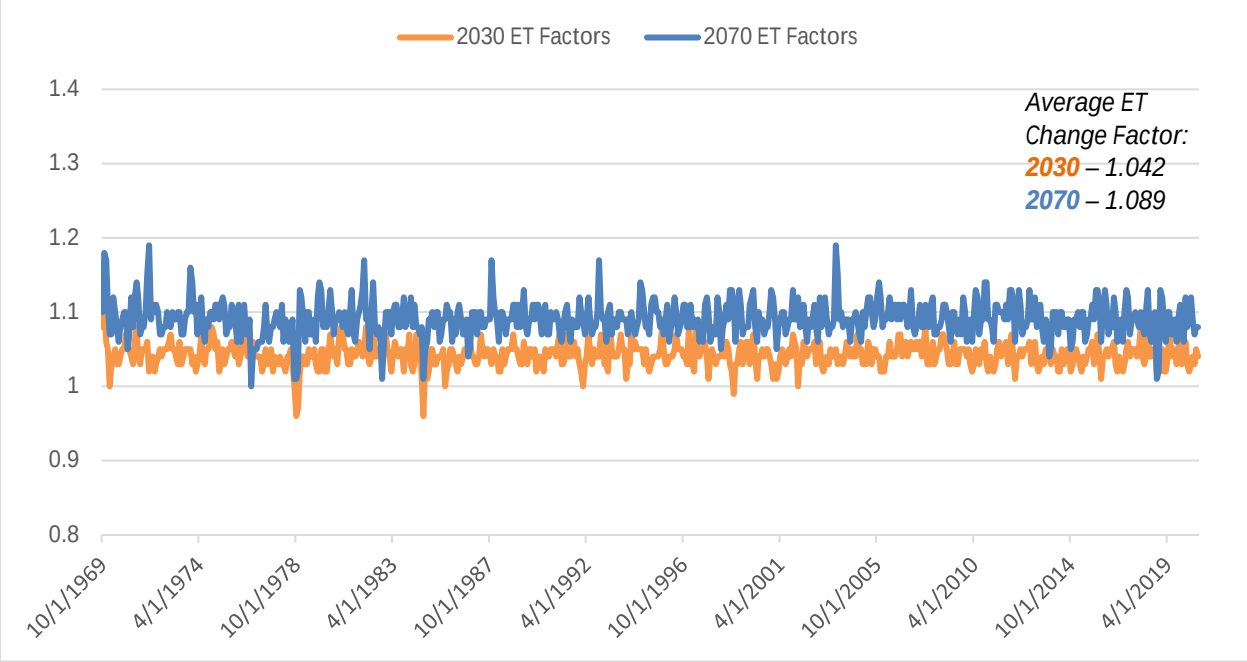


Figure 15.1b. Monthly Evapotranspiration Scaling Factors for Climate Change Scenarios.

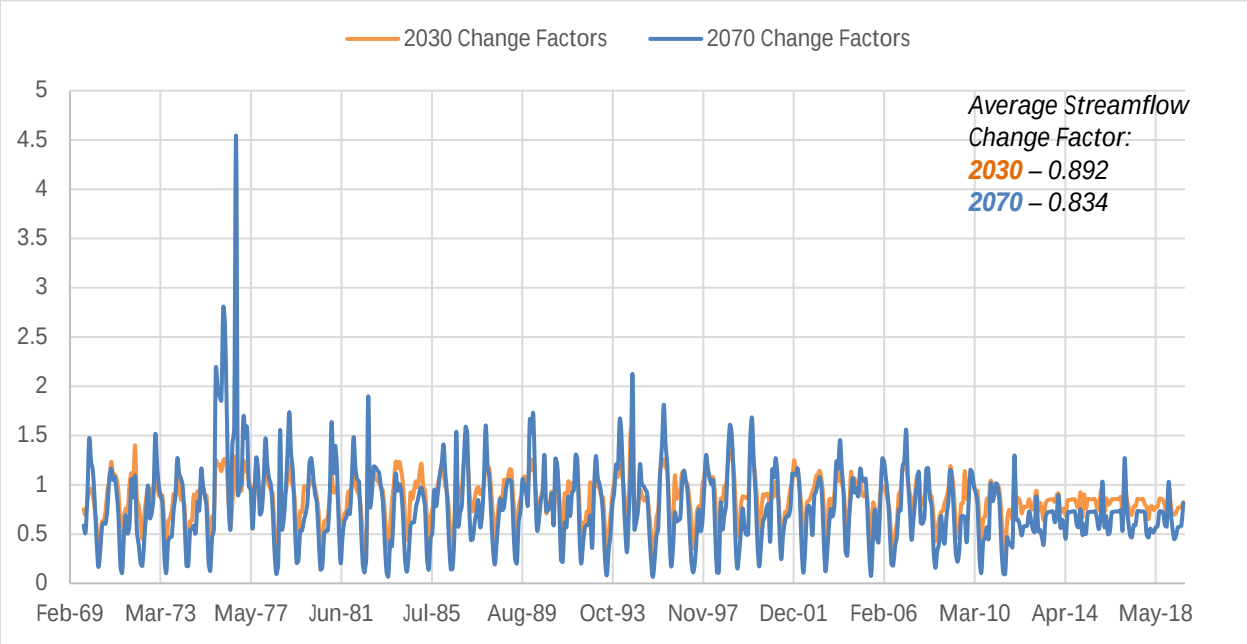


Figure 15.2. Streamflow Change Factors for Climate Change Scenarios.

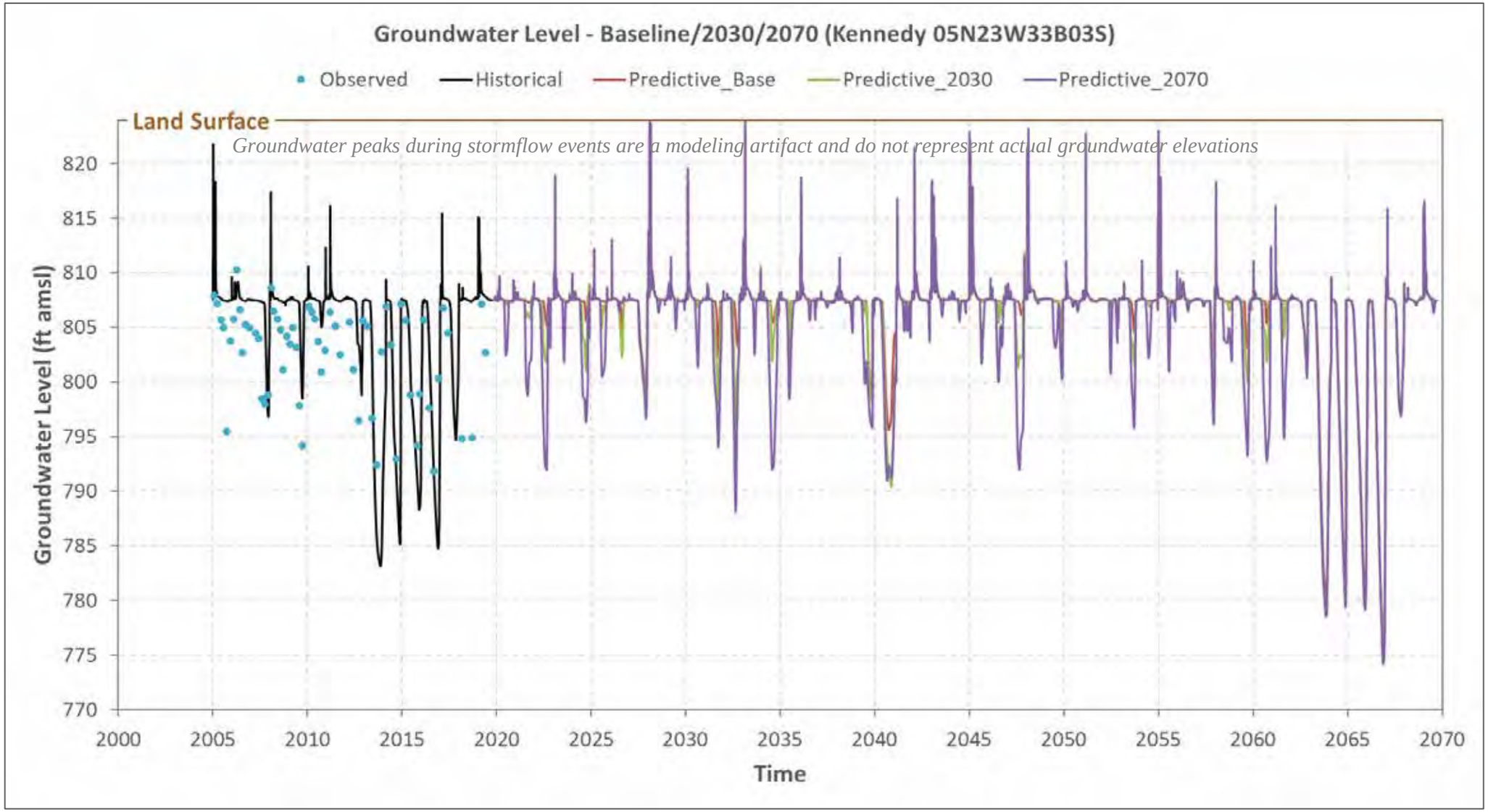


Figure 15.3a. GWL hydrograph (Baseline, 2030, 2070) – Kennedy 05N23W33B03S.

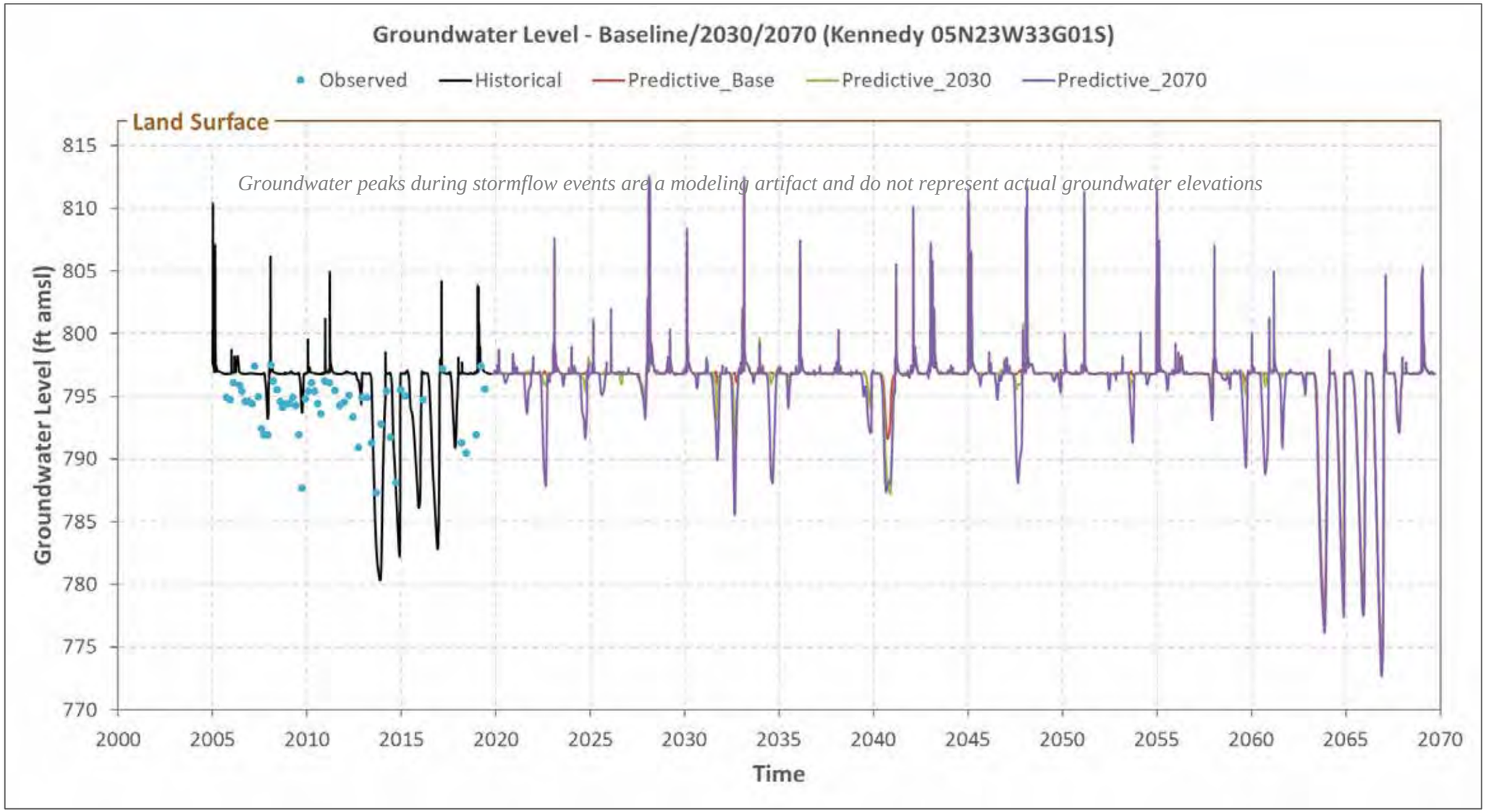


Figure 15.3b. GWL hydrograph (Baseline, 2030, 2070) – Kennedy 05N23W33G01S.

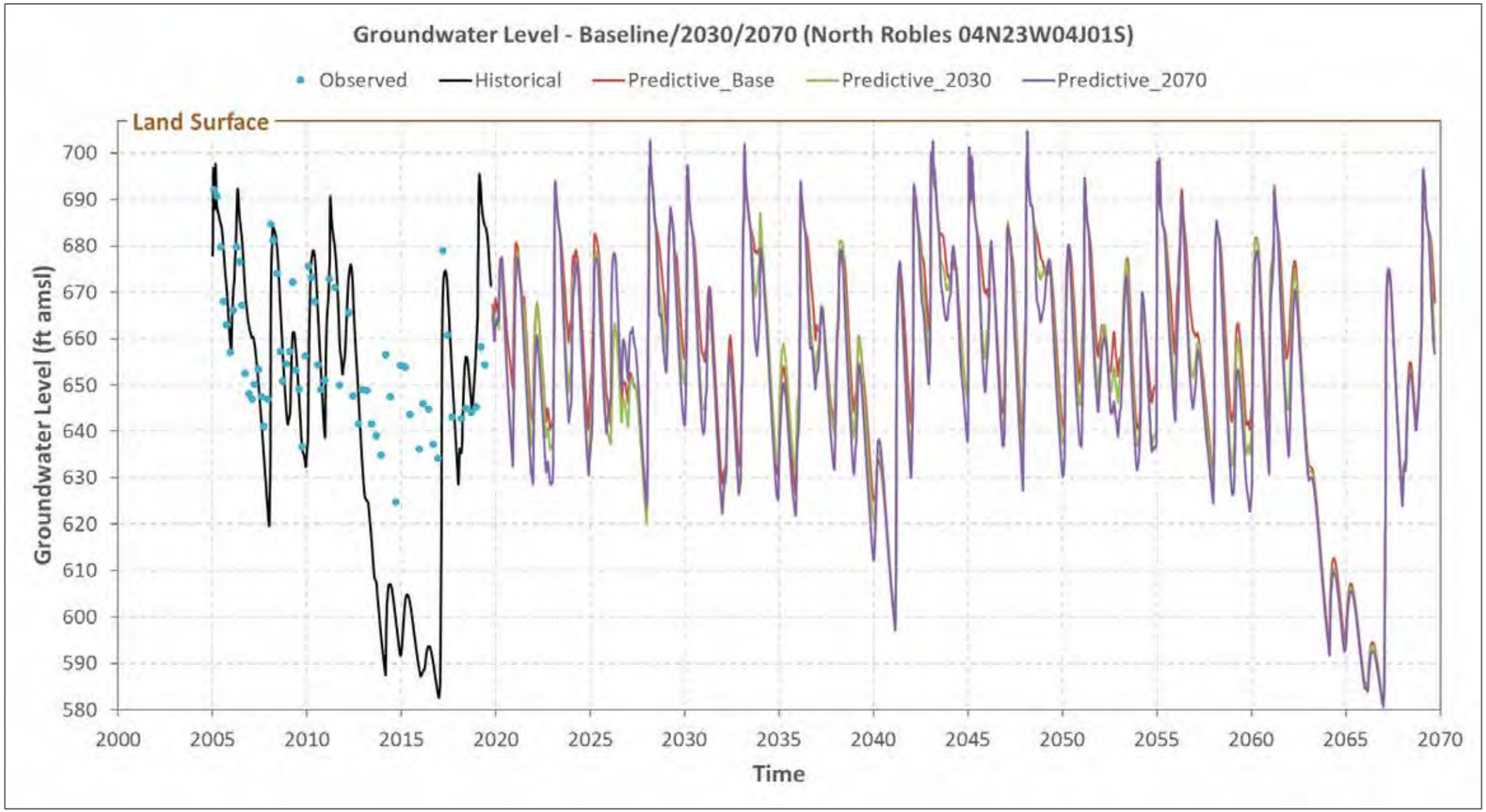


Figure 15.3c. GWL hydrograph (Baseline, 2030, 2070) – North Robles 04N23W04J01S.

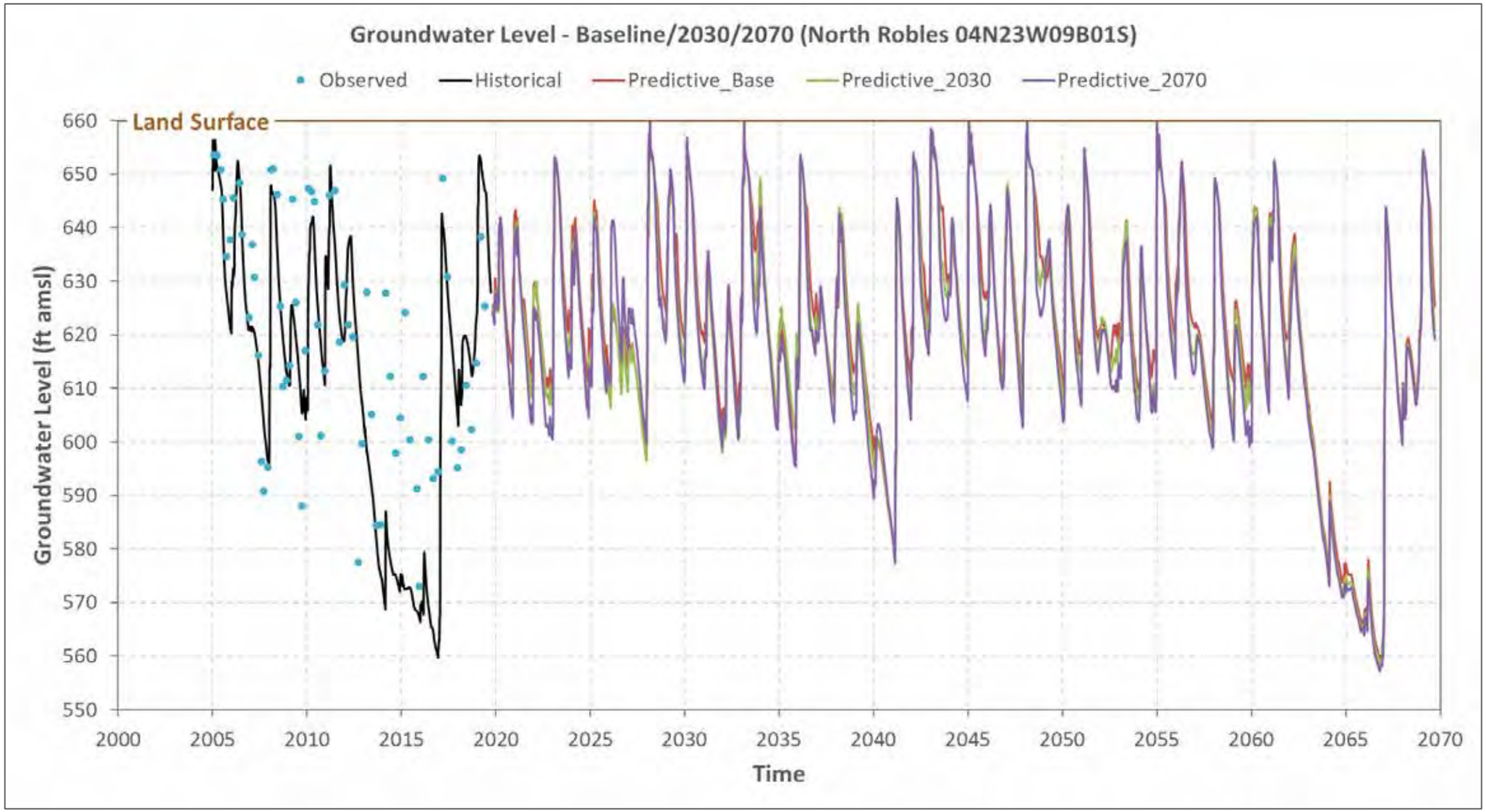


Figure 15.3d. GWL hydrograph (Baseline, 2030, 2070) – North Robles 04N23W09B01S.

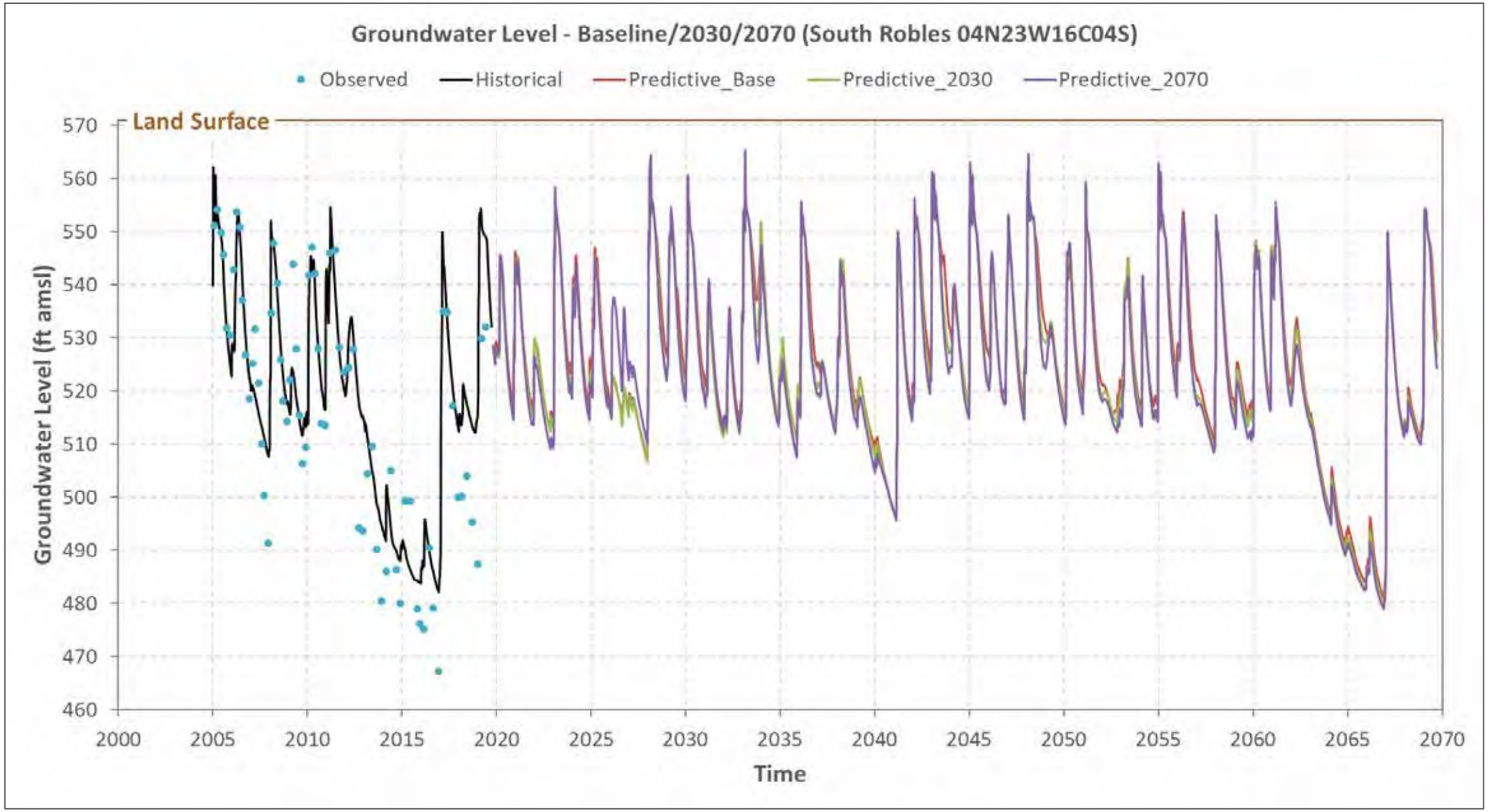


Figure 15.3e. GWL hydrograph (Baseline, 2030, 2070) – South Robles 04N23W16C04S.

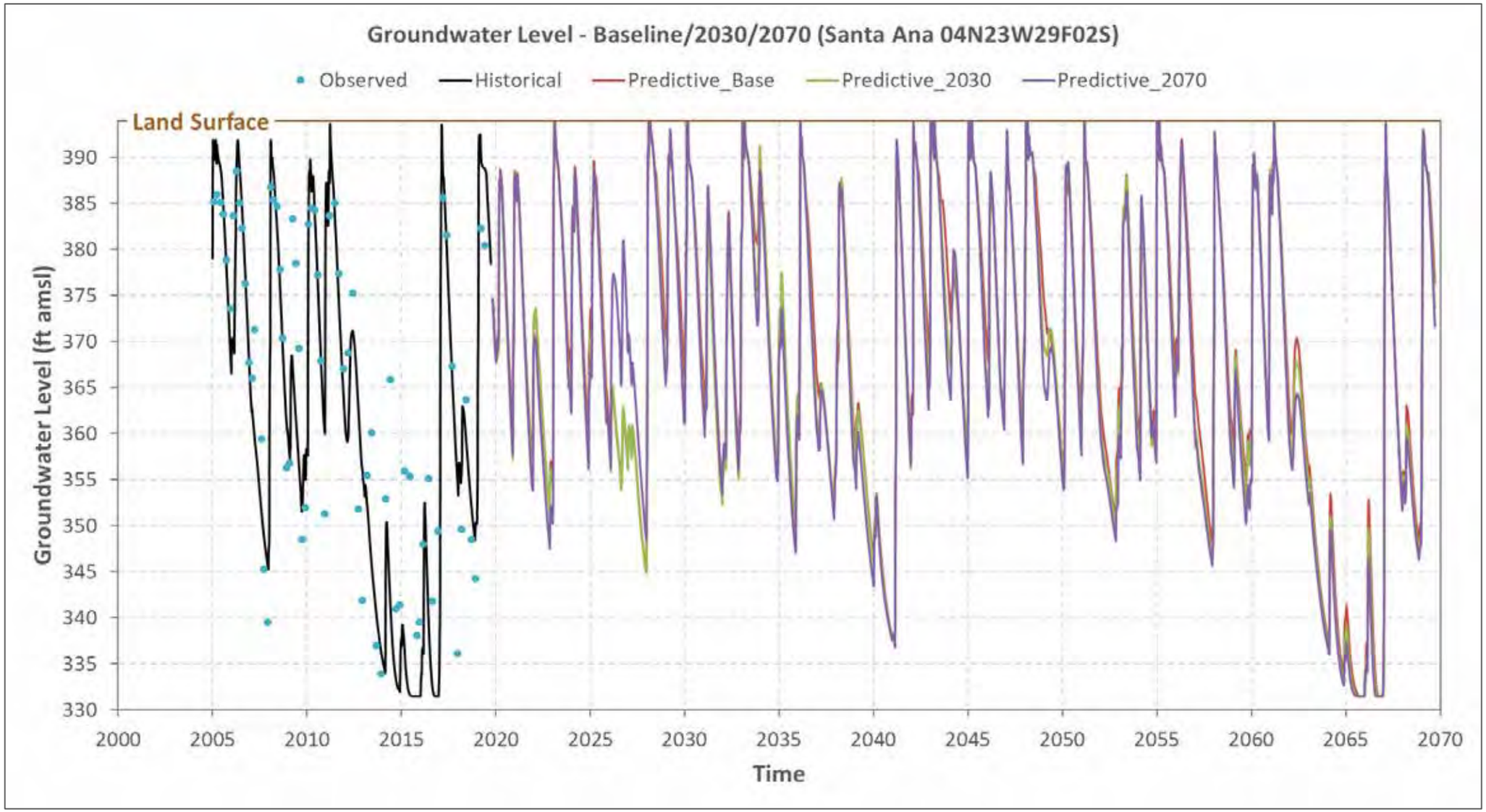


Figure 15.3f. GWL hydrograph (Baseline, 2030, 2070) – Santa Ana 04N23W29F02S.

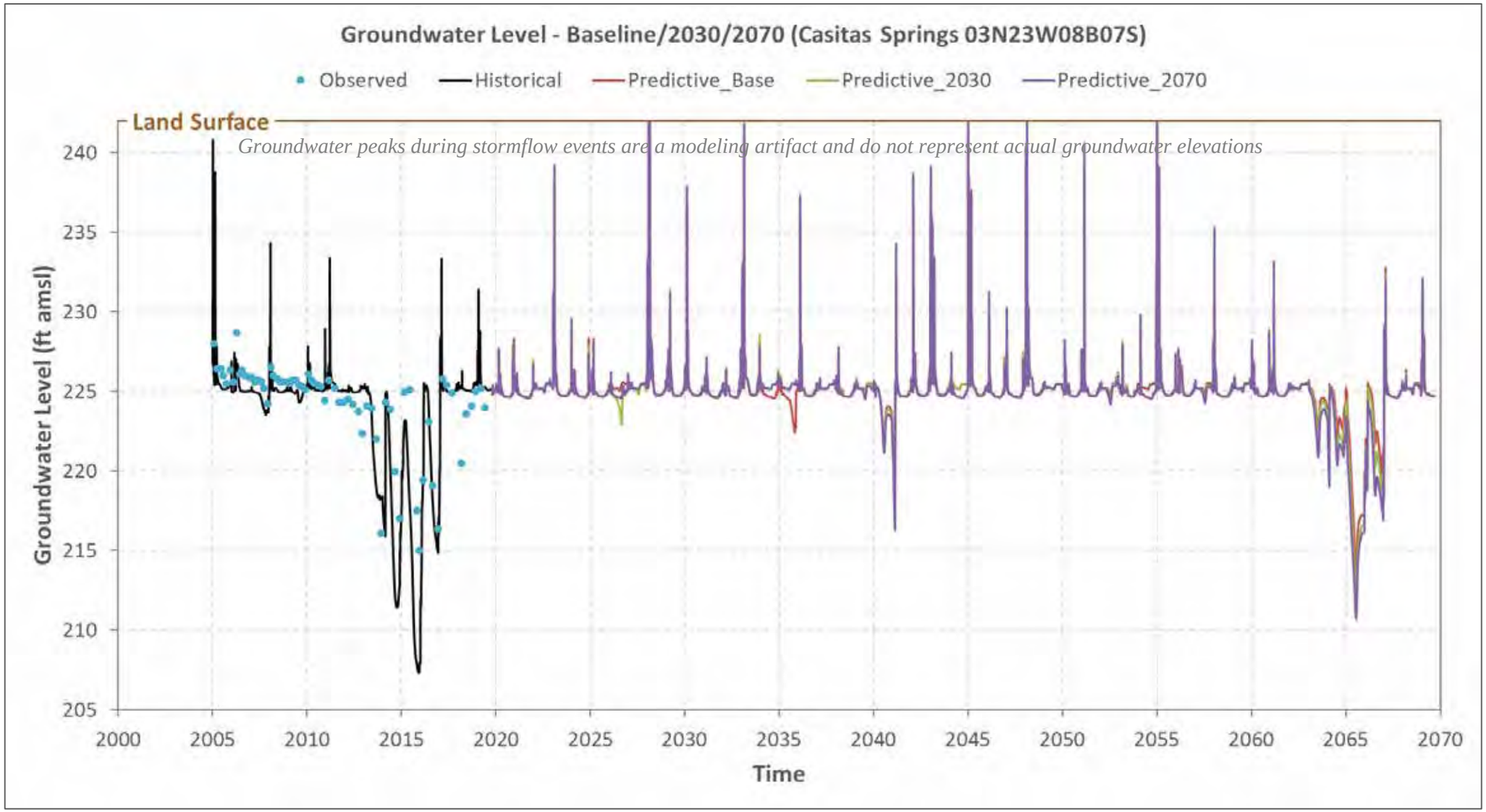


Figure 15.3g. GWL hydrograph (Baseline, 2030, 2070) – Casitas Springs 03N23W08B07S.

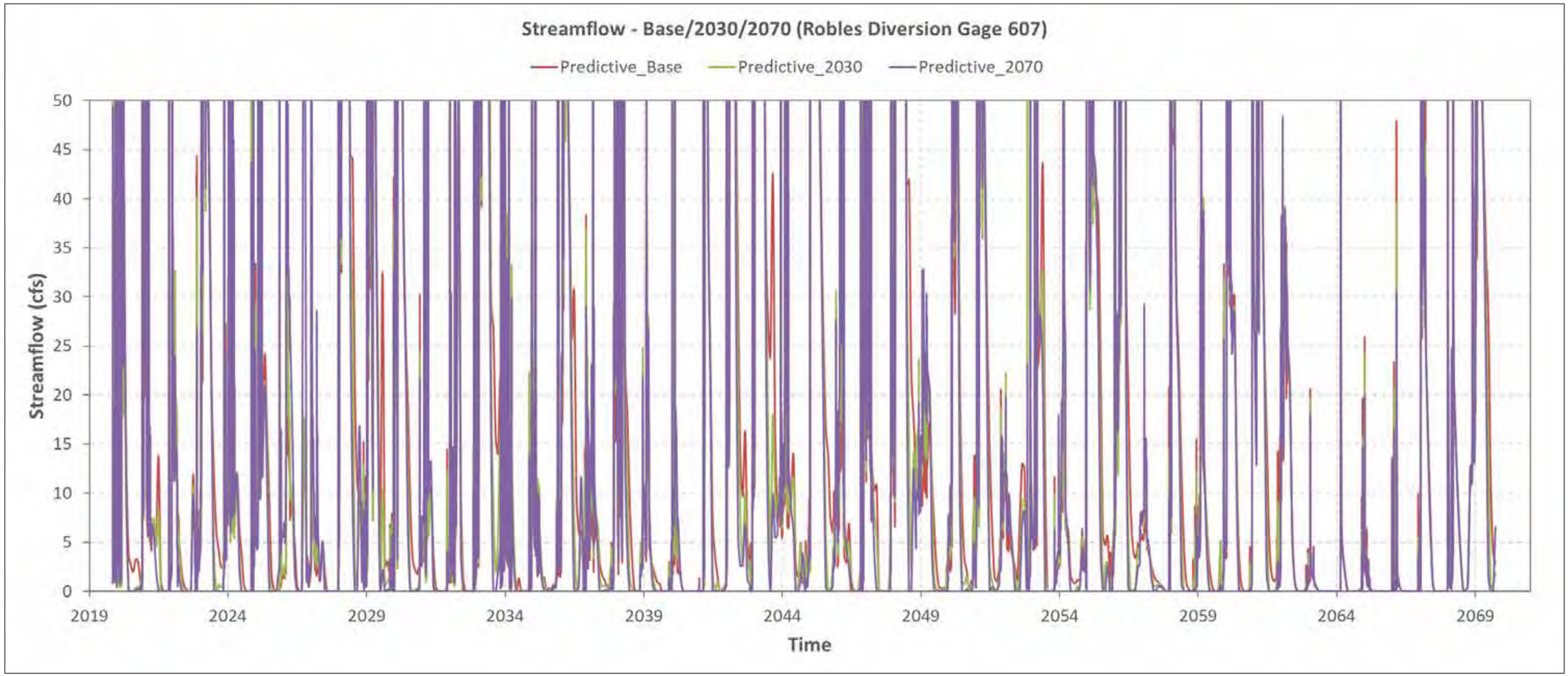


Figure 15.4a. Streamflow hydrograph (Baseline, 2030, 2070) – Robles Diversion Gage 607.

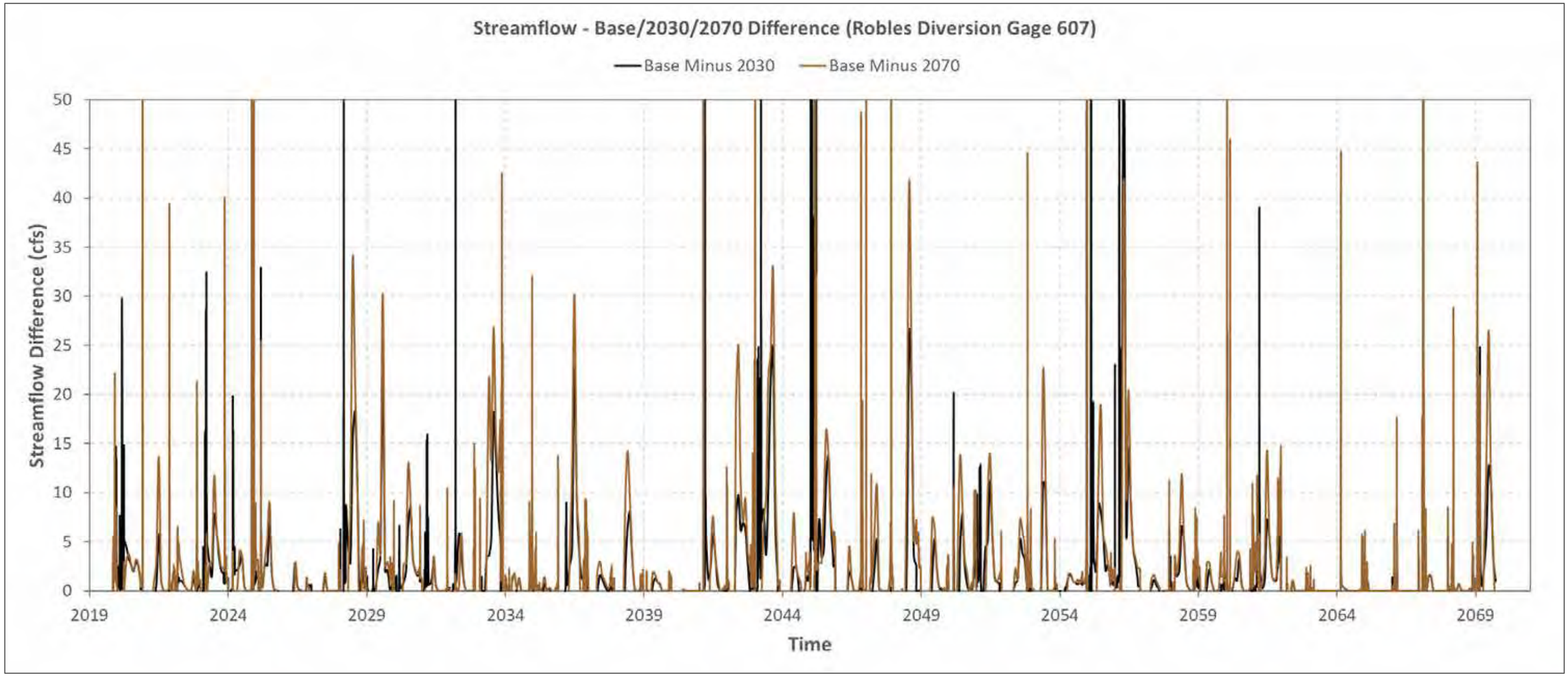


Figure 15.4b. Streamflow hydrograph difference (Baseline, 2030, 2070) – Robles Diversion Gage 607.

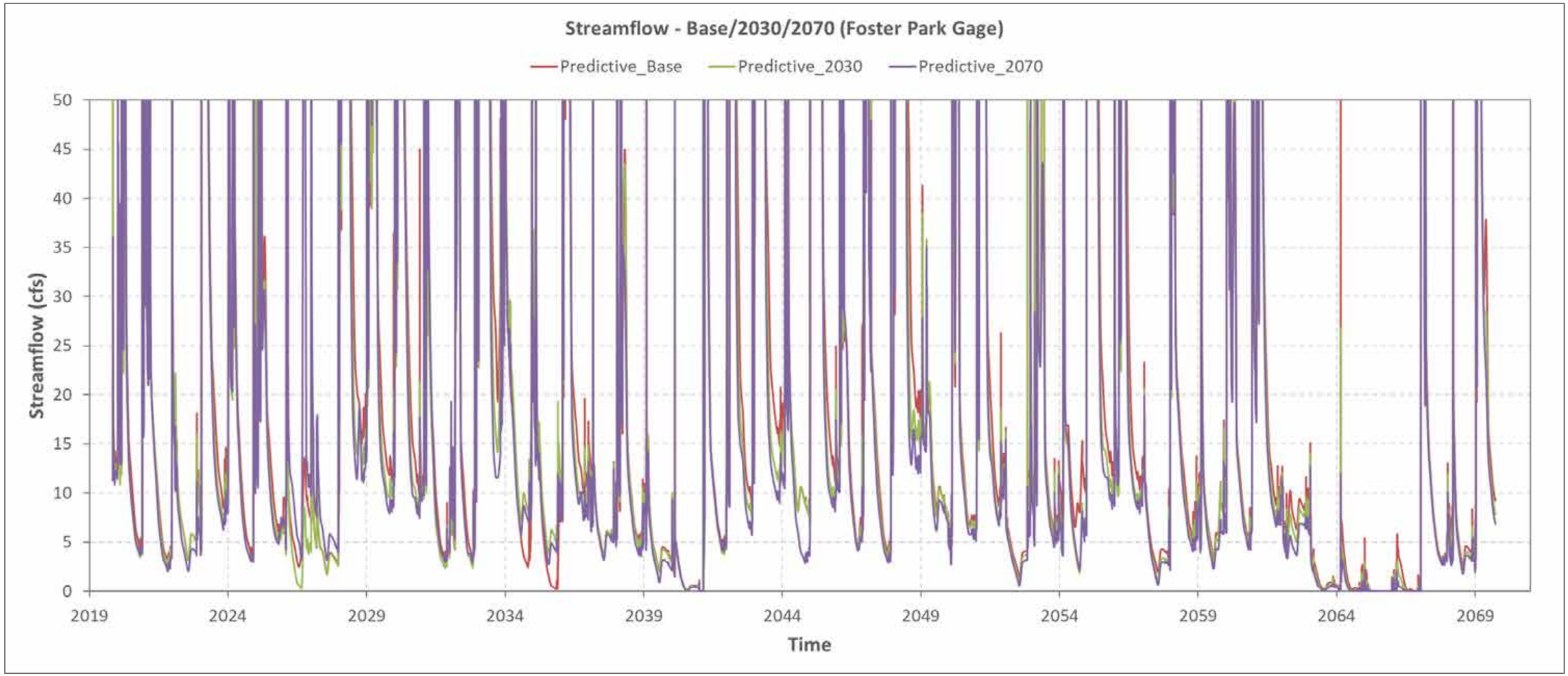


Figure 15.5a. Streamflow hydrograph (Baseline, 2030, 2070) – Foster Park Gage.

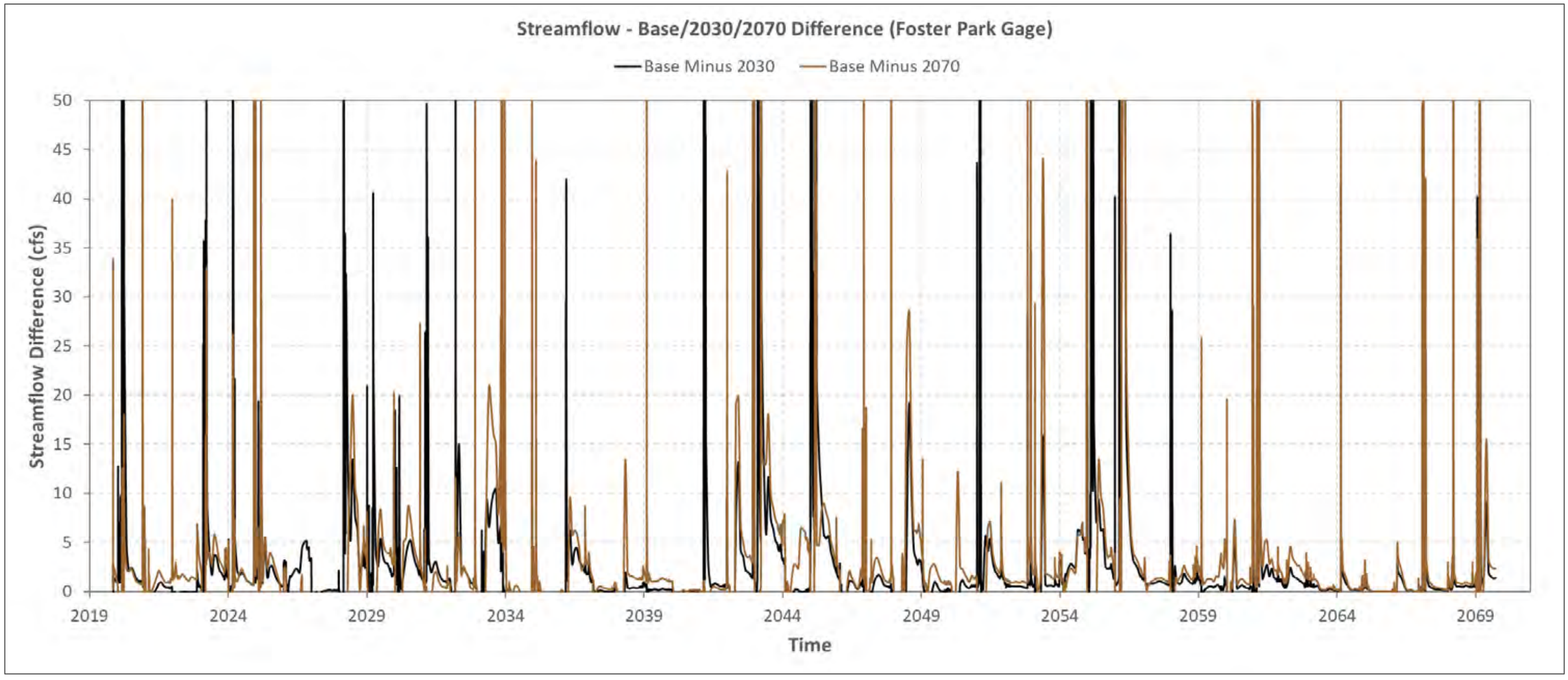


Figure 15.5b. Streamflow hydrograph difference (Baseline, 2030, 2070) – Foster Park Gage.

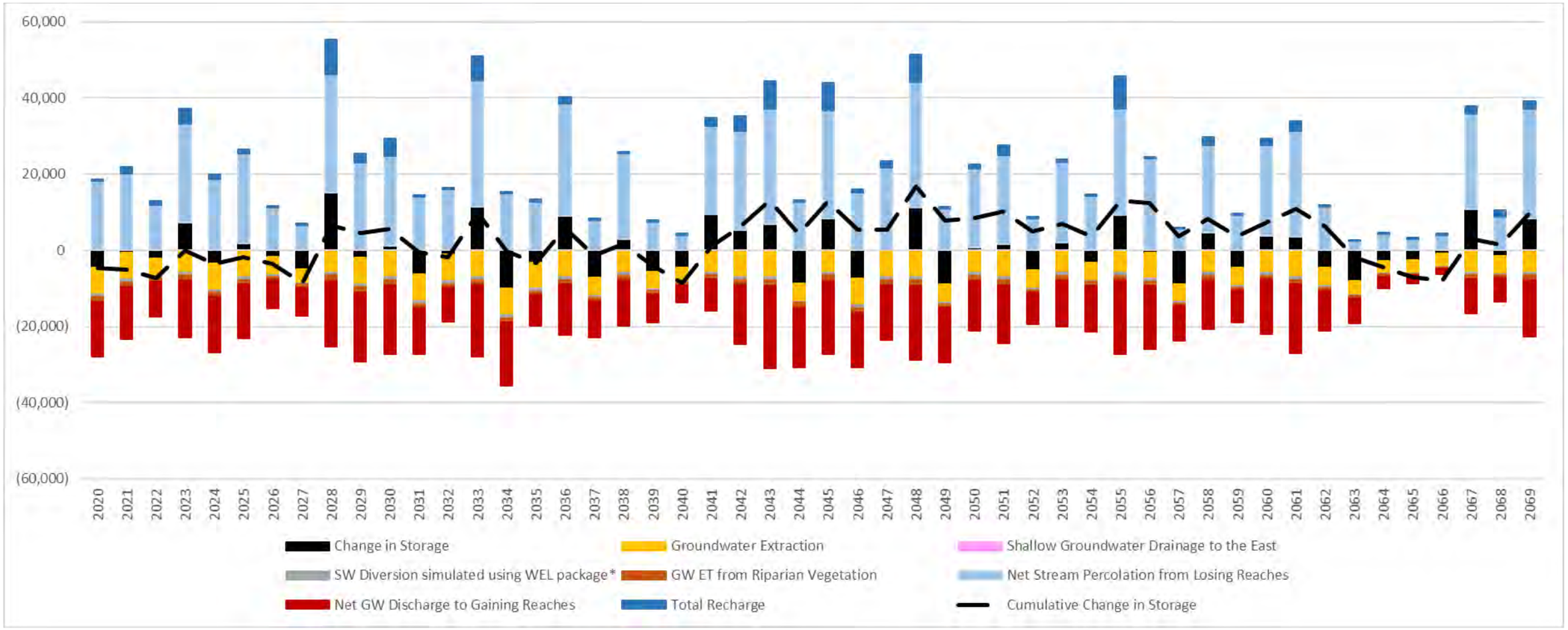


Figure 15.6a. Baseline Projected Annual Groundwater Inflows (positive values) and Outflows (negative values) to/from Mound Basin (acre-feet per year).

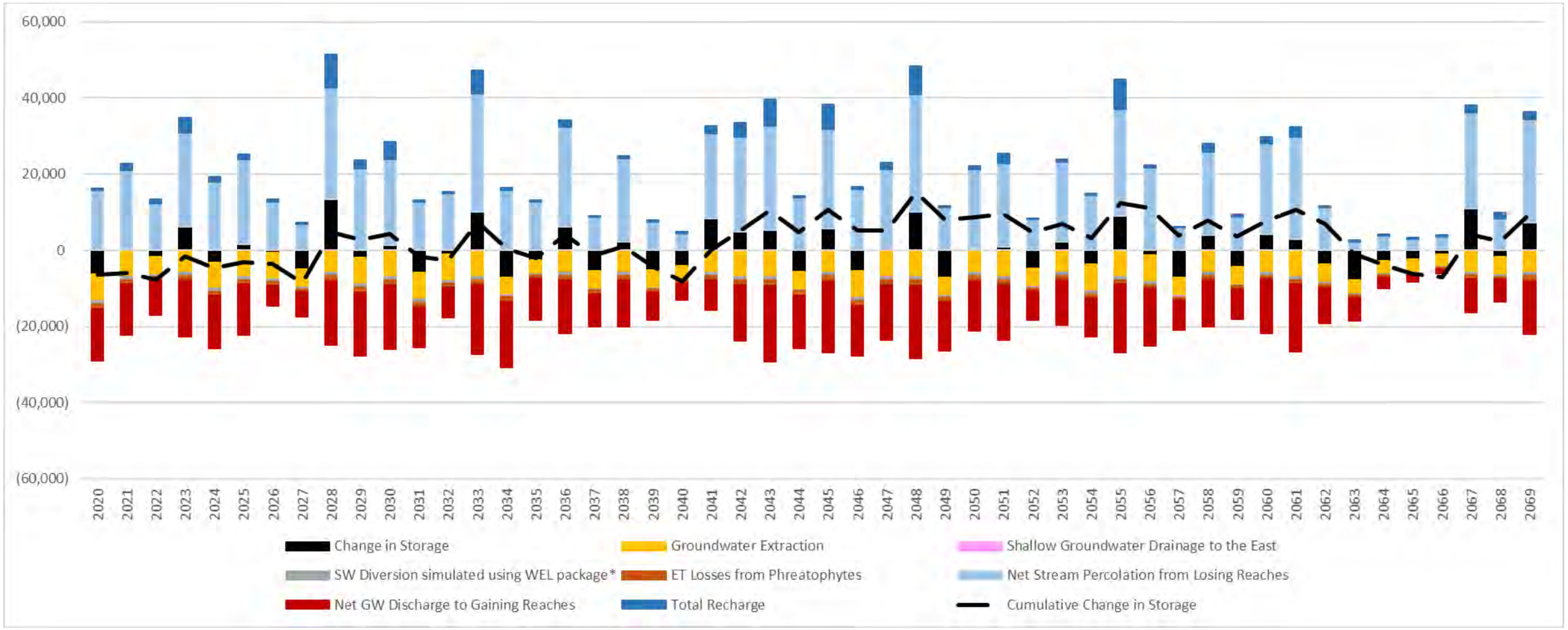


Figure 15.6b Projected Groundwater Budget Components Under the 2030 Climate Change Scenario.

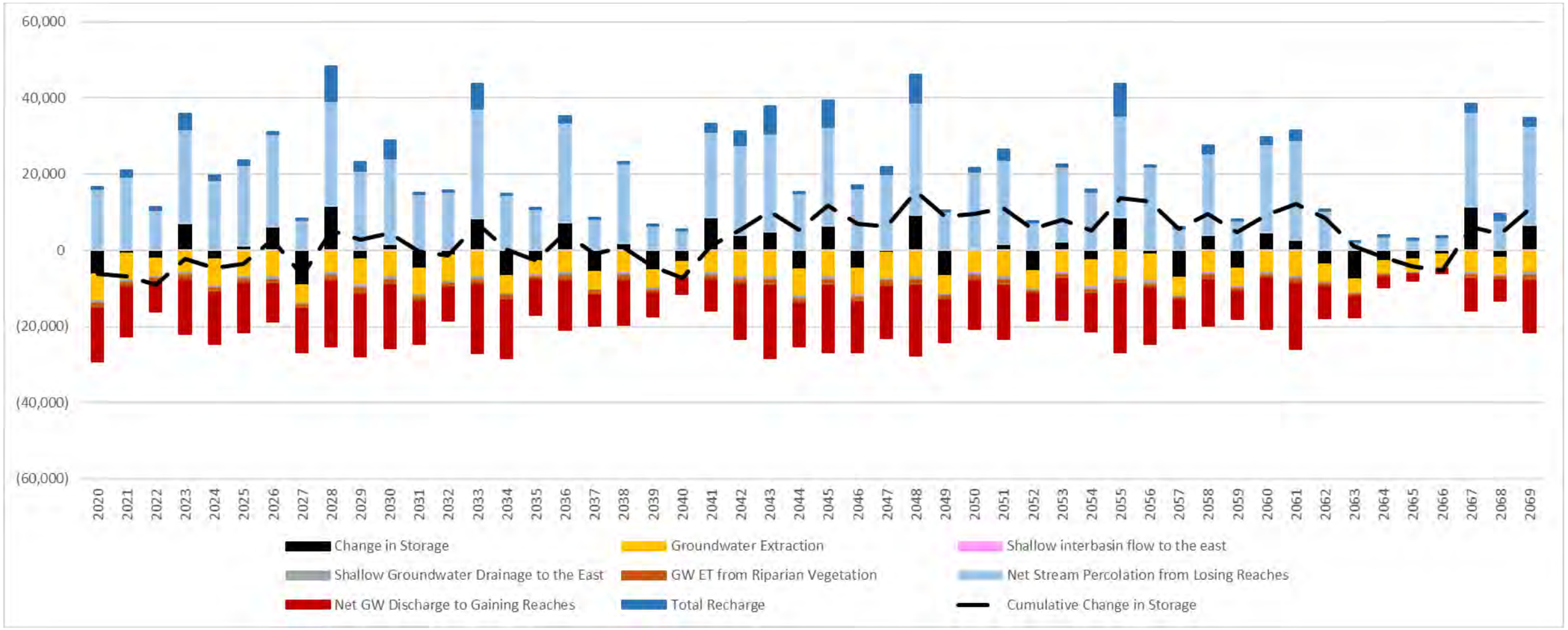


Figure 15.6c. Projected Groundwater Budget Components Under the 2070 Climate Change Scenario.

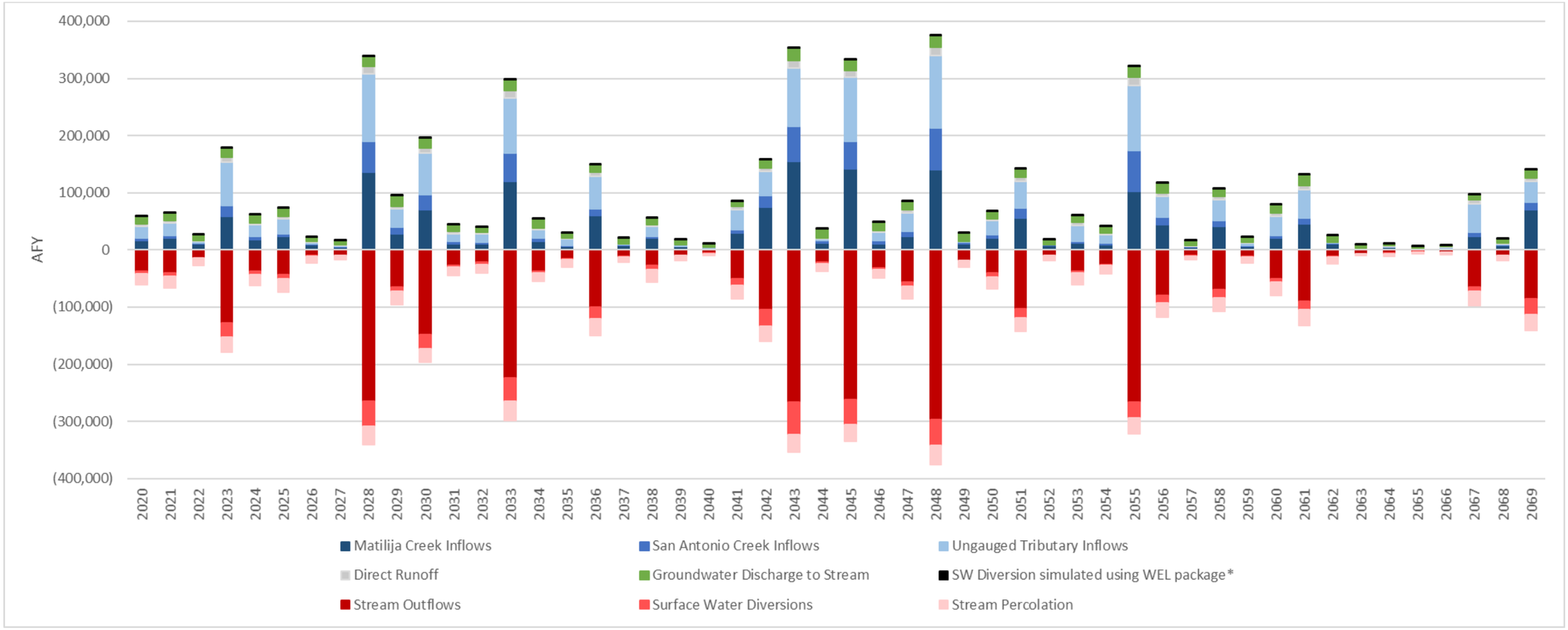


Figure 15.7a. Baseline Projected Annual Surface Water Inflows (positive values) and Outflows (negative values) to/from Mound Basin (acre-feet per year).

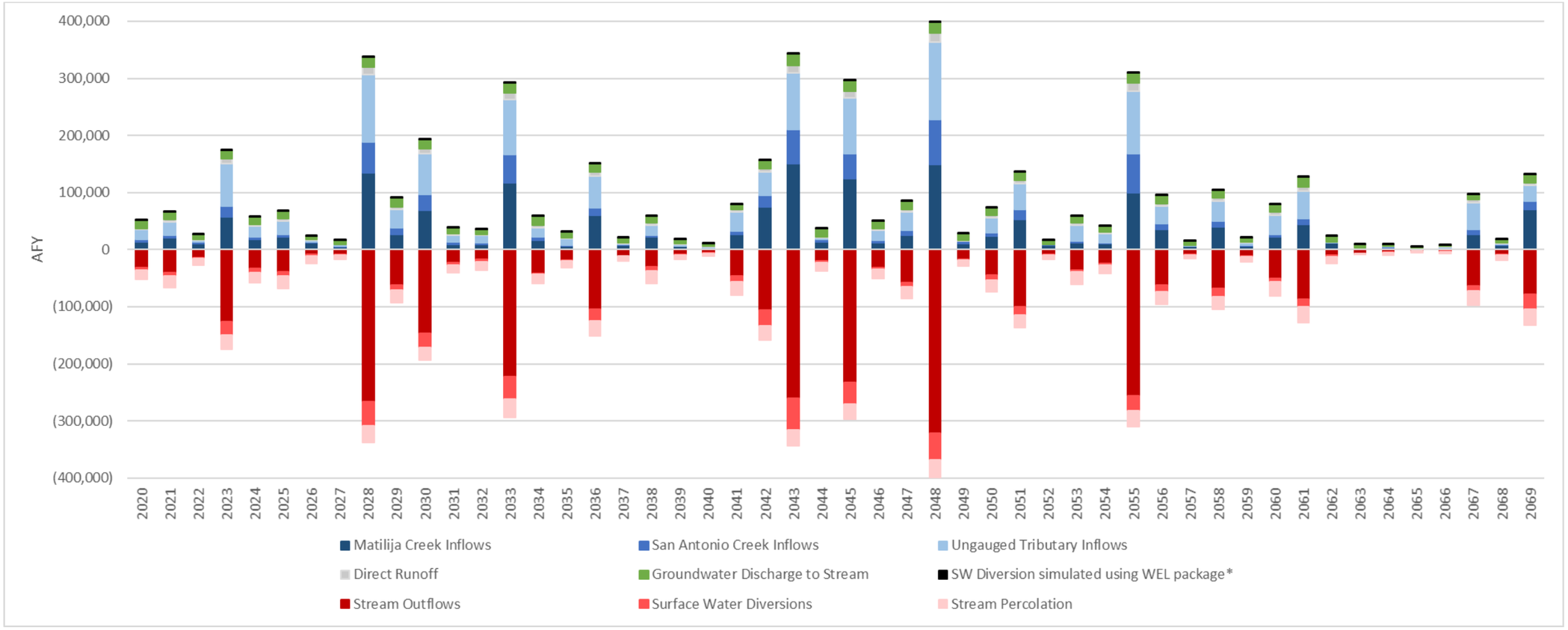


Figure 15.7b. Projected Surface Water Budget Components Under the 2030 Climate Change Scenario.

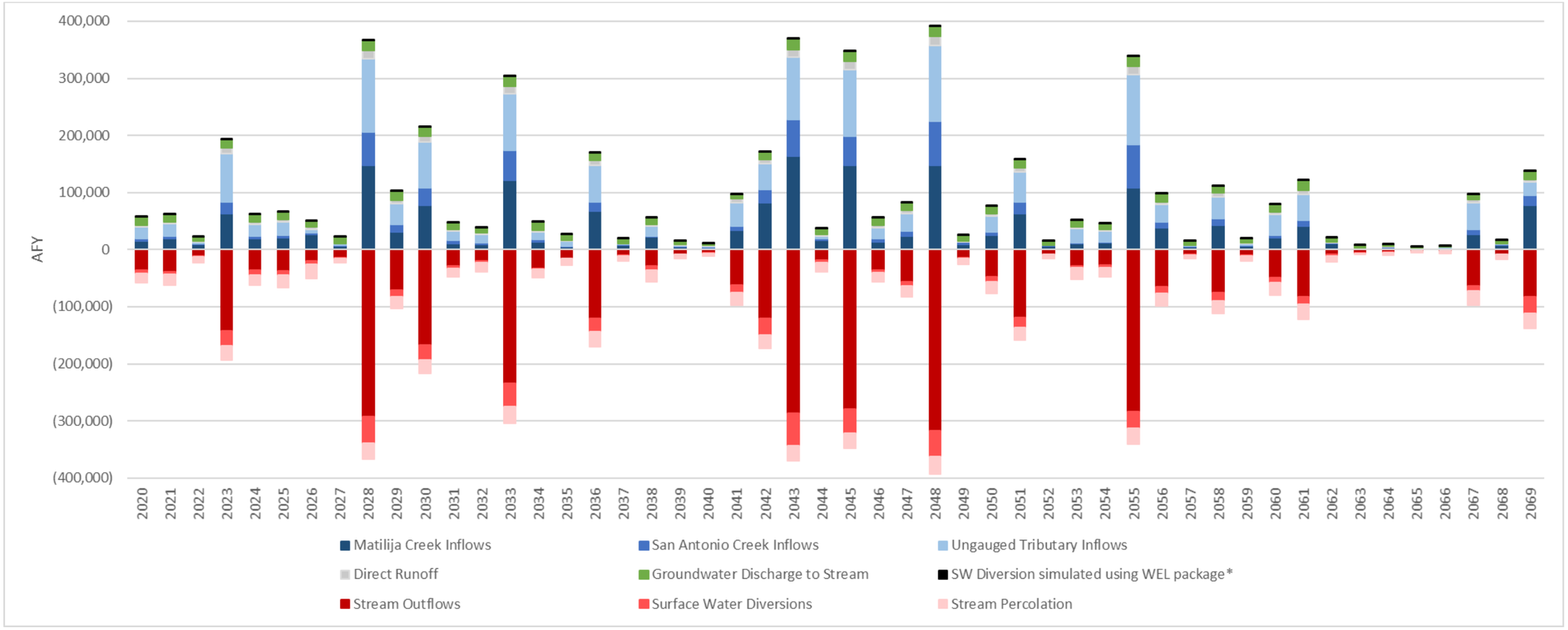


Figure 15.7c. Projected Surface Water Budget Components Under the 2070 Climate Change Scenario.