UPPER VENTURA RIVER GROUNDWATER AGENCY

NOTICE OF SPECIAL MEETING

NOTICE IS HEREBY GIVEN that the Upper Ventura River Groundwater Agency ("Agency") Board of Directors ("Board") will hold a **Special Board Meeting at 10 A.M. on Monday, November 15, 2021 via**

ON-LINE OR TELECONFERENCE:

DIAL-IN (US TOLL FREE) 1-669-900-6833
Find your local number: https://us06web.zoom.us/u/kcCkF3q5M3
JOIN BY COMPUTER, TABLET OR SMARTPHONE:
https://us06web.zoom.us/j/85351589826?pwd=YlozbUdMZnNFMVF5UWh3c2ZVbXBEdz09
Meeting ID: 853 5158 9826
Passcode: 542665
New to Zoom, go to: https://support.zoom.us/hc/en-us/articles/206175806

Per Resolution No. 2021-05 by the Board of Directors of the Upper Ventura River Groundwater Agency, the Board is authorized to hold public meetings via teleconferencing and to make public meetings accessible telephonically or otherwise electronically to all members of the public seeking to observe and to address the Board. A physical location accessible for the public to participate in the teleconference is not required.

UPPER VENTURA RIVER GROUNDWATER AGENCY BOARD OF DIRECTORS SPECIAL MEETING AGENDA

November 15, 2021

1. **MEETING CALL TO ORDER**

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL**

4. **APPROVAL OF AGENDA & RENEWAL OF RESOLUTION NO. 2021-05**
   Pursuant to AB 361, the Board may continue to meet via teleconference, provided it make the findings in section 3 of Resolution No. 2021-05.

5. **PUBLIC COMMENT FOR ITEMS NOT APPEARING ON THE AGENDA**
   The Board will receive public comments on items not appearing on the agenda and within the subject matter jurisdiction of the Agency. The Board will not enter into a detailed discussion or take any action on any items presented during public comments. Such items may only be referred to the Executive Director or other staff for administrative action or scheduled on a subsequent agenda for discussion. Persons wishing to speak on specific agenda items should do so at the time specified for those items. In accordance with Government Code § 54954.3(b)(1), public comment will be limited to three (3) minutes per speaker.

6. CONSENT CALENDAR

All matters listed under the Consent Calendar are considered routine by the Board and will be enacted by one motion. There will be no separate discussion of these items unless a Board member pulls an item from the Calendar. Pulled items will be discussed and acted on separately by the Board. Members of the public who want to comment on a Consent Calendar item should do so under Public Comments.

a. **Approve Minutes from October 14, 2021 Regular Board Meeting**
b. **Approve Financial Report for October 2021**

7. DIRECTOR ANNOUNCEMENTS

Directors may provide oral reports on items not appearing on the agenda.

8. EXECUTIVE DIRECTOR'S REPORT

The Board will receive an update from the Executive Director concerning miscellaneous matters and Agency correspondence. The Board may provide feedback to staff.

9. ADMINISTRATIVE ITEMS

a. **State Water Resources Control Board Ventura River Watershed Groundwater-Surface Water Model Scenarios Comments**
The Board will consider providing direction to staff concerning potential submittal of comments on the State Water Resources Control Board Ventura River Watershed Groundwater-Surface Water Model scenarios.

10. GSP ITEMS

a. **Groundwater Sustainability Plan Update (Grant Category (e); Task 12: GSP Reviews and Approvals)**
The Board will receive an update from the Executive Director concerning groundwater sustainability plan development and consider providing feedback to staff.

b. **Draft Groundwater Sustainability Plan Comment Responses and GSP Edits (Grant Category (e); Task 12: GSP Reviews and Approvals)**
The Board will discuss the draft GSP comment responses and GSP edits and consider providing feedback to staff.

c. **Schedule Public Hearing for GSP Adoption (Grant Category (e); Task 12: GSP Reviews and Approvals)**
The Board will consider setting a date and time for a public hearing concerning adoption of the GSP.

d. **Intera, Inc. Work Order No. 4 for Annual Report and Numerical Model Update**
The Board will consider authorizing the Executive Director to issue Work Order No. 4 to Intera, Inc. for annual report preparation and numerical model updates for an amount not to exceed $56,040.

11. COMMITTEE REPORTS

a. Ad Hoc Stakeholder Engagement Committee

The committee will provide an update on Stakeholder Engagement Plan implementation activities since the last Board meeting and receive feedback from the Board.

12. FUTURE AGENDA ITEMS

This is an opportunity for the Directors to request items for future agendas.

13. ADJOURNMENT

The next Regular Board meeting is December 9, 2021.

UPPER VENTURA RIVER GROUNDWATER AGENCY MINUTES OF REGULAR MEETING OCTOBER 14, 2021

The Board meeting was held via teleconference in accordance with Upper Ventura River Groundwater Agency Board Resolution No. 2021-05. Directors present were Bruce Kuebler, Larry Rose, Susan Rungren, Emily Ayala, Pete Kaiser, Glenn Shephard, and Diana Engle. Also, present: Executive Director Bryan Bondy, Agency Counsel Wayne Lemieux, and Administrative Assistant Maureen Tucker. Identified public members present: Burt Handy (public), Jenny Tribo (City of Ventura staff), Mary Bergen (Casitas MWD director and UVRGA alternate director), and Steve Slack (CDFW staff).

1) CALL TO ORDER

Chair Engle called the meeting to order at 1:00 p.m.

2) PLEDGE OF ALLEGIANCE

Executive Director Bryan Bondy led the Pledge of Allegiance.

3) ROLL CALL

Executive Director Bondy called roll.

Directors Present: Bruce Kuebler, Larry Rose, Susan Rungren, Pete Kaiser, Glenn Shephard, Diana Engle, Emily Ayala

Directors Absent: none

4) APPROVAL OF AGENDA & RENEWAL OF RESOLUTION 2021-05

Chair Engle asked for any proposed changes to the agenda. No changes were offered. Chair Engle requested an explanation of the Resolution No. 2021-05 renewal. Agency Counsel Wayne Lemieux briefly explained the requirements.

Director Kaiser moved agenda approval and renewal of Resolution 2021-05. Director Rungren seconded the motion.

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	D. Engle – Y	
	S. Rungren – Y	P. Kaiser – Y	E. Ayala – Y	G. Shephard – Y

Director Absent: none

5) PUBLIC COMMENTS ON ITEMS NOT APPEAR ON THE AGENDA

Chair Engle called for public comments on items not appearing on the agenda. No public comments were offered.

6) CONSENT CALENDAR

a. Approve Minutes from September 9, 2021 Regular Board Meeting
b. Approve Minutes from September 23, 2021 Special Board Meeting
c. Approve Financial Report for September 2021
d. Approve Rate Increase for Bondy Groundwater Consulting, Inc.

Director Rungren moved approval of the consent calendar items. Director Shephard seconded the motion.

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	D. Engle – Y	
	S. Rungren – Y	P. Kaiser – Y	E. Ayala – Y	G. Shephard – Y

Director Absent: none

7) DIRECTORS ANNOUNCEMENTS

a. Directors may provide oral report on items note appearing on the agenda.
b. Directors shall report time spent on cost-sharing eligible activities for the 2017 Proposition 1 Sustainable Groundwater Management Planning (SGWP) Grant.

Director Kuebler: No time. Reported that he attended a meeting of the Ojai Basin Groundwater Management Agency regarding their GSP and made comments on their analysis of San Antonio Creek flows.

Director Rungren: No time. No report.

Director Rose: No time. No report.

Director Shephard: No time. No report.

Director Kaiser: No time. No report.

Director Ayala: No time. No report

Director Engle: No time. Reported that she attended two meetings concerning Matilija Dam removal. Sedimentation in the Kennedy area is an issue that will need to be investigated.

8) EXECUTIVE DIRECTOR'S REPORT

Executive Director Bondy briefly reviewed the written staff report with the Board concerning updates on non-GSP Agency matters since the last Board meeting. He also provided a brief summary of the October 13, 2021 VRIF meeting that he attended.

Director Kaiser asked what the process is for addressing unpaid fees. Executive Director Bondy said there has not been a situation in which the fees have not been paid. The only

issue is penalties and interest for late payments, which the Board has waived in the past. He added that there are several penalties and interest amounts on the books that need to be brought to the Board.

Director Kuebler said that Regina Hirsch is tracking grant opportunities as part of the VRIF process, but he is not sure if she is thinking about opportunities that the GSAs may be interested in. Executive Director Bondy said he has spoken with Ms. Hirsch in the past about UVRGA's interests. He will reach out again to remind her that the Agency is interested in opportunities to obtain funding for monitoring.

Chair Engle asked about grant retention. Executive Director Bondy stated that the grant has 10% retention. He said the Agency will receive the retention payment toward the end of current fiscal year, which is accounted for in the budget.

No public comments.

9) ADMINISTRATIVE ITEMS

a. Fiscal Year 2021/2022 First Quarter Budget Report

Executive Director Bondy briefly reviewed the first quarter budget report. He stated there is an error in the budget concerning grant revenue that should be fixed during the mid-year review. $60,897.06 was accidentally included as income for fiscal year 2021/2022 that had already been booked during a prior fiscal year. The error only affects the income statement; the cash flow projection was correct.

Director Ayala moved to receive and file the Fiscal Year 2021/2022 First Quarter Budget Report. Director Kaiser seconded the motion.

No public comments.

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	D. Engle – Y	
	S. Rungren – Y	P. Kaiser – Y	E. Ayala – Y	G. Shephard – Y

Director Absent: none

10) GSP ITEMS

a. Groundwater Sustainability Plan Update (Grant Category (d); Task 12: GSP Review and Approvals)

Executive Director Bondy reviewed the written staff report with the Board concerning GSP development status. He said the goal is to have a final GSP draft ready in November and hold the required public hearing at the regular Board meeting on

December 9. Ideally the GSP will be adopted in December to provide ample time for upload of the GSP and the data to the DWR web portal.

Comment responses and redline edits to the GSP will be ready in early November for discussion at the November regular board meeting. If a second meeting is needed to discuss the comment responses and edits, that would need to be scheduled too. The Board discussed the November schedule. The normal date for a special meeting would fall on Thanksgiving Day. The next regular board meeting falls on Veteran's Day. The Board discussed changing the date of the next regular meeting. It was decided to cancel the regular board meeting on November 11, 2021 and hold a special meeting on November 15, 2021 at 10:00 a.m.

Executive Director Bondy reviewed the GSP budget attachment with the Board. Director Ayala thanked Executive Director Bondy for the budget details.

No Public comment.

No motion.

b. Draft Groundwater Sustainability Plan Comments (Grant Category (e); Task 12; GSP Reviews and Approvals)

Executive Director Bryan Bondy summarized the GSP comments received. The two primary themes are (1) concerns about identification groundwater dependent ecosystems (GDEs) and (2) the minimum threshold for the depletion of interconnected surface water sustainability criterion. He briefly reviewed the scientific analysis included in the GSP concerning these comment subject areas.

Director Kuebler asked if there is guidance on comment response format. Executive Director Bondy said the regulations require a summary of responses. The GSP Development Team is developing a comment response table to meet this requirement.

Director Kaiser thanked the Executive Director for staying focused on the scientific evidence.

Director Rose said that Rice Creek was realigned 8-10 years ago, which may have changed the distribution of vegetation in that area.

Director Ayala said she agrees with the screening out of vegetation near irrigated areas. She said she observed oaks die off after irrigation ceased at an orchard.

Director Shepherd said he likes The Executive Director's approach. It is rooted in logic.

Director Rungren concurred with Director Shepherd.

Director Engle said Meiner's Oaks Water District did not provide comments on the GSP.

Public comments:

Mary Bergen asked about the timing of studies to further evaluate the indirect effect of pumping on GDEs.

Steve Slack expressed appreciation to UVRGA for considering CDFW's comments. CDFW is concerned that SGMA is not accomplishing what they had hoped it would.

c. Intera, Inc. Works Order No. 3 Budget Modification (Grant Category (a); Grant Administration)

Executive Director Bondy briefed the Board on the proposed budget modification for Intera, Inc. Work Order No. 3 to complete the GSP. He referred the Board to the GSP budget analysis presented during Item No. 10(a).

Director Kuebler moved to increase the budget for Intera, Inc. Work Order No. 3 from $418,780 to $463,610. Seconded by Director Kaiser.

No public comment.

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	D. Engle – Y	
	S. Rungren – Y	P. Kaiser – Y	E. Ayala – Y	G. Shephard – Y

Director Absent: none

d. Rincon Consultants, Inc. Work Order No. 1 Budget Modification (Grant Category (a): Grant Administration

Executive Director Bondy briefed the Board on the proposed budget modification for Rincon Consultants Work Order No. 1 to complete the GSP. He referred the Board to the GSP budget analysis presented during Item No. 10(a).

Director Kaiser moved to increase the authorized amount on Rincon's Work Order No. 1 from $77,500 to $92,141. Director Rose seconded the motion.

No public comment.

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	D. Engle – Y	
	S. Rungren – Y	P. Kaiser – Y	E. Ayala – Y	G. Shephard – Y

11) COMMITTEE REPORTS

a. Ad Hoc Stakeholder Engagement Committee

Director Rose said there is no report this month.

No public comments.

12) FUTURE AGENDA ITEMS

Chair Engle confirmed that the November 11, 2021 regular meeting will be cancelled and a special meeting will be held on November 15, 2021 at 10 a.m.

13) ADJOURNMENT

The meeting was adjourned at 2:54 p.m.

Action: _____

Motion: _____

B.Kuebler__ D.Engle__ P.Kaiser__S. Rungren__ G.Shephard___ E.Ayala___ L.Rose___

UPPER VENTURA RIVER GROUNDWATER AGENCY Item No. 6(b)

DATE: November 10, 2021
TO: Board of Directors
FROM: Carrie Troup C.P.A., Treasurer
SUBJECT: Approve Financial Report for October 2021

September 2021 UVRGA Balance			$	244,565.31
October 2021 Activity:				
Revenues:				
	Groundwater Extraction Fees		$	910.34
October Expenditures Paid:				
	Bank fees - stop payment on 5 checks (reimbursed)		$	150.00
Checks Pending Signature:				
2256	Olivarez Madruga Lemieux O'Neill LLP	September services	$	2,110.00
2257	California Special Districts Association	2022 Membership	$	1,250.00
2258	Rincon Consultants Inc	August - Oct. services	$	1,985.58
2259	Rincon Consultants Inc	October services	$	8,118.75
2260	Carrie Troup, C.P.A.	October services & Reimburs	$	782.42
2261	Bondy Groundwater Consulting, Inc	October services	$	10,012.25
2262	Intera Incorporated	October services	$	9,695.55
	Total Expenditures Paid & To Be Paid		$	33,954.55
October 2021 UVRGA Ending Balance:			**$**	**211,371.10**

Action: _____

Motion: _____ Second: _____

B. Kuebler___ G. Shephard___ D. Engle___ P. Kaiser___ S. Rungren___ L. Rose___ E. Ayala___

The financial report omits substantially all disclosures required by accounting principles generally accepted in the United States of America; no assurance is provided on them.

UPPER VENTURA RIVER GROUNDWATER AGENCY Item No. 8

DATE: November 15, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Executive Director's Report

SUMMARY
The following are updates on Agency matters since the last Board meeting:

1. Administrative: ***Nothing to report.***

2. Financial:

    a. Groundwater Extraction Fees:

        i. ***The fifth round of semi-annual extraction fee invoices were due in mid-August. One entity is unpaid, totaling $554.12.***

    b. GSP Grant:

        i. ***Grant Progress Report and Invoice No. 9 were submitted to DWR on August 23, 2021. DWR approved the invoice on October 27, 2021. Payment in the amount of $1,316.25 is anticipated in approximately one month.***

3. Legal: ***No reportable activity.***

4. Sustainable Groundwater Management:

    a. Groundwater Sustainability Plan Development: ***Please see Item 10a.***

    b. Groundwater and Surface Water Monitoring:

        i. The property on which well 04N23W20A01S is located changed ownership in early 2021. Staff sent a request for continued access to the new property owner on February 24, 2021. ***The Executive Director will provide an oral update on this matter during the Board meeting.***

    c. Camino Cielo Crossing Surface Water Flow Gauge: ***Due to the lack of rainfall, gauge activation was deferred until Spring 2022.***

5. SWRCB / CDFW Instream Flow Enhancement Coordination: ***The Executive Director attended a webinar concerning development of modeling scenarios. Please see Item No. 9a for more information.***

6. Ventura River Watershed Instream Flow & Water Resilience Framework (VRIF): ***Meetings are scheduled for November 17, January 12, and February 3.***

7. Miscellaneous: N/A

RECOMMENDED ACTIONS
Receive an update from the Executive Director concerning miscellaneous matters and Agency correspondence. Provide feedback to staff.

BACKGROUND
Not applicable

FISCAL SUMMARY
Not applicable

ATTACHMENTS
None

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ P. Kaiser___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose__

UPPER VENTURA RIVER GROUNDWATER AGENCY Item No. 9(a)

DATE: November 15, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: State Water Resources Control Board Ventura River Watershed Groundwater-Surface Water Model Scenarios Comments

SUMMARY:

The State Water Resources Control Board (SWRCB) Ventura River Watershed Groundwater-Surface Water Model Scenarios webinar was held on October 29. Please see Attachment A for a copy of the webinar notice. Please see Attachment B for a copy of the webinar slides. A video of the webinar can be viewed here:
https://www.youtube.com/watch?v=PBGptW3qA9Y&feature=youtu.be

The purpose of the webinar was to solicit input on the development of scenarios to be evaluated using the Groundwater-Surface Water Model of the Ventura River Watershed (GW-SW Model). SWRCB has budgeted to complete eight model scenarios. SWRCB's project team presented the proposed methodology to evaluate four (4) scenarios included in the Final Study Plan. The four selected scenarios are: Climate Change, Matilija Dam Removal, Post-Thomas Fire, and Unimpaired Flow. The remaining four scenarios will be developed based on input received during the webinar or separately (input is due by December 3, 2021). SWRCB presented ideas for the four additional scenarios. The concepts discussed included CA Department of Fish and Wildlife's (CDFW) flow recommendations, additional climate change scenarios, eradication of Arundo donax, groundwater sustainability plans, local cooperative agreements, and new water supplies. Executive Director Bondy said that UVRGA could assist with scoping the "groundwater sustainability plans" scenario if it is selected.

Director Kuebler made the following comments during the webinar:

1. One of the scenarios should be the CDFW flow recommendation. He suggested simulating the CDFW flow recommendations with climate change.

2. Suggested working with UVRGA to leverage to fine-scale UVRGA model in concert with the more regional, coarse scale SWRCB model.

Executive Director Bondy made several comments during the webinar:

1. Requested information about what quantitative metrics will be used to compare the scenarios.

2. Encouraged SWRCB to start thinking about adding more simulations. Eight does not seem like enough to answer the important questions. For perspective, UVRGA ran dozens of model simulations to evaluate surface water depletion for the GSP. Seems like more simulations will be needed. SWRCB responded that they intend to perform additional simulations if they decide to move forward with a flow objective rule setting process.

3. Simulations are needed to look at the timing and location of groundwater pumping effects. Blanket water use reductions may not be the most efficient or effective means of achieving objectives. More modeling will be needed to evaluate targeted/optimized approaches.

4. Consider running each scenario multiple times to evaluate the range of uncertainty by varying sensitive parameters overlaid on the scenario in question.

5. Asked whether the modeling analysis will be updated over time to consider new data. Significant new data is expected through GSP implementation.

6. Recommended against committing to using one of the four "TBD" scenarios for additional climate change conditions until after seeing the results of the first climate change simulation.

At this time, staff's only potential additional comment is that SWRCB might want to consider performing the four "decided" scenarios and present the results before settling on the four "TBD" scenarios.

RECOMMENDED ACTION

It is recommended that the Board consider providing direction to staff concerning potential submittal of additional comments on the State Water Resources Control Board Ventura River Watershed Groundwater-Surface Water Model scenarios.

BACKGROUND

Please see Summary and Attachments.

FISCAL SUMMARY

The current fiscal year budget includes $55,000 for groundwater management, coordination, and outreach. A portion of this budget item was intended for coordination with the SWRCB instream flow process.

ATTACHMENTS

A. Webinar Notice
B. Webinar Slides

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ P. Kaiser ___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

CALIFORNIA Water Boards

GAVIN NEWSOM
GOVERNOR

JARED BLUMENFELD
SECRETARY FOR
ENVIRONMENTAL PROTECTION

State Water Resources Control Board

Webinar to Solicit Input on the Development and Evaluation of Scenarios Using the Groundwater-Surface Water Model of the Ventura River Watershed

PURPOSE

The State Water Resources Control Board (State Water Board) and Los Angeles Regional Water Quality Control Board (collectively, the Water Boards) will hold a webinar to provide information and solicit technical comments and data related to development of scenarios to be evaluated using the Groundwater-Surface Water Model of the Ventura River Watershed (GW-SW Model). The webinar will have presentations and time for discussion.

The project team will present the proposed draft methodology to evaluate four (4) scenarios that the Water Boards included in the Final Study Plan. The four selected scenarios are: Climate Change, Matilija Dam Removal, Post-Thomas Fire, and Unimpaired Flow. The Water Boards are soliciting technical comments on the draft methodology that will be used to evaluate these scenarios.

Following the above-referenced presentation related to previously identified scenarios, the project team will present options for four (4) additional scenarios that could be evaluated as part of this project. Options for the additional scenarios include evaluation of: CA Department of Fish and Wildlife's flow recommendations, eradication of *Arundo donax,* groundwater sustainability plans, local cooperative agreements, and new water supplies. The project team will then facilitate discussion and solicit technical comments and data to help select, build, and evaluate the additional four scenarios.

WEBINAR REGISTRATION

The webinar will be held using Zoom online meeting software. To participate, please RSVP using the link below. After registering, you should receive an email with participation instructions.

- **Friday October 29, 2021**
- **9:00am-12:00pm**
- ***Webinar RSVP*[1]**

[1] Zoom webinar registration URL:
https://waterboards.zoom.us/webinar/register/WN_2bK7jKRUS5ihZFN6YXpMTQ

SOLICITING TECHNICAL COMMENTS AND DATA

The Water Boards are soliciting technical comments and data on the topics presented in the webinar. Parties that are interested in coordinating on the development of the to-be-determined scenarios are encouraged to contact Water Boards staff to discuss technical questions and data needs. Contact information is in the *Contact Us* section, below.

Please email technical comments and data to:
InstreamFlows@waterboards.ca.gov by Friday December 3, 2021.

BACKGROUND

Additional information on the GW-SW Model is available in the following resources[2]:

- Preliminary Draft Groundwater-Surface Water Model of the Ventura River Watershed (*See Notice for access instructions*)
- Ventura River Watershed Modeling Webinar Series
  - Webinar 1 (YouTube): Groundwater-Surface Water and Nitrogen Transport Models: Overview, Status, and Updates to Geologic Analysis
  - Webinar 2 (YouTube): Groundwater-Surface Water Model: Water Supply and Demand
  - Webinar 3 (YouTube): Groundwater-Surface Water Model: Preliminary Draft Calibration, Next Steps, and How to Stay Involved
- Draft Sensitivity Analysis Approach Memo for the Development of the Groundwater-Surface Water Model of the Ventura River Watershed (*Draft Sensitivity Analysis Approach Memo*)
- Draft Data Compilation Report for the Development of Groundwater-Surface Water and Nitrogen Transport Models of the Ventura River Watershed (*Draft Data Compilation Report*)
- Geologic Analysis, Ventura River Watershed (*Revised Geologic Analysis*)
- Final Study Plan for the Development of Groundwater-Surface Water and Nutrient Transport Models of the Ventura River Watershed (*Final Study Plan)*

[2] The following resources are available online at the *Instream Flow Unit: Ventura River Watershed website*: *https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/cwap_enhancing/ventura_river.html*

STAY CONNECTED

If you would like to receive emails regarding the Water Boards' development of the GW-SW Model, as well as related California Water Action Plan efforts, please subscribe to the "*California Water Action Plan/Statewide Instream Flows"* list under the Division of Water Rights on the State Water Board's Email Subscription List website, which is online at:
https://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.html

CONTACT US

If you have questions related to this notice or would like to make a request for reasonable accommodations for a disability, please contact Kevin DeLano at kevin.delano@waterboards.ca.gov.

	10/13/2021
Ann Marie Ore, Program Manager Water Quality Certification and Public Trust Section Division of Water Rights	Date

Ventura River Watershed GW-SW Model: Scenarios Methodology Webinar

January 2017. SWRCB.

Friday October 29, 2021
9am-12pm

Division of Water Rights (SWRCB)
TMDL and NPS Unit (LA RWQCB)
Geosyntec Consultants
Daniel B. Stephens & Associates

Ventura River at Foster Park,
Upper Ventura River Valley Groundwater Basin

May 2017. SWRCB.

Ventura River Watershed Modeling Project Team

- State Water Resources Control Board
  - Daniel Worth, MS, Senior Environmental Scientist, daniel.worth@waterboards.ca.gov
  - Kevin DeLano, GIT, MS, Geologist, kevin.delano@waterboards.ca.gov
  - Rajaa Hassan, PE (CA), MS, Water Resources Control Engineer, rajaa.hassan@waterboards.ca.gov
  - Shahab Araghinejad, PhD, Water Resources Control Engineer, shahab.araghinejad@waterboards.ca.gov
- Los Angeles Regional Water Quality Control Board
  - Jun Zhu, PhD, Senior Environmental Scientist, jun.zhu@waterboards.ca.gov
  - Alexander Prescott, MS, Environmental Scientist, alexander.prescott@waterboards.ca.gov
  - Stefanie Hada, MS, Water Resources Control Engineer, stefanie.hada@waterboards.ca.gov
- Geosyntec Consultants
  - Brandon Steets, PE (CA), MS, Principal, Project Director
  - Al Preston, PE (CA), PhD, Project Manager, Modeler
- Daniel B. Stephens & Associates
  - Stephen J. Cullen, PG (CA, ID), PhD, Hydrogeologist
  - Gregory Schnaar, PG (VA), PhD, Hydrologist
  - Farag Botros, PE (CA), PhD, Hydrogeologist

San Antonio Creek at Old Creek Road, October 2018. Project Team.

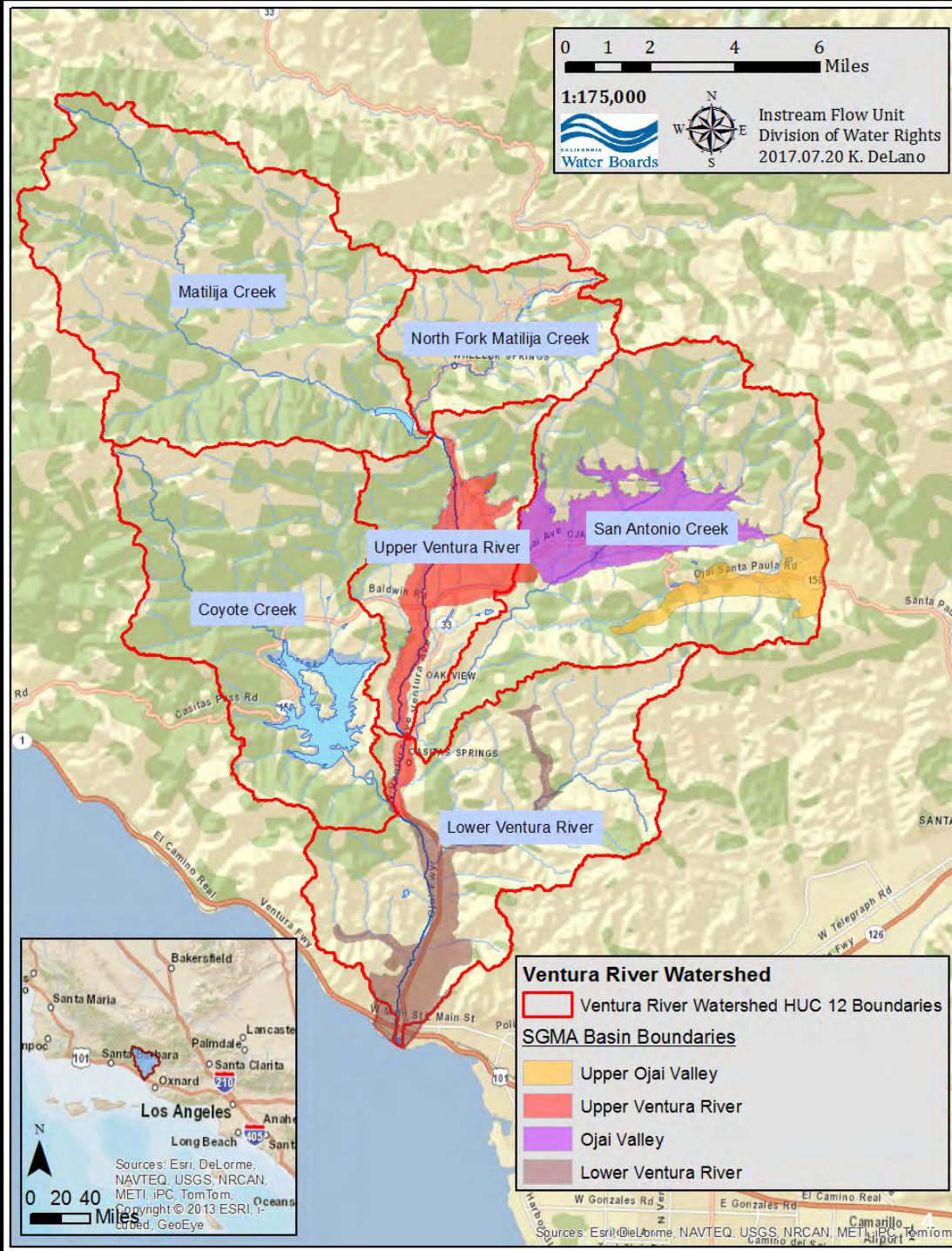
Meeting Format

- At meeting start, non-host participants don't have permission to unmute or turn on video
- During presentations, breaks for questions
- To ask a question
  - Type a question
  - Or ask for permission to unmute
  - Please remember to mute yourself
- Lots of time for discussion
- Instructions for accessing slides, chat log, and meeting recording at end

Ventura River Estuary, Lower Ventura River Valley Groundwater Basin, January 2017. SWRCB.

Outline

- Introduction (9:05-9:10am)
- Four selected scenarios (9:10-10:15am)
- Break ~10:15am
- Four TBD scenarios (10:30-11:15am)
- Remaining Questions (11:15-11:45am)
- Review Timeline, Wrap Up (11:45am-noon)



Purpose

- Replacing memo with webinar
- We have scope and budget for modeling team to evaluate eight (8) GSFLOW scenarios
  - More scenarios can be evaluated later by SWRCB and other parties
- Solicit comments on methodology for four (4) selected GSFLOW scenarios
  - Unimpaired flow
  - Climate Change
  - Matilija Dam Removal
  - Post-Thomas Fire re-calibration
- Solicit comments and **data** on remaining four (4) TBD GSFLOW scenarios
- Please email technical comments and data to **InstreamFlows@waterboards.ca.gov** by **Friday December 3, 2021**

Aerial view looking south at VRW
Source: VRW Council

Draft Unimpaired Flow Scenario: Purpose

- Purpose: Bookend scenario to create water budget for WY 1994-2017
- Understand the quantity and timing of streamflow and groundwater available in the watershed that can be used for reasonable human and ecosystem beneficial uses
- Not trying to recreate pre-development conditions

Draft Unimpaired Flow Scenario: Description

- All diversions from surface water are set to zero
- Reservoirs have zero storage, zero evaporation, and zero leakage
  - Appropriative water rights
  - Water flows through reservoirs with no impediment (e.g. no dams)
- All pumping from groundwater is set to zero
- Irrigation is removed
  - Vegetation (agriculture, natural, domestic) only receives water from precipitation

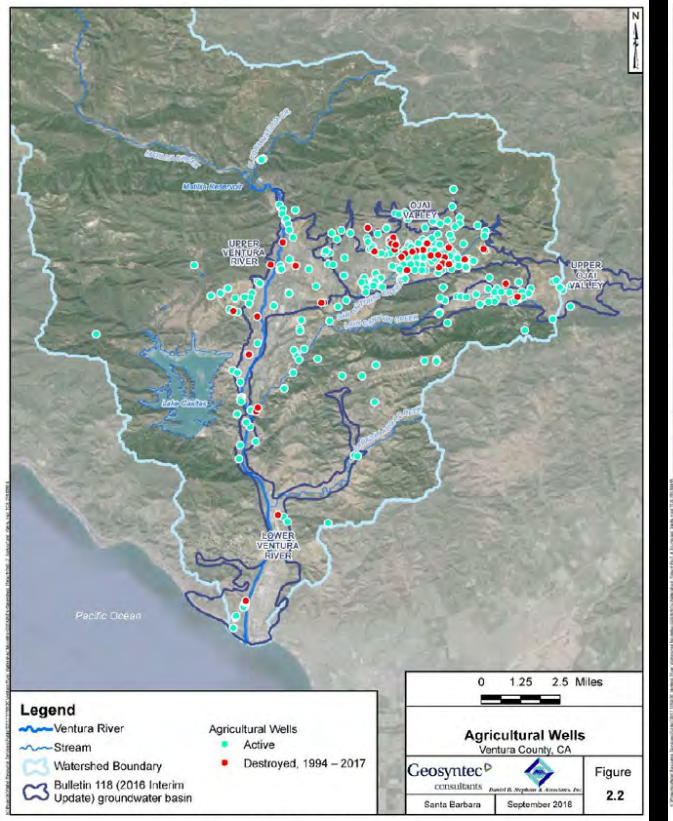


Figure 2.2 Agricultural Wells

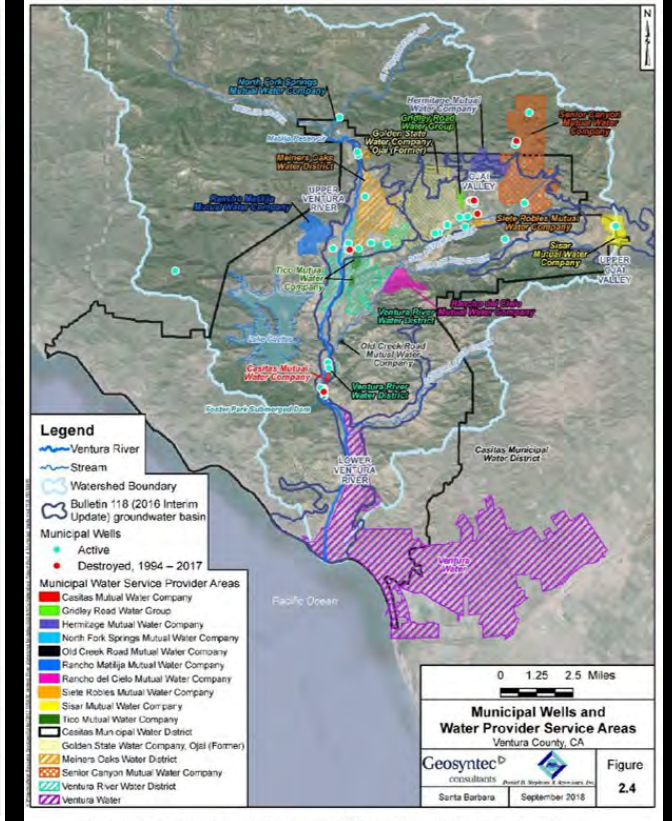
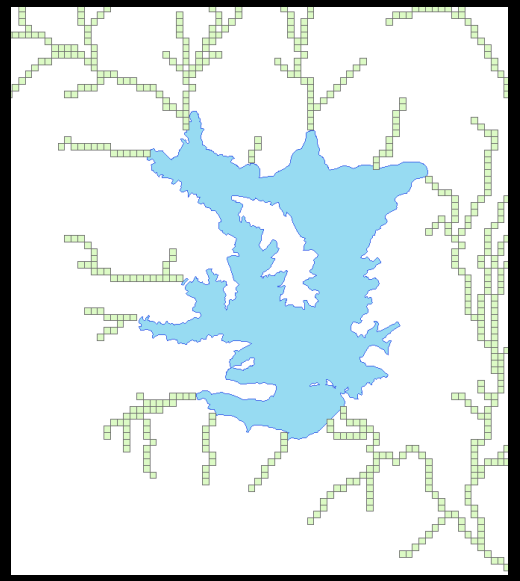


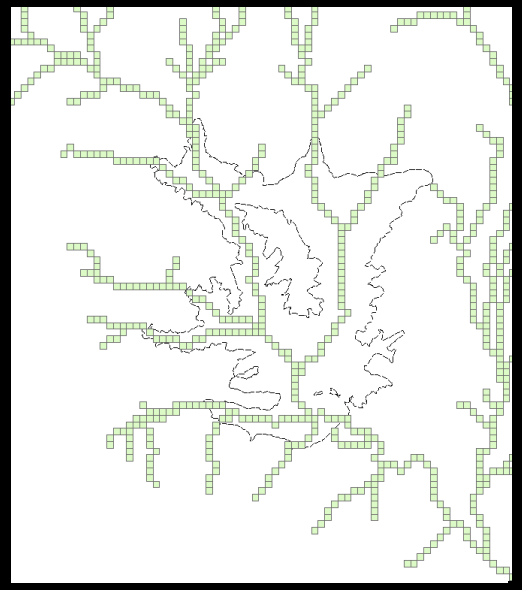
Figure 2.4 Municipal Wells and Water Provider Service Areas

Source: Draft Data Report, 2020

Draft Unimpaired Flow Scenario: Description

- Remove onsite wastewater treatment systems (OWTS) and inflow from WWTP
- All other water infrastructure is consistent with existing conditions
  - E.g. levees, channelization, imperviousness, flood bypasses, etc are kept
  - The effects of water infrastructure, excluding dams, on stream routing, infiltration, floodplain connectivity, etc. are kept
- Land use is consistent with existing conditions
  - Agricultural, municipal, industrial land use are kept
  - Existing vegetation is kept

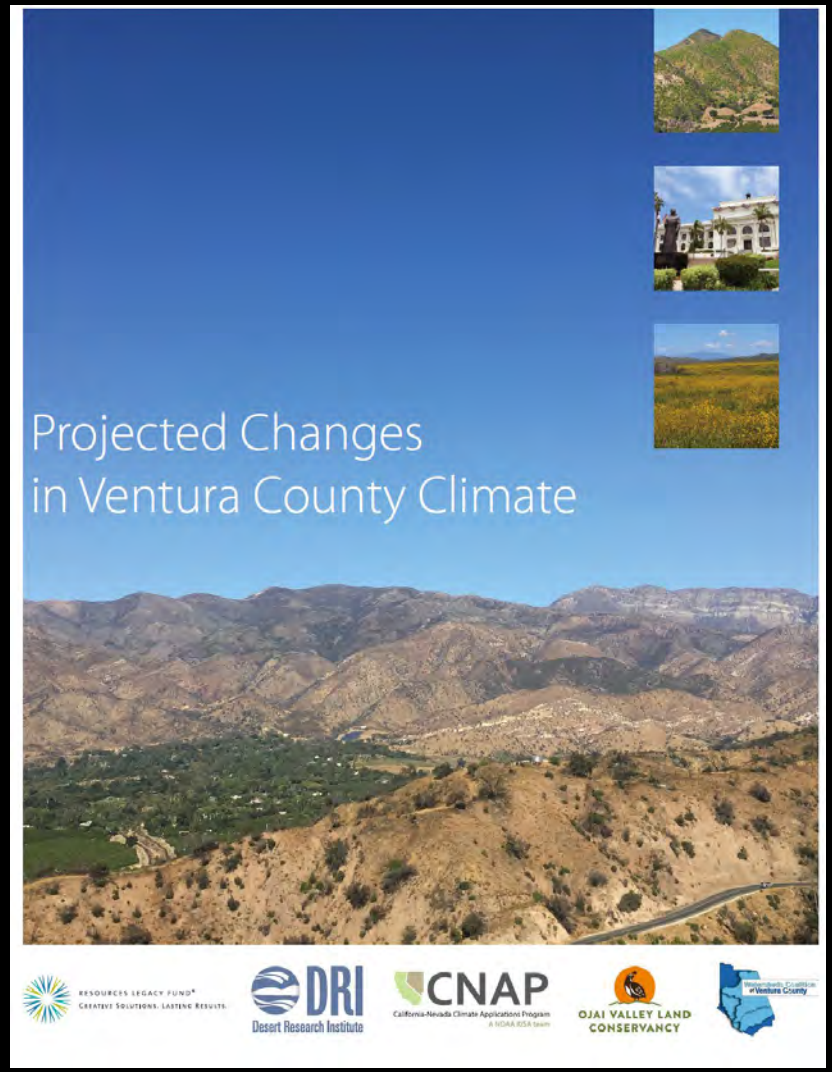




Questions?

Draft Climate Change Scenario: Purpose

- Purpose: How would WY 1994-2017 hydrology have been different with the climate change?
- Consulted Ben Hatchett, co-author of *Projected Changes in Ventura County Climate* (2019)
  - Authors down-scaled 32 global climate models to generate 32 projections for Ventura County
  - Focused on RCP 8.5 (Business as Usual) pathway
  - Compared 1950-2006 baseline to 2021-2040 future



Full Citation: Oakley, N.S., Hatchett, B.J., McEvoy, D., Rodriguez, L., 2019. Projected Changes in Ventura County Climate. Western Regional Climate Center, Desert Research Institute, Reno, Nevada. Available at: wrcc.dri.edu/Climate/reports.php

Air Temperature

- Consensus among the 32 climate models that temperature in the VRW will increase
- Scenario: 75% percentile temperature change
  - 75% of the models predict less temp increase
  - 25% of the models predict a greater temp increase
  - Net increase from baseline period to the 2021-2040 period

(Oakley et al., 2019)

CHANGES IN MAXIMUM TEMPERATURE

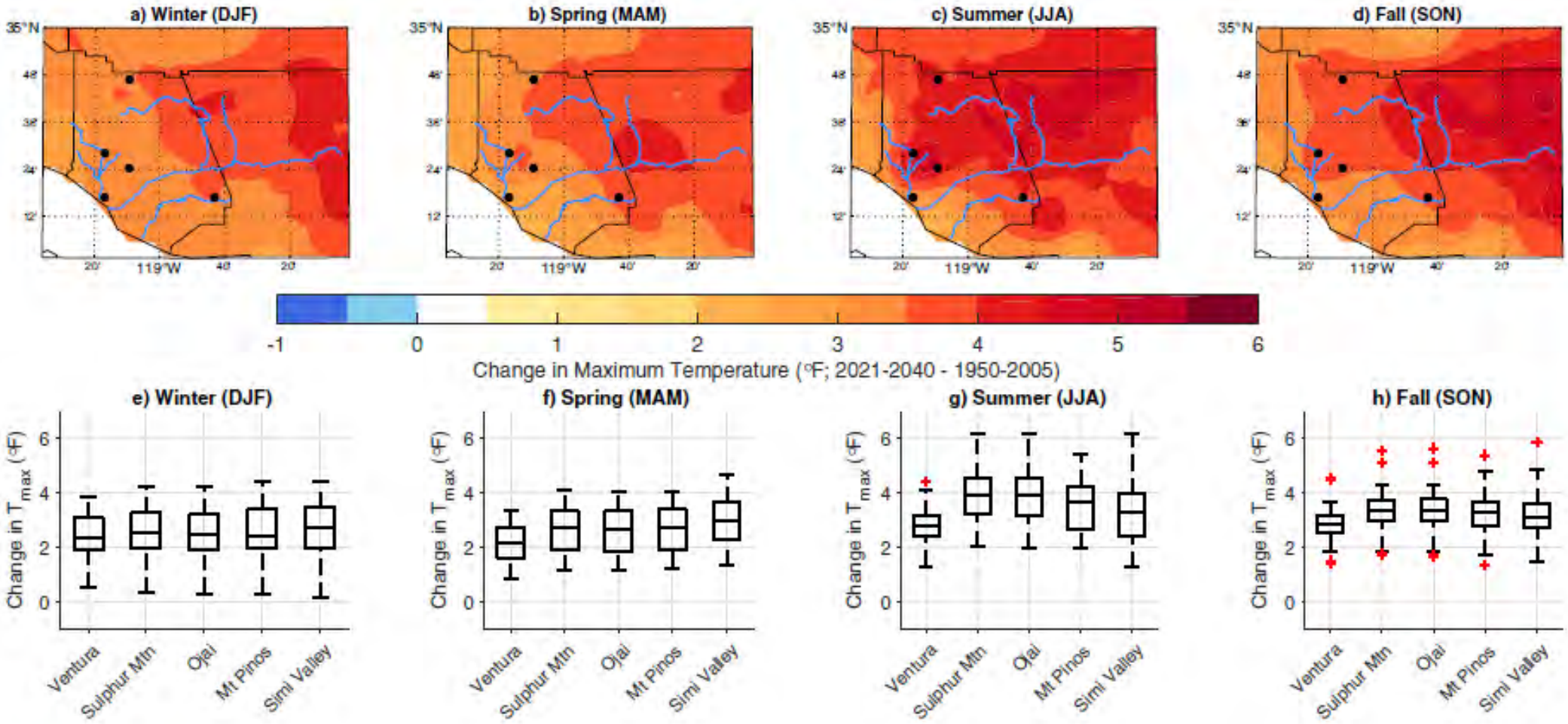


FIGURE 3.1: Change in maximum temperature by season, 2021–2040 mean minus 1950–2005 mean. The top row shows the minimum change that ≥75% of models (≥24 of 32) agree on. Bottom row depicts spread of average change in maximum temperatures across all 32 CMIP5 models for five selected locations within Ventura County (black dots on map). Rivers and creeks are shown as blue lines (Fig. 1.1).

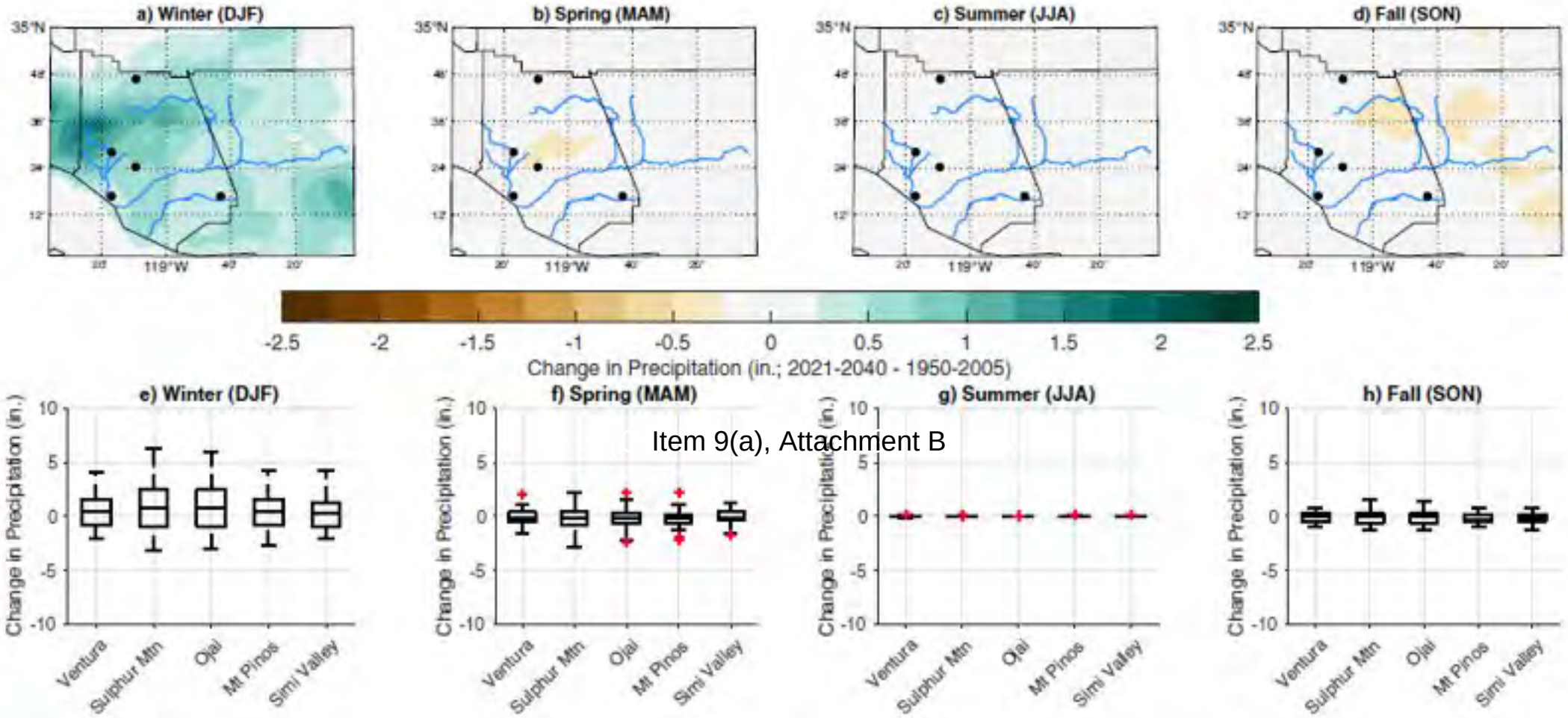
(Oakley et al., 2019)

Precipitation

- Wide range of potential changes in annual average precipitation amongst 32 climate models
- The median prediction:
  - Additional rain in the winter season (~1 inch on average)
  - Slight drying (less than 0.5 inches) in other seasons
- *Variability* of precipitation is likely to increase
  - More extreme events (wetter wets, drier dries)
  - Less wet days, increased rainfall intensity
  - More dry days

(Oakley et al., 2019)

AVERAGE SEASONAL PRECIPITATION CHANGE



Item 9(a), Attachment B

FIGURE 4.2: Changes in average seasonal precipitation (2021–2040 minus 1950–2005), shown as: a-d) Median average precipitation change across models for each season; e-h) Spread in average seasonal precipitation change across all 32 CMIP5 models for five selected locations within Ventura County (black dots on map).

(Oakley et al., 2019)

CHANGE IN CONTRIBUTION TO TOTAL PRECIPITATION FROM TOP 5% OF WETTEST DAYS

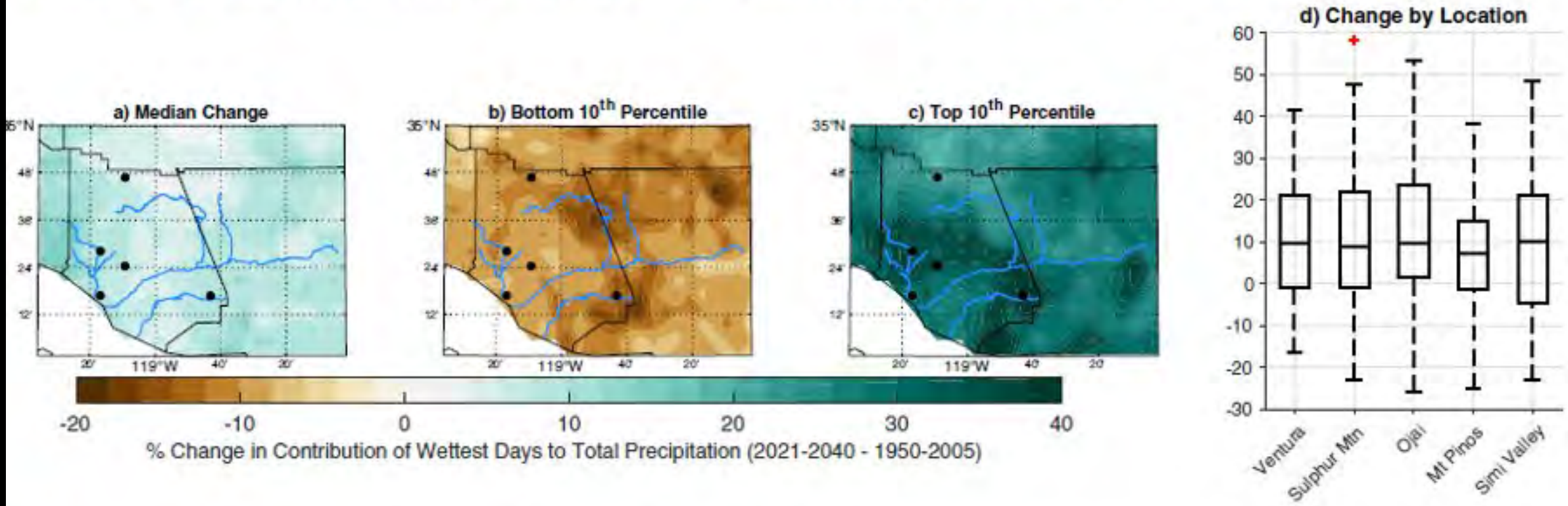


FIGURE 4.4: Changes in contribution of the top 5% of wettest days to total annual precipitation (2021–2040 minus 1950–2005) as: a) Median change in contribution across models; b) The bottom 10th percentile (decile with smallest or negative change in contribution) in a distribution fit to the model range of values; c) The top 10th percentile (decile with greatest positive changes in contribution) in a distribution fit to the model range of values; d) Spread in change in contribution across all 32 CMIP5 models for five selected locations within Ventura County (black dots on map).

(Oakley et al., 2019)

CHANGE IN AVERAGE ANNUAL NUMBER OF DRY DAYS

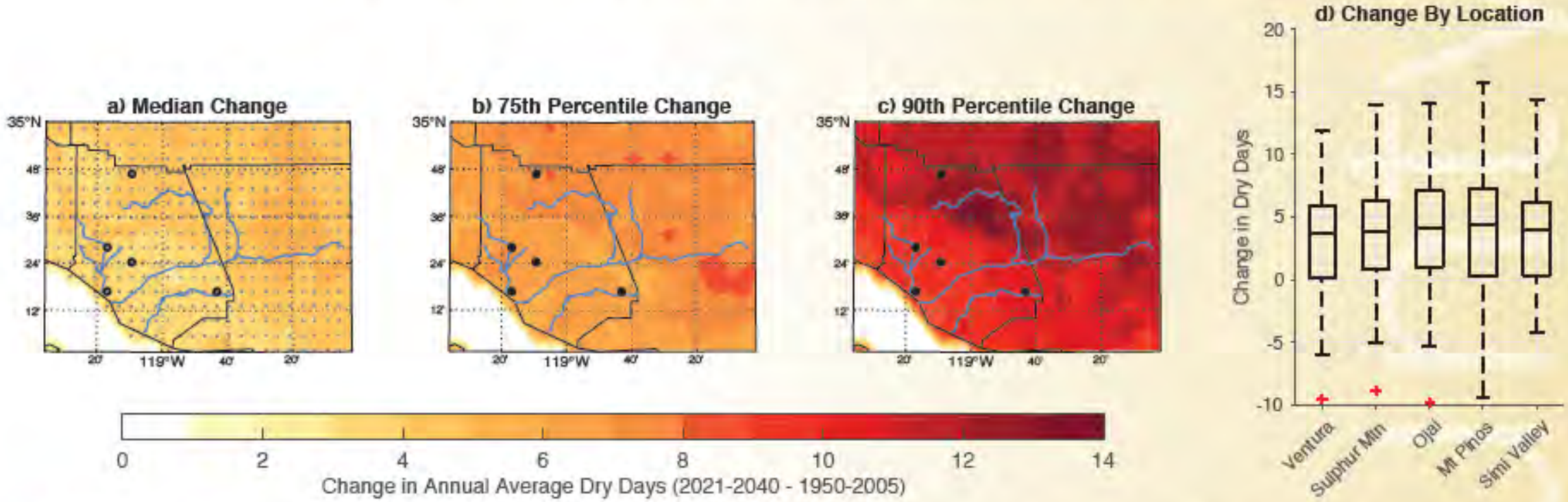
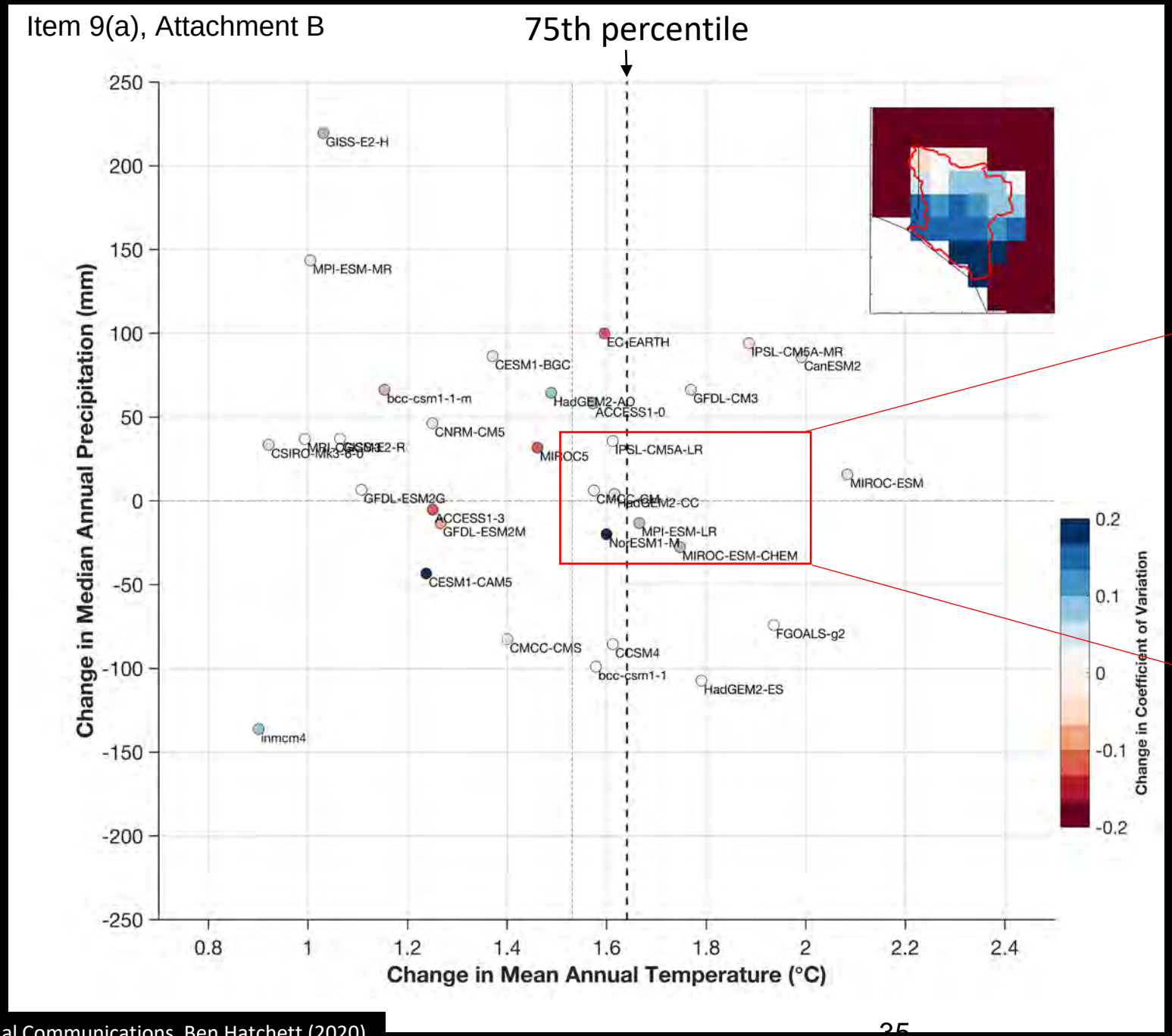
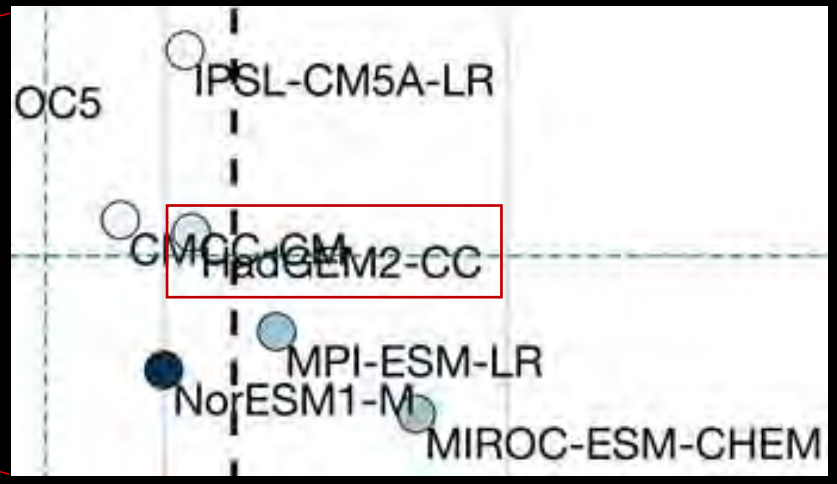


FIGURE 4.5: Change in average annual number of dry (zero precipitation) days, 2021–2040 minus 1950–2005 for: a) median change across all models as filled contours with grid cells where at least 75% (24 of 32) of models are in agreement on an increase in number of dry days shown as dots; b) The 75th percentile change in dry days (upper quartile) in a distribution fit to the model range of values; c) The 90th percentile change in dry days (uppermost decile) in a distribution fit to the model range of values; d) Spread in change in annual dry days across all 32 CMIP5 models for five selected locations within Ventura County (black dots on map).

(Oakley et al., 2019)



- 32 climate model projections for Ventura River Watershed
- Selected HadGEM2-CC



Personal Communications, Ben Hatchett (2020)

Personal Communications, Ben Hatchett (2020)

Modified from (Oakley et al., 2019)

Draft Climate Change Scenario: Description

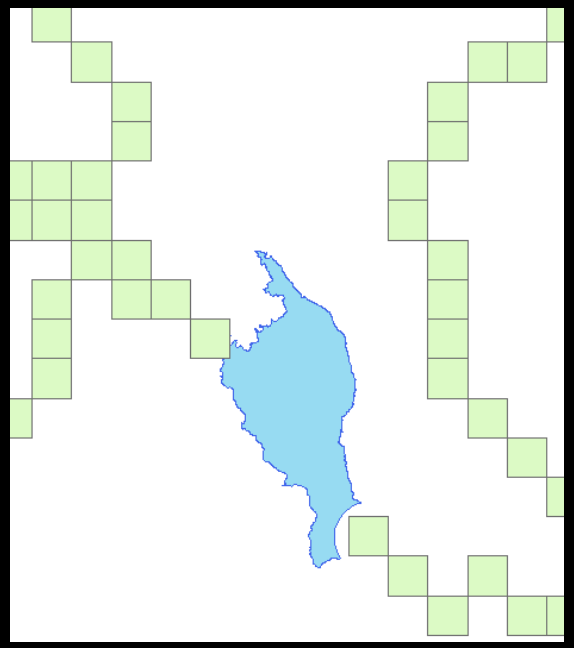
- Scenario: Simulate the projected effects of the next 20 years of climate change in Ventura County on WY 1994-2017
- Use HADGEM2-CC results for 2021-2040 to change daily timeseries of historic meteorology (WY 1994-2017)
  - Air Temperature:
    - Will be increased
    - Seasons, locations
  - Precipitation:
    - Average precipitation amounts not changing
    - Temporal and spatial differences
  - Evapotranspiration (ET)
    - Calculated using PRMS air temperature and adjusted if necessary
  - Demands

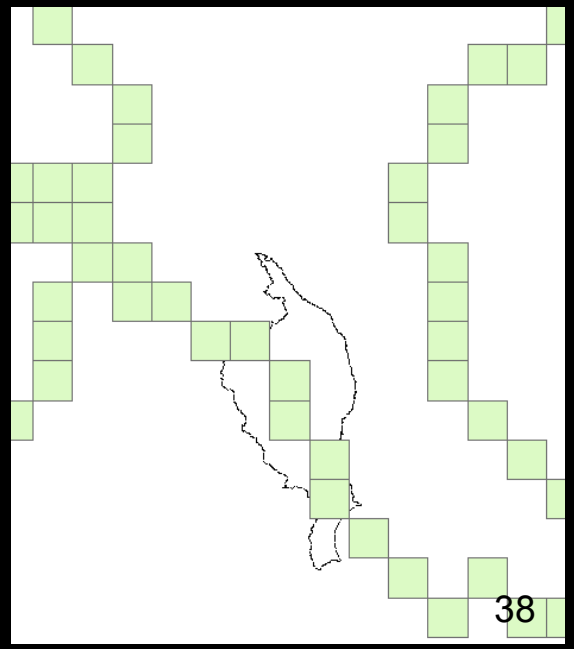
(Oakley et al., 2019)

Questions?

Draft Matilija Dam Removal Scenario: Description

- Purpose: Evaluate the impact of Matilija Dam removal on surface water flows and groundwater levels for WY 1994-2017
- Scenario: Remove dam, sediment, and reservoir releases. Create stream network to route flows.





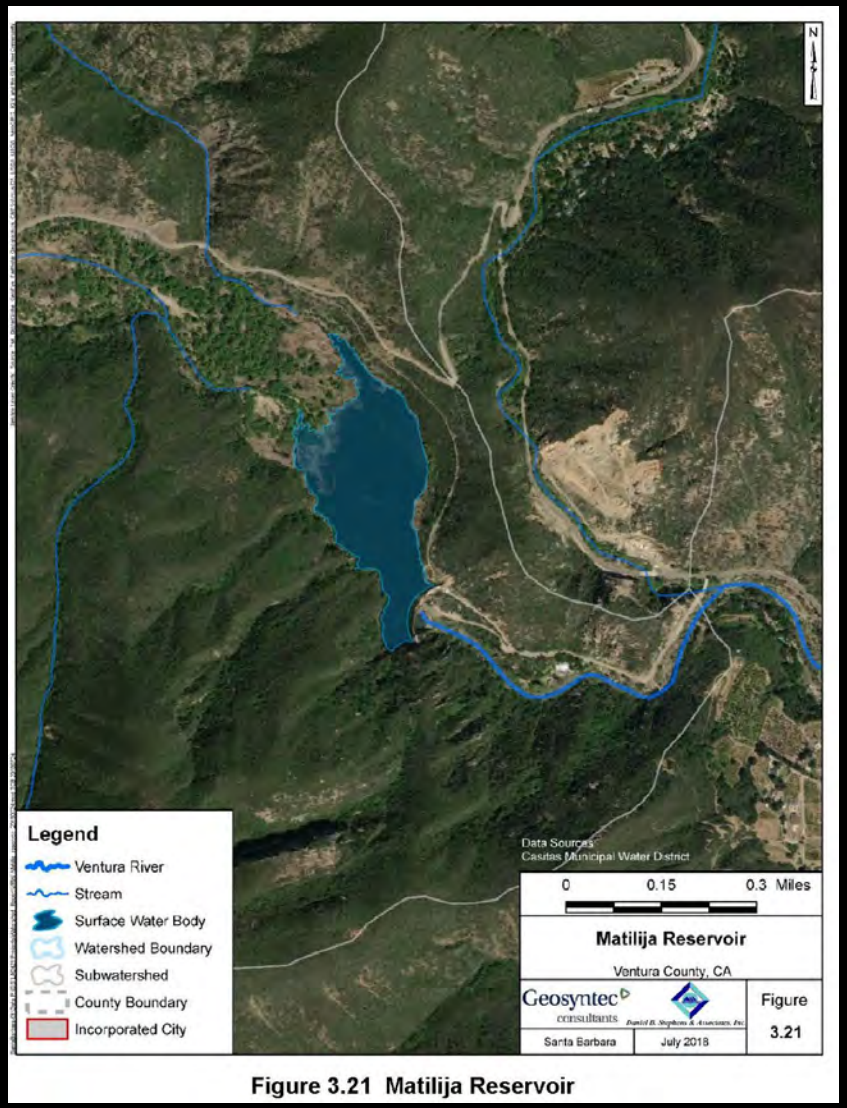
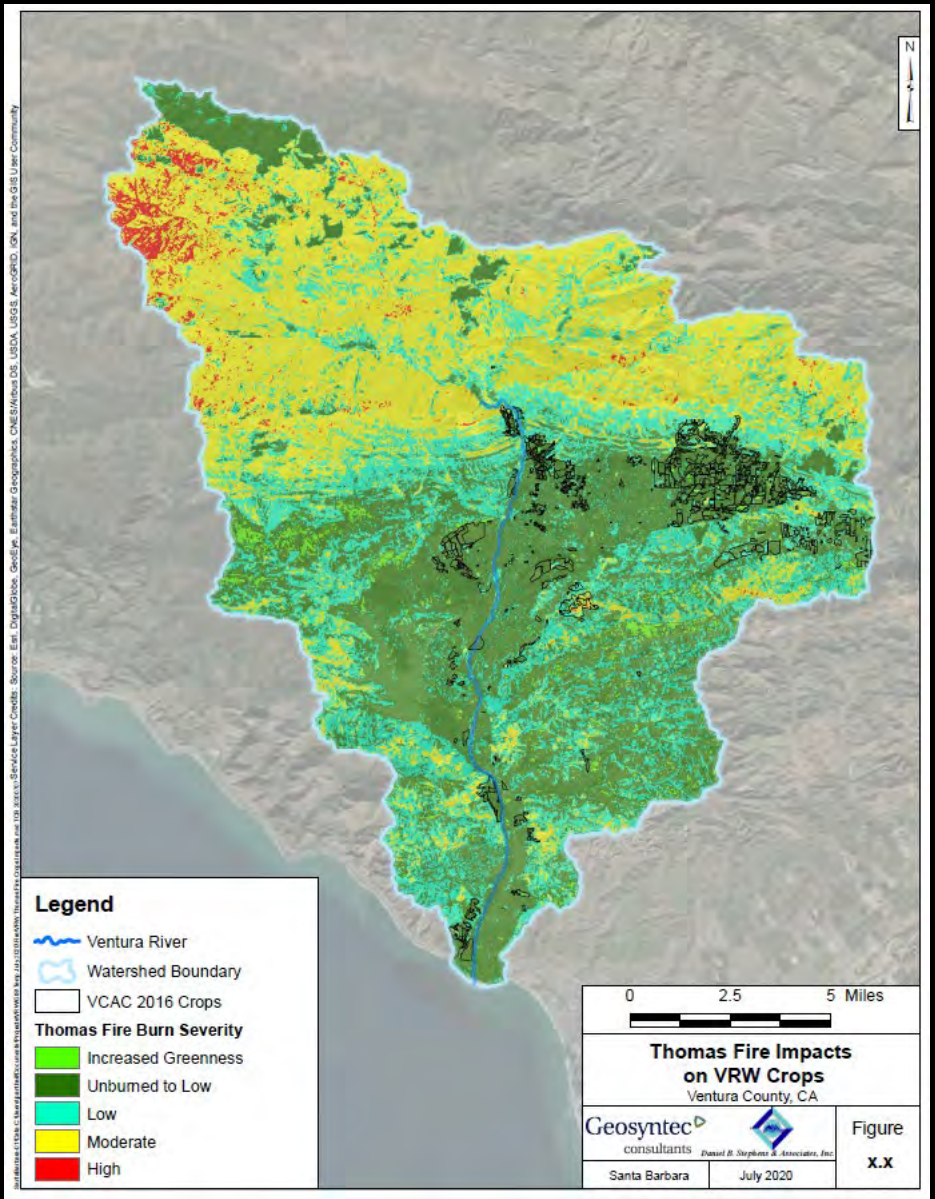


Figure 3.21 Matilija Reservoir

Source: Draft Data Report, 2020

Draft Post-Thomas Fire Recalibration: Description

- Purpose: Evaluate impact of 2017-2018 Thomas Fire on surface water flows and groundwater levels
- Scenario: Re-calibration of GSFLOW model for WY 2018- 2020
- Developing list of WY 2018-2020 data needs
  - e.g. water demand, Lake Casitas operations
- Run WY 1994-2017 calibrated model for WY 2018-2020 and compare
- Adjusting model parameters
  - Hydrophobic soil: run-off parameters
  - ET: soil capillary storage, PET coefficients
  - Riparian ET: extinction depth, PET coefficients
  - Canopy interception: cover density
  - Land-use: crops



Questions?

BREAK, back in 15 minutes

Ideas for the four TBD Scenarios

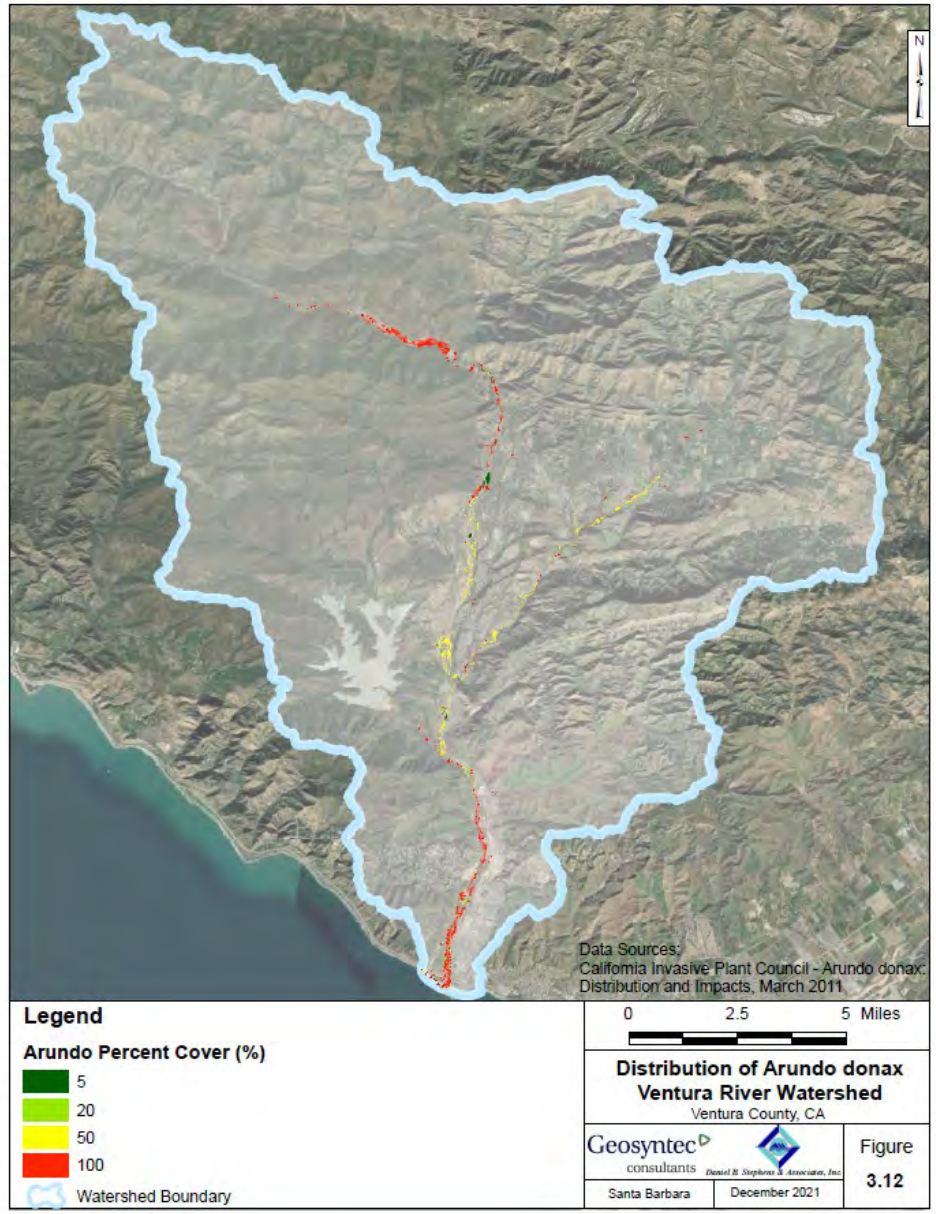
- CDFW's instream flow recommendation
- Eradication of invasive *Arundo donax*
- Groundwater sustainability plans
- Local cooperative agreements
- New water supplies in the watershed

Draft Scenario Idea: CDFW Instream Flow Recommendation

- Idea: What water demand reductions are needed to meet CA Department of Fish and Wildlife's flow recommendations, *exactly as is*, for WY 1994-2017?
- What changes in the scenario: Water demand
- Question: How is water demand reduced to meet the flow recommendations?
  - Water rights curtailment following water rights priority system
  - Unless we get a Local Cooperative Agreement
    - Blanket water use reduction across the watershed
    - Package of water user specific reductions

Draft Scenario Idea: Eradication of *Arundo donax*

- Idea: How would the eradication of *Arundo donax* have changed surface flows and groundwater levels during WY 1994-2017?
  - Arundo in the VRW is estimated to use ~5,000 acre-ft more water per year compared to native riparian species
- What changes in the scenario?
  - Replace *Arundo donax* with native vegetation
  - PET rates (24 acre-ft/acre/year → 4 acre-ft/acre/year)
  - Rooting depth (extinction depth)



California Invasive Plant Council. 2011. *Arundo donax*, Distribution and impact report. Agreement No. 06-374-559-0. Prepared for State Water Resources Control Board, Sacramento, CA. March, 2011.

Draft Scenario Idea: Groundwater Sustainability Plans

- Idea: How would groundwater levels and surface water flows have been different for WY 1994-2017 if the Ojai Basin and Upper Ventura River Basin GSPs were in place?
- What changes in the scenario?
  - Groundwater pumping consistent with GSPs
- Request: Need plan summaries and data (what/when/where details)

Draft Scenario Idea: Local Cooperative Agreements

- Idea: How would a local water management agreement have changed surface water flows and groundwater levels during WY 1994-2017?
- What changes in the scenario?
  - Water demand
    - Blanket water use reduction across the watershed
    - Package of water user specific reductions
    - Instream flow dedications
  - Land-use
    - E.g., large scale ornamental turf replacement
    - Change existing land use to a new type
  - Imperviousness: increase urban infiltration
    - E.g., decrease effective imperviousness in City of Ojai
- Request: Need proposals and data (what/when/where details)

Other TBD Scenario Ideas

- New water supplies in the watershed
  - City of Ventura connection to State Water Project water (reducing demand on VRW?)
  - Horizontal tunnels above Lake Casitas
- Drought planning
  - Water use reduction during drought years or all years
- Additional climate change scenarios (31 other projections)
- Combine existing scenarios
  - Unimpaired flow with climate change
  - Matilija Dam removal with climate change
  - Local Cooperative Agreement with climate change
- Any other scenarios ideas?

Maps

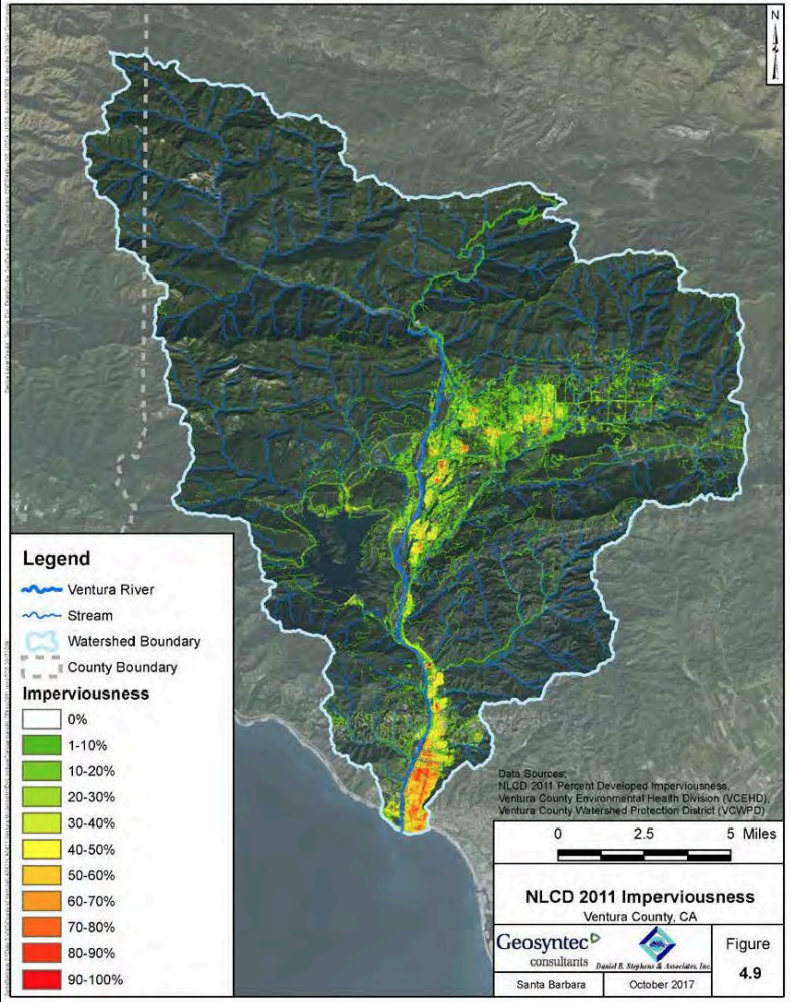


Figure 4-9 National Land Cover Dataset 2011 Imperviousness

Source: Study Plan, 2019

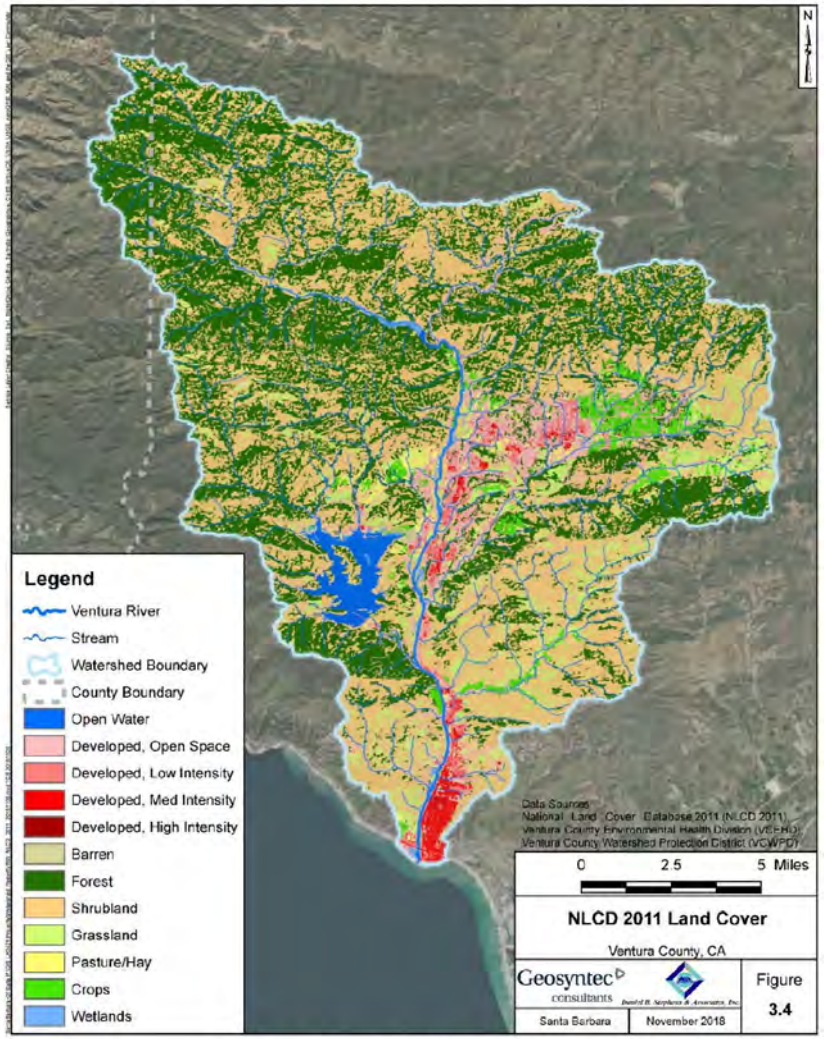


Figure 3.4 NLCD 2011 Land Cover

Source: Draft Data Report, 2020

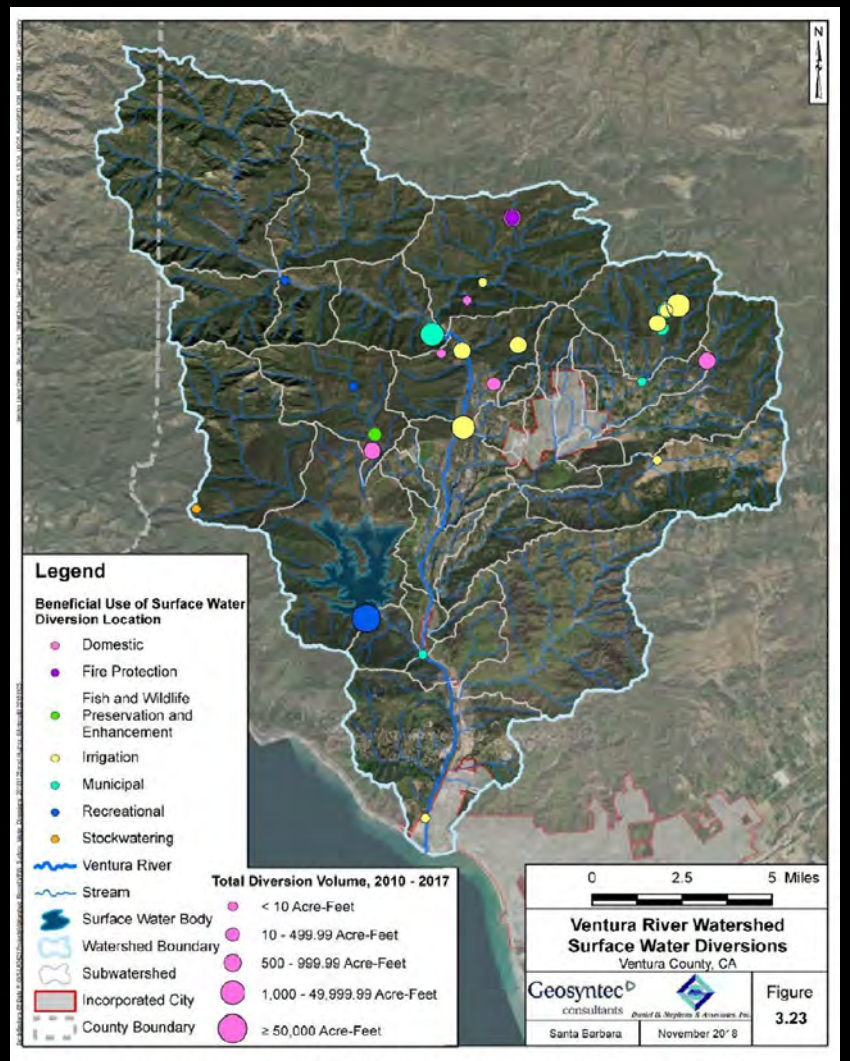


Figure 3.23 Ventura River Watershed Surface Water Diversions

Source: Draft Data Report, 2020

Maps

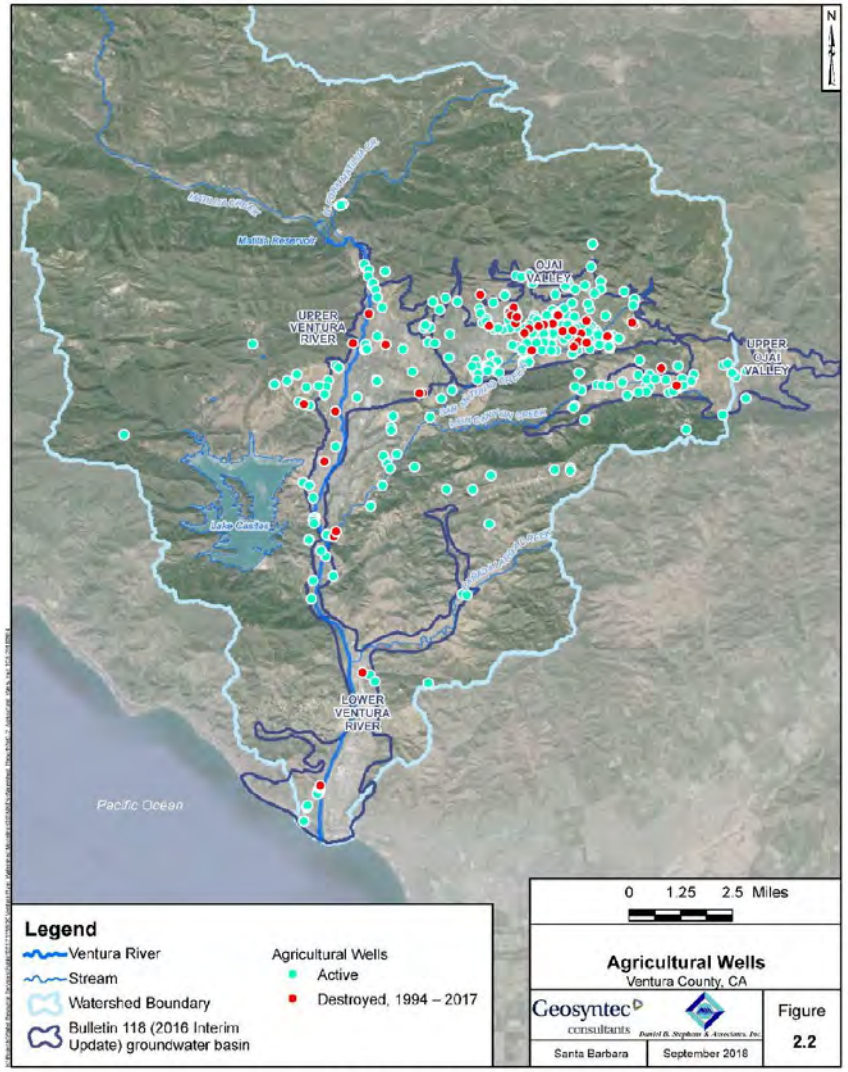


Figure 2.2 Agricultural Wells

Source: Draft Data Report, 2020

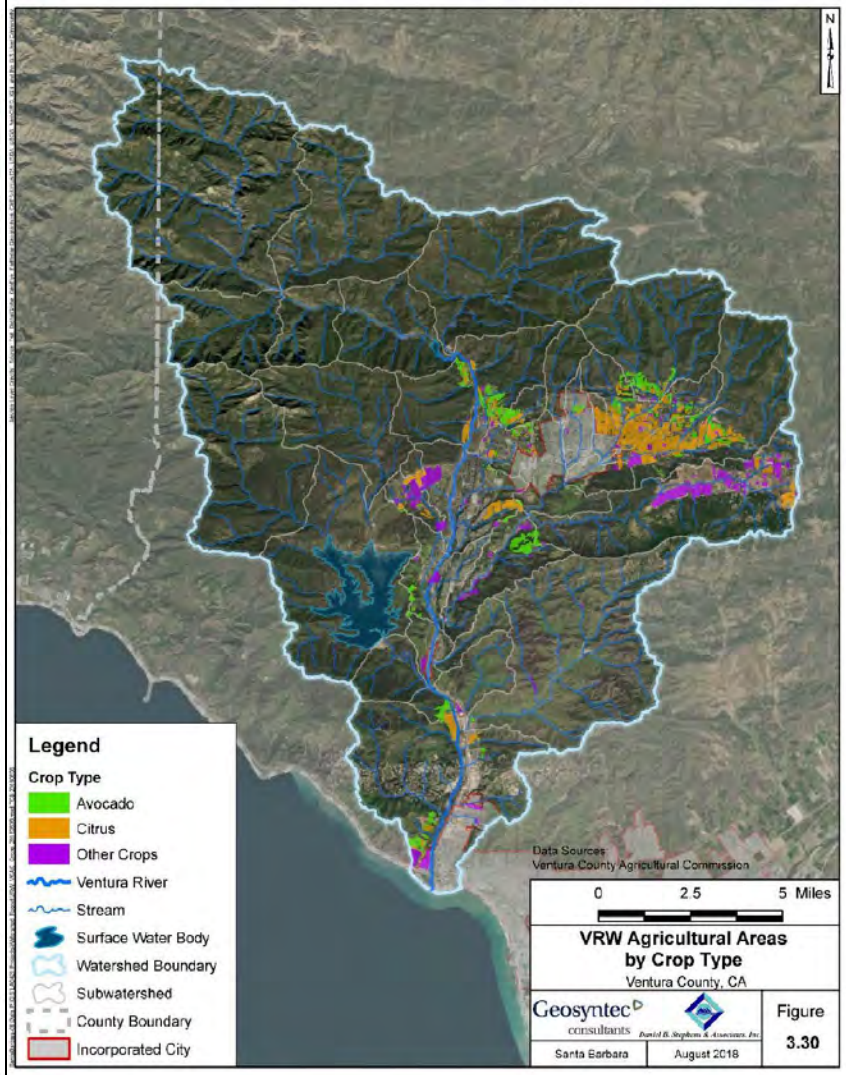


Figure 3.30 VRW Agricultural Areas by Crop Type

Source: Draft Data Report, 2020

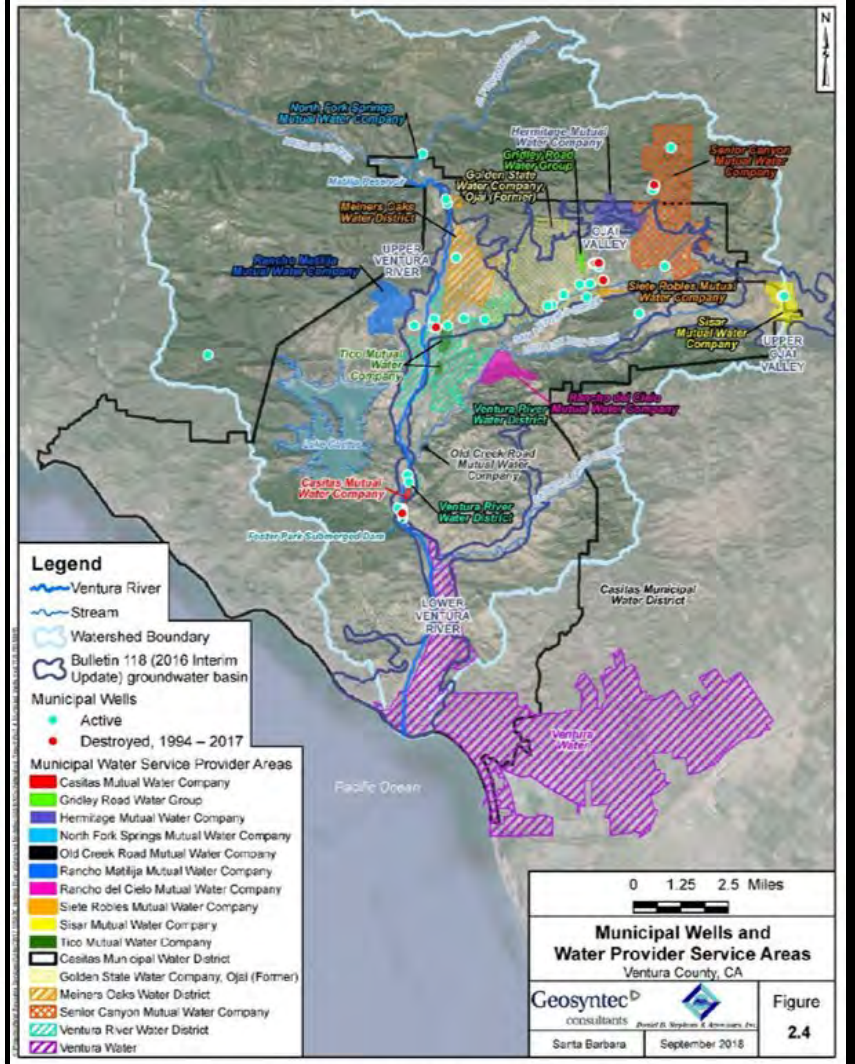


Figure 2.4 Municipal Wells and Water Provider Service Areas

Source: Draft Data Report, 2020

Upcoming Deliverables

Draft Deliverables	Anticipated Timeline
• ~~Preliminary Draft GW-SW model and user manual~~	~~August 2021~~
• ~~GW-SW scenarios methodology webinar~~	~~October 29, 2021~~
• Draft VRW GW-SW Model and Report	December 2021
• Draft VRW Nitrogen Transport Model and Report	Spring 2022

Draft VRW GW-SW Model and Report

- Purpose: Solicit comments on Draft VRW GSFLOW model and model report
- Report will include
  - Model setup, calibration and validation results
  - Unimpaired flow scenario result
- User Manual

Expected: December 2021
Announced On: CWAP and VRWC email lists, email to TAC

TAC and Public Comment Period
- 60+ days
- 12-hour training (beginning is general, remainder is training for modelers)
- Targeting February 2022 for training

Draft VRW Nitrogen Transport Model and Report

- Purpose: Solicit comments on Draft VRW MT3D-USGS model and model report
- Model report will include
  - Model setup, calibration and validation results
  - All scenario results
- Training materials

Expected: Spring 2022
Announced On: CWAP and VRWC email lists, email to TAC

TAC and Public Comment Period
- 30-days
- 4-hour technical training (previous training highly recommended)

52

Ojai Valley Basin, October 2018. Project Team.

Questions?

Instream Flow Unit: Ventura River Watershed website:
https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/cwap_enhancing/ventura_river.html

or search:
"California Water Action Plan State Water Board"

SWRCB

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Stefanie Hada
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Thank you for participating!

- If you want to coordinate on scenarios, please contact us.
- Please email technical comments and data to **InstreamFlows@waterboards.ca.gov** by **Friday December 3, 2021**

Slides and Meeting Recording

https://www.waterboards.ca.gov/waterrights/water_issues/programs/instream_flows/cwap_enhancing/ventura_river.html
or search: “California Water Action Plan State Water Board”

- Link to meeting recording on IFU: Ventura Website
- VRW Modeling TAC FTP
  - https://ftp.waterboards.ca.gov
  - Copies of slides and chat log
  - Link to meeting recording
- Login
  - username: IFUVenturaTAC
  - password (case sensitive): S7i1Xb
- Locate files and download
- Need help? Contact Kevin DeLano

Water Boards Lyris Email List

- Please subscribe
- State Water Board's **Email Subscription List**
  - *https://www.waterboards.ca.gov/resources/email_subscriptions/swrcb_subscribe.html*
- Under Division of Water Rights
  - "California Water Action Plan/Statewide Instream Flows"

Thank You

- State Water Resources Control Board
  - Daniel Worth, MS, Senior Environmental Scientist, daniel.worth@waterboards.ca.gov
  - Kevin DeLano, GIT, MS, Geologist, kevin.delano@waterboards.ca.gov
  - Rajaa Hassan, PE (CA), MS, Water Resources Control Engineer, rajaa.hassan@waterboards.ca.gov
  - Shahab Araghinejad, PhD, Water Resources Control Engineer, shahab.araghinejad@waterboards.ca.gov
- Los Angeles Regional Water Quality Control Board
  - Jun Zhu, PhD, Senior Environmental Scientist, jun.zhu@waterboards.ca.gov
  - Alexander Prescott, MS, Environmental Scientist, alexander.prescott@waterboards.ca.gov
  - Stefanie Hada, MS, Water Resources Control Engineer, stefanie.hada@waterboards.ca.gov
- Geosyntec Consultants
  - Brandon Steets, PE (CA), MS, Principal, Project Director
  - Al Preston, PE (CA), PhD, Project Manager, Modeler
- Daniel B. Stephens & Associates
  - Stephen J. Cullen, PG (CA, ID), PhD, Hydrogeologist
  - Gregory Schnaar, PG (VA), PhD, Hydrologist
  - Farag Botros, PE (CA), PhD, Hydrogeologist

UPPER VENTURA RIVER GROUNDWATER AGENCY Item No. 10(a)

DATE: November 15, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Groundwater Sustainability Plan Update (Grant Category (e); Task 12: GSP Reviews and Approvals)

SUMMARY

Progress on the Groundwater Sustainability Plan (GSP) since the last update included the following:

1. **GSP**: The GSP Development team prepared responses to comments received on the draft GSP. A comment response table and redline GSP edits were posted to the Agency website on November 5, 2021. Please see Item No. 10(b) for more information.

2. **Outreach**: The interested parties were emailed concerning availability of the comment response table and redline GSP edits and the November 15, 2021 Board meeting to discuss those items.

3. **GSP Development Schedule**: The updated GSP Development Schedule is provided in Attachment A. The Board is required to hold a public hearing prior to adopting the GSP. Item No. 10(c) addresses scheduling of the public hearing.

4. **GSP Budget Status**: $94,100 of budget was remaining for completion of the GSP as of September 30, 2021. October expenditures on the GSP totaled $25,720.25, leaving $68,379.75 to complete the GSP. The GSP Development Team feels good about the budget status at this juncture.

RECOMMENDED ACTIONS

Receive an update from the Executive Director concerning groundwater sustainability plan development and consider providing feedback.

BACKGROUND

Not applicable.

FISCAL SUMMARY

Not applicable.

ATTACHMENTS

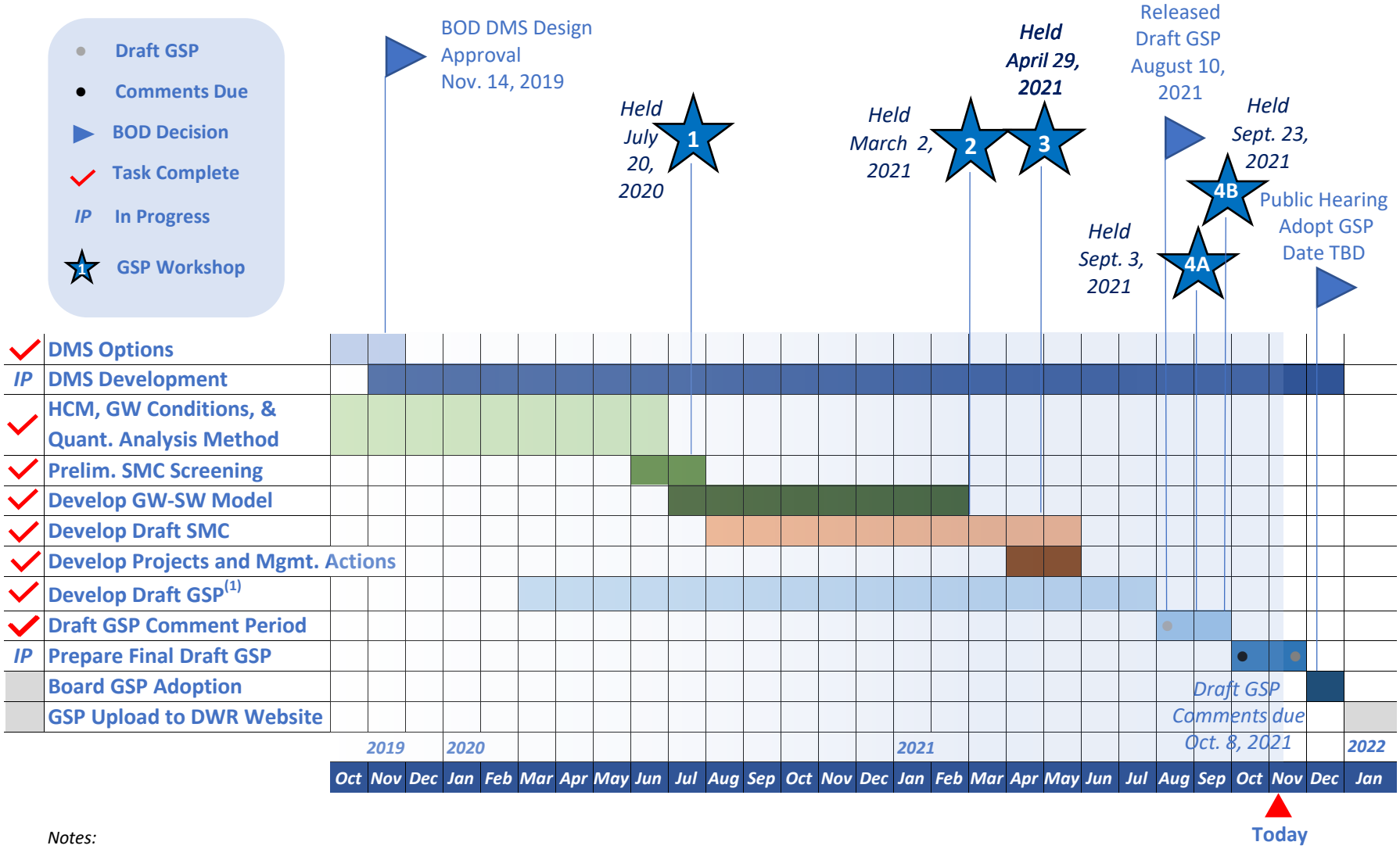
A. GSP Development Schedule

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ P. Kaiser___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

Upper Ventura River Groundwater Agency
GSP Development Schedule Updated November 10, 2021



Notes:

(1) GSP topics not listed above generally consist of background or supporting information and will be prepared concurrently with the above-listed tasks.

BOD = Board of Directors; DMS = Data Management System; HCM = Hydrogeologic Conceptual Model; GSA = Groundwater Sustainability Agency; GSP = Groundwater Sustainability Plan; GW = Groundwater; SW = Surface Water

UPPER VENTURA RIVER GROUNDWATER AGENCY Item No. 10(b)

DATE: November 15, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Draft Groundwater Sustainability Plan (GSP) Comment Responses and GSP Edits (Grant Category (e); Task 12: GSP Reviews and Approvals)

SUMMARY

The GSP Development team prepared responses to comments received on the draft GSP and updated the draft GSP based on those comments. A comment response table and redline GSP edits were posted to the Agency website at https://uvrgroundwater.org/sgma-overview/ for review and consideration on November 5, 2021.

RECOMMENDED ACTIONS
Discuss the draft GSP comment responses and GSP edits and consider providing feedback to staff.

BACKGROUND
Not applicable.

FISCAL SUMMARY
Please see GSP budget summary provided in Item No. 10(a).

ATTACHMENTS
None.

The GSP comment response table and redline GSP edits are posted at https://uvrgroundwater.org/sgma-overview/.

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ P. Kaiser___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

UPPER VENTURA RIVER GROUNDWATER AGENCY Item No. 10(c)

DATE: November 15, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Schedule Public Hearing for GSP Adoption (Grant Category (e); Task 12: GSP Reviews and Approvals)

SUMMARY

A public hearing is required prior to adopting the GSP. It is recommended that a public hearing be included during the next regular Board meeting on December 9, 2021 or other date selected by the Board. The Board would have the option of adopting the GSP following the public hearing. If the public hearing results in Board requests for significant changes to the GSP, the Board would have the option of directing staff to modify the GSP and postpone adoption until a subsequent meeting.

A clean draft of the GSP will be posted to the Agency website prior to the public hearing. Assuming minimal additional changes are requested by the Board during Item No. 10(b), the clean draft can be posted on the Agency website by November 19, 2021. Any additional GSP issues that may arise can be discussed during the public hearing.

RECOMMENDED ACTIONS

Consider setting a date and time for a public hearing concerning adoption of the GSP.

BACKGROUND

Not applicable.

FISCAL SUMMARY

Please see GSP budget summary provided in Item No. 10(a).

ATTACHMENTS

None.

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ P. Kaiser___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

UPPER VENTURA RIVER GROUNDWATER AGENCY Item No. 10(d)

DATE: November 15, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Intera, Inc. Work Order No. 4 for Annual Report and Numerical Model Update

SUMMARY

Annual basin reports are required pursuant to the Sustainable Groundwater Management Act (SGMA). The purpose of this item is to authorize professional services by Intera, Inc. to assist the Executive Director with completion of the annual report. The annual report requirements are listed in the Background section of this staff report. One requirement is to provide a "description of progress towards implementing the Plan, including achieving interim milestones." This will entail assessing all sustainability indicators against the minimum thresholds, interim milestones, and measurable objectives developed in the GSP. In the case of the depletions of interconnected surface water sustainability indicator, it will be necessary to update the numerical model through the preceding water year to quantify depletions of interconnected surface water. Proposed Intera Work Order No. 4 includes these model update services.

Intera's proposed budget for the model update and annual report services is $51,040 (Attachment A). The Executive Director recommends adding $5,000 of contingency to the requested amount, making the recommended work order authorization amount $56,040. Use of any contingency funds would require a written request by Intera and written approval by the Executive Director. Because Work Order No. 4 is a time-and-materials contract, UVRGA will only be billed for the actual effort necessary to complete the remaining assigned work.

RECOMMENDED ACTIONS

Authorize the Executive Director to issue Work Order No. 4 to Intera, Inc. for annual report preparation and numerical model updates for an amount not to exceed $56,040.

BACKGROUND

Intera's Master Services Agreement was approved by the Board on April 12, 2019.

The required annual report elements include the following for the preceding water year:

- General information, including an executive summary and a location map depicting the basin covered by the report.

- A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

- Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:

- Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.
- Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.

- Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.

- Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.

- Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.

- Change in groundwater in storage shall include the following:
  - Change in groundwater in storage maps for each principal aquifer in the basin.
  - A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

- A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.

FISCAL SUMMARY

The estimated cost for Intera to complete the model updates is $11,770 (this total includes ½ of the project management budget shown in Intera's proposal – Attachment A). The current fiscal year budget does not include funding for model updates because it was thought that the model would be updated once every 5 years instead of annually. The adopted long range budget projection includes $54,636 for model updates in 2025 and additional amounts in later years. It is recommended that the long-range budget projection be updated to reflect the need to update the model annually and reallocate the model update costs to each year. In the meantime, the unanticipated expenses for the current fiscal year can be accommodated by drawing from the non-capital contingency line item in the budget, which has $26,767.

The estimated cost for Intera to assist the Executive Director with completing the annual report is $39,270 (this total includes ½ of the project management budget shown in Intera's proposal – Attachment A). The current fiscal year budget includes $45,000 for the annual report. The difference of $5,730 is allocated for the Executive Director's efforts on the annual report and any input that may be needed from Rincon Consultants.

ATTACHMENTS

A. Draft Intera, Inc. Work Order No. 4

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ P. Kaiser ___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

Statement of Work

Work Order No. 4

Numerical Model Update and First GSP Annual Report

To: Intera, Inc.
3838 W Carson St, Ste 380
Torrance, CA 90503
Attention: Abhishek Singh
Email: ASingh@intera.com

From: Upper Ventura River Groundwater Agency
202 W. El Roblar Dr., Ojai, California 93023
Attention: Bryan Bondy
Email: bbondy@uvrgroundwater.org

In accordance with our Master Services Agreement (**"MSA"**) dated April 12, 2019, the following Statement of Work (**"SOW"**) is entered into by Upper Ventura River Groundwater Agency (**"Customer"**) and Intera, Inc. (**"Provider"**) for a new project and/or services (collectively, **"Services"**):

GENERAL NATURE OF SERVICES:

1. Update Numerical Model through end of water year ending September 30, 2021, as further described in the attached proposal.
2. Prepare First GSP Annual Report spanning period between data presented in GSP and September 30, 2021, as further described in the attached proposal.
3. Services rendered shall result in final annual report submittal to DWR no later than March 31, 2022.
4. Provider shall ensure all work is performed under the supervision of a California Professional Civil Engineer or Professional Geologist.
5. Provider shall ensure all work is performed in accordance with UVRGA's adopted procedures.

SCOPE OF SERVICES: See attached proposal.

TERM: November 15, 2021 through March 31, 2022.

COMPENSATION AND PAYMENT: Time and material services, not-to-exceed $51,040, without prior written authorization. Labor Rates are pursuant to the attached proposal.

PAYMENT TERMS

Payments shall be due:

☐ upon the completion of the SOW

☒ as follows: Billing will occur on a monthly basis and shall be based on time and materials. All invoices will be payable on a Net-30 basis. Invoices are due on the 5th business day of each month. Invoices received after the 5th business day of the month are payable on a Net-60 basis. Payment may be delayed up to 30 days beyond these terms in the event of Board of Directors meeting cancellations.

ADDITIONAL TERMS AND CONDITIONS

This SOW will be governed by the terms and conditions of the MSA. In the event of any conflict between the terms set forth in this SOW and the MSA, the MSA shall be deemed to control the control the relationship between the parties with respect to the SOW.

[signature page follows]

ACCEPTED AND AGREED:

“PROVIDER” **INTERA, INC.**	**“CUSTOMER”** **UPPER VENTURA RIVER GROUNDWATER AGENCY**
By: Print Name: David Jordan Title: Vice President Date:	By: Print Name: Bryan Bondy Title: Executive Director Date:

INTERA Incorporated
3838 W. Carson Street, #380
Torrance, California 90503 USA
424.275.4055

November 9, 2021

Mr. Bryan Bondy, PG, CHG
Executive Director
Upper Ventura River Groundwater Agency
202 W. El Roblar Dr.
Ojai, CA 93023

RE: Proposal for UVRGA Model Update and SGMA Annual Reporting

Dear Mr. Bondy,

Under the direction of the UVRGA Board and Executive Director, INTERA has supported the development of the Upper Ventura River Groundwater Basin (UVRGB) Sustainability Plan and the numerical groundwater model for GSP associated analysis. As per SGMA Requirements (23 CCR § 356.2) all Groundwater Sustainability Agencies (GSAs) are required to submit annual reports to the California Department of Water Resources (DWR) by April 1 of each year following the adoption of the Plan. This proposal presents the scope, level of effort, and budget for the annual report. The annual report will also require updating the numerical groundwater model with the latest available hydrologic and water use data and performing model simulations to estimate streamflow depletions. As such, this proposal also includes scope, level of effort, and budget for the model update and streamflow depletion calculations.

As per SGMA requirements, the GSP annual report shall include the following components for the preceding water year:

(a) General information, including an executive summary and a location map depicting the basin covered by the report.

(b) A detailed description and graphical representation of the following conditions of the basin managed in the Plan:

(1) Groundwater elevation data from monitoring wells identified in the monitoring network shall be analyzed and displayed as follows:

(A) Groundwater elevation contour maps for each principal aquifer in the basin illustrating, at a minimum, the seasonal high and seasonal low groundwater conditions.

(B) Hydrographs of groundwater elevations and water year type using historical data to the greatest extent available, including from January 1, 2015, to current reporting year.

(2) Groundwater extraction for the preceding water year. Data shall be collected using the best available measurement methods and shall be presented in a table that summarizes groundwater extractions by water use sector, and identifies the method of measurement (direct or estimate) and accuracy of measurements, and a map that illustrates the general location and volume of groundwater extractions.

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(3) Surface water supply used or available for use, for groundwater recharge or in-lieu use shall be reported based on quantitative data that describes the annual volume and sources for the preceding water year.

(4) Total water use shall be collected using the best available measurement methods and shall be reported in a table that summarizes total water use by water use sector, water source type, and identifies the method of measurement (direct or estimate) and accuracy of measurements. Existing water use data from the most recent Urban Water Management Plans or Agricultural Water Management Plans within the basin may be used, as long as the data are reported by water year.

(5) Change in groundwater in storage shall include the following:

(A) Change in groundwater in storage maps for each principal aquifer in the basin.

(B) A graph depicting water year type, groundwater use, the annual change in groundwater in storage, and the cumulative change in groundwater in storage for the basin based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year.

(c) A description of progress towards implementing the Plan, including achieving interim milestones, and implementation of projects or management actions since the previous annual report.

The tasks and level of effort involved in the above tasks are summarized below:

1) **Task 1: Model Update**. The annual report requires "description of progress towards implementing the Plan, including achieving interim milestones". This will entail assessing all sustainability indicators against the minimum thresholds, interim milestones, and measurable objectives developed in the GSP. A key sustainability indicator for UVRGA is streamflow depletion, which cannot be directly measured and must be computed using the numerical groundwater model. The current numerical groundwater model covers the hydrologic period from January 2005 to September 2019. To support the 2022 annual report, the numerical model will be updated with hydrologic, pumping, and return-flow data through the most recent period with complete datasets (anticipated to be water year 2021, dependent on data availability). INTERA will coordinate with the UVRGA Executive Director to collect the required datasets including: groundwater pumping; streamflows; diversions; precipitation; evaporation; and water deliveries/use. Key water budget terms, such as natural recharge, groundwater evaporation rates, and return flows will be estimated based on the data collected. Transient model boundary conditions will be updated accordingly. For the purpose of this proposal, we have assumed no other changes to the model properties or numerical set-up.

2) **Task 2: Develop GSP Annual Report.** INTERA will develop the annual report as per the SGMA requirements, listed above. INTERA will coordinate with the UVRGA Executive Director to collect the necessary data for the GSP update, including: groundwater pumping; groundwater water levels; and water deliveries/use. The UVRGA data management system will be updated with the relevant hydrologic, pumping, and water use datasets. INTERA will use the data to develop appropriate graphs, maps, and tables for the GSP annual reporting purposes. INTERA will use the updated model (Task 1) to develop estimates of streamflow depletions. Similar to the GSP, INTERA will develop two scenarios: 1) historical conditions, and 2) historical conditions *with no groundwater pumping*. Streamflow depletions from groundwater pumping will be calculated by taking the difference in streamflow conditions at various locations between the two simulations.

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The model will also be used to generate maps depicting change in storage in the basin, as required by SGMA annual reporting regulations.

It is anticipated that the annual reports will require input, text, and discussion from the UVRGA Executive Director on groundwater conditions and plan implementation progress (including achieving interim milestones). INTERA will identify areas for the input and text from the UVRGA Director and coordinate with him to obtain and integrate the necessary information into the annual report. INTERA will submit one preliminary draft for review, revisions, and comments by the UVRGA Executive Director. INTERA will respond to one round of comments by the UVRGA Executive Director, and submit a draft report for review and comments by the UVRGA Board Members. INTERA will revise the draft report based on the comments received and submit the annual report and supporting data to DWR before April 1, 2022.

The estimated budget for the proposed scope is $51,040, as detailed in attachment A. We expect to start the work on the proposed scope upon getting the notice to proceed and will ensure submittal of the annual report before April 1, 2022.

We appreciate the opportunity to support the UVRGA on the development and submittal of the GSP Annual Report for the Upper Ventura River Groundwater Basin. If you have questions, comments, or concerns please do not hesitate to contact me.

Sincerely,

INTERA Incorporated

Abhishek Singh, PhD, PE
Project Manager
Vice President, Western Region

Attachment A: Detailed Budget

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Torrance, California 90503 USA
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			Task 1. Model Update		Task 2. Annual Report		Task 3. Project Management	
Labor Category	Proposed Staff	Rate	Hours	Cost	Hours	Cost	Hours	Cost
Principal Engineer/Scientist I		$250		$0		$0		$0
Principal Engineer/Scientist II	David Jordan	$220		$0		$0		$0
Principal Engineer/Scientist III	Abhishek Singh	$205	12	$2,460	32	$6,560	4	$820
Senior Engineer/Scientist I		$195		$0		$0		$0
Senior Engineer/Scientist II		$185		$0		$0		$0
Senior Engineer/Scientist III		$170		$0		$0		$0
Senior Engineer/Scientist IV	Steven Humphrey	$155	4	$620	80	$12,400		$0
Engineer/Scientist I		$145		$0		$0		$0
Engineer/Scientist II	Nathan Hatch	$135	40	$5,400	60	$8,100		$0
Engineer/Scientist III	Erick Fox	$125	16	$2,000	40	$5,000		$0
Engineer/Scientist IV	Mitsuyo Tsuda	$110	8	$880	48	$5,280		$0
Senior Technician		$115		$0		$0		$0
Technician		$72		$0		$0		$0
Senior Technical Editor		$115		$0		$0		$0
Tech Editor	Joanna Stakutis	$95		$0	16	$1,520		$0
Senior CAD/Graphics		$87		$0		$0		$0
CAD/Graphics		$76		$0		$0		$0
Project Analyst/Assistant		$105		$0		$0		$0
Project Associate		$75		$0		$0		$0
Travel and other Direct Costs		$0		$0		$0		$0
Subtotals				**$11,360**		**$38,860**		**$820**
Total								**$51,040**