UPPER VENTURA RIVER GROUNDWATER AGENCY

NOTICE OF REGULAR MEETING

NOTICE IS HEREBY GIVEN that the Upper Ventura River Groundwater Agency ("Agency") Board of Directors ("Board") will hold a **Regular Board Meeting at 1 P.M. on Thursday, March 11, 2021 via**

ON-LINE OR TELECONFERENCE:

DIAL-IN (US TOLL FREE) 1-669-900-6833
Find your local number: https://zoom.us/u/aeqVJLAxXP
JOIN BY COMPUTER, TABLET OR SMARTPHONE:
https://zoom.us/j/93878854989?pwd=cGFlNmR5NVJ1dTBwNXo4ZW5vVE9TQT09
Meeting ID: 938 7885 4989
Passcode: 985632
New to Zoom, go to: https://support.zoom.us/hc/en-us/articles/206175806

PER CALIFORNIA EXECUTIVE ORDER N-29-20, SECTION 3: A local legislative body 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 local legislative body. A physical location accessible for the public to participate in the teleconference is not required.

UPPER VENTURA RIVER GROUNDWATER AGENCY BOARD OF DIRECTORS REGULAR MEETING AGENDA

March 11, 2021

1. **MEETING CALL TO ORDER**

2. **PLEDGE OF ALLEGIANCE**

3. **ROLL CALL**

4. **APPROVAL OF AGENDA**

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 February 11, 2021 Regular Board Meeting
b. Approve Minutes from March 2, 2021 Special Board Meeting
c. Approve Financial Report for February 2021

7. DIRECTOR ANNOUNCEMENTS

a. Directors may provide oral reports on items not appearing on the agenda.
b. Directors shall report time spent on cost-share eligible activities for the 2017 Proposition 1 Sustainable Groundwater Management Planning (SGWP) Grant.

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. California Environmental Quality Act Notice of Exemption for Wildlife Conservation Board Grant Monitoring Sites (Resolution 2021-01)
The Board will consider adopting Resolution 2021-01 approving a notice of exemption covering the monitoring sites identified for the grant.

b. California Department of Fish and Wildlife Draft Instream Flow Regime Recommendations for the Lower Ventura River, Ventura County
The Board will discuss potential comments on the CDFW draft instream flow regime recommendations and consider providing direction concerning a comment letter.

10. GSP ITEMS

a. Groundwater Sustainability Plan Update (Grant Category (d); Task 11: GSP Development and Preparation)
The Board will receive an update from the Executive Director concerning groundwater sustainability plan development and consider providing feedback.

b. Groundwater Modeling Results (Grant Category (d); Task 11: GSP Development and Preparation)
The Board will receive an update concerning groundwater model results and will consider providing feedback to staff.

c. Degraded Water Quality Sustainable Management Criteria (Grant Category (d); Task 11: GSP Development and Preparation)
The Board will consider approving sustainable management criteria for the degraded water quality sustainability indicator for inclusion in forthcoming draft groundwater sustainability plan.

d. Special Board Meetings (Grant Category (c); Task 10: Stakeholder Outreach and Engagement)
The Board will consider scheduling special board meetings for GSP development.

e. GSP Workshop No. 3 (Grant Category (c); Task 10: Stakeholder Outreach and Engagement)
The Board will consider scheduling the third GSP public workshop.

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 Board meeting agendas.

13. ADJOURNMENT

The next scheduled Regular Board meeting is April 8, 2021.

UPPER VENTURA RIVER GROUNDWATER AGENCY
MINUTES OF REGULAR MEETING FEBRUARY 11, 2021

The Board meeting was held via teleconference, in accordance with California Executive Order N-25-20. Directors present were Bruce Kuebler, Larry Rose, Emily Ayala, Susan Rungren, Angelo Spandrio, Glenn Shephard, and Chair Diana Engle (arrived at 1:11 pm). Also present: Executive Director Bryan Bondy, Agency Counsel Keith Lemieux and administrative assistant Maureen Tucker.

ON-LINE OR TELECONFERENCE:

DIAL-IN (US TOLL FREE) 1-669-900-6833

Find your local number: https://zoom.us/u/amgLytQm

JOIN BY COMPUTER, TABLET OR SMARTPHONE:

https://zoom.us/j/92914179188?pwd=bHMyb1VQL3V4L21VTExXOWJYbURtdz09 Meeting ID: 929 1417 9188

Passcode: 214624

1) CALL TO ORDER

Vice Chair Kuebler called the meeting to order at 1:03 p.m.

Executive Director Bondy noted that Chair Engle will be approximately 10 minutes late.

2) PLEDGE OF ALLEGIANCE

Vice Chair Kuebler led the Pledge of Allegiance.

3) ROLL CALL

Executive Director Bondy called roll.

Directors present: Bruce Kuebler, Larry Rose, Susan Rungren, Angelo Spandrio, Glenn Shephard, Emily Ayala

Directors absent: Diana Engle

Public: Burt Handy and Steve Slack

4) APPROVAL OF AGENDA

Vice Chair Kuebler asked if there are any proposed changes to the agenda. No changes were requested.

Director Rose moved to approve the agenda. Director Ayala seconded the motion.

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	E. Ayala - Y
	S. Rungren – Y	G. Shephard – Y	A. Spandrio – Y

Absent: D. Engle

Noes: None.

5) PUBLIC COMMENTS ON ITEMS NOT APPEARING ON THE AGENDA

Vice Chair Kuebler asked if there were any public comments on items not appearing on the agenda. No public comments were offered.

6) CONSENT CALENDAR

a. Approve Minutes from January 14, 2021 Regular Board Meeting
b. Approve Financial Report for January 2021
c. Fiscal Year 2019-2020 Financial Statement Audit

Director Rose moved to approve the consent calendar. Director Rungren seconded the motion.

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	E. Ayala - Y
	S. Rungren – Y	G. Shephard – Y	A. Spandrio – Y

Absent: D. Engle

Noes: None.

7) DIRECTORS ANNOUNCEMENTS

a. Directors may provide oral reports on items not 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: He attended a recent adjudication status conference. The judge was critical of the State agencies for slow progress on their studies. No time to report.

Director Rungren: Ventura Water's water and wastewater rates study will be presented at the Water Commission meeting. No time.

Director Rose: He worked on access for monitoring wells (1 hour). He would like to update the Executive Director after the meeting.

Director Shephard: No report and no time.

Director Spandrio: No report and no time.

Director Ayala: Thanked her fellow directors for reappointment. Time: 1 ½ hours on stakeholder outreach and 1 hour on monitoring well access.

Director Engle arrived at 1:11 p.m. and stated that Meiners Oaks Water District is recruiting for a new general manager. No time.

8) EXECUTIVE DIRECTOR'S REPORT

Executive Director Bondy briefly reviewed the written staff report with the Board. He noted that grant invoice no. 6 payment was received on February 9, after the Board meeting packet was published. He thanked Director Kuebler for making the bank deposit.

Chair Engle asked for Director comments.

Director Ayala mentioned that a well owner expressed concerns about paying extraction fees at the beginning of the billing period. She suggested that the invoices be made more generic to help avoid this issue. The Board briefly discussed the matter. Executive Director Bondy said staff could make the change on the next batch of invoices.

Chair Engle asked for public comments. None were offered.

Executive Director Bryan Bondy reminded the Directors to complete their Form 700s.

9) ADMINISTRATIVE ITEMS

a. Fiscal Year 2021/2021 2nd Quarter Budget Report and Mid-Year Budget Modifications

Executive Director Bondy reviewed the staff report and recommended approval of the mid-year budget modifications. He added that the Ad Hoc Budget Committee favorably review the budget report and budget modifications.

Chair Engle asked for Director questions or comments. None were offered.

Director Spandrio moved to receive and file the second quarter budget report and approve the proposed mid-year budget modifications. Motion seconded by Director Shephard.

Chair Engle asked for public comments. None were offered.

Roll Call Vote: B. Kuebler – Y D. Engle – Y L. Rose – Y E. Ayala - Y
S. Rungren – Y G. Shephard – Y A. Spandrio – Y

Noes: None.

Absent: None

b. Rincon Consultants Work Order No. 4 for CEQA Review of Monitoring Sites Included in the Wildlife Conservation Board Grant

Executive Director Bondy briefly reviewed the written staff report with the Board and recommended approval of the work order.

Chair Engle asked if the work order is included in the budget. Executive Director Bondy explained that this was part of the budget modification in the prior item.

Director Rungren moved to authorize the Executive Director to execute Rincon Consultants Work Order No. 4 for an amount not-to-exceed $7,545 for a streamlined CEQA analysis and preparation of a NOE, including up to $2,455 for potential unanticipated costs, to be authorized at the discretion of the Executive Director. Motion seconded by Director Rose.

No public comments.

Roll Call Vote:	B. Kuebler – Y	D. Engle – Y	L. Rose – Y	E. Ayala - Y
	S. Rungren – Y	G. Shephard – Y	A. Spandrio – Y	

Noes: None.

Absent: None

10) GSP ITEMS

a. Groundwater Sustainability Plan Update (Grant Category (d); Task 11: GSP Development and Preparation)

Executive Director Bondy briefly reviewed the written staff report with the Board and added that he is coordinating with Ojai Valley News for an article ahead of GSP Workshop No. 2. He also reminded the Directors that they must register for the workshop if they plan to attend.

Chair Engle asked for Director questions or comments.

Director Kuebler asked if the Department of Fish and Wildlife and Water Board are on the interested parties list. Executive Director Bondy replied yes and added that he has periodic coordination calls with staff from those agencies.

Director Engle asked if groundwater level monitoring would continue even though the monitoring period funded by the GSP grant has concluded. Executive Director Bondy said the Agency has budgeted for ongoing monitoring in its long-range budget.

Chair Engle asked for public comments. None were offered.

No motion.

b. **Well Monitoring Network Annual Data Deliverable for Water Year 2019/2020 (Grant Category (b); Task 1)**

Executive Director Bondy briefly summarized the staff report and recommended receiving and filing the Well Monitoring Network Annual Data Deliverable for Water Year 2019/2020. He added that this is last deliverable for the data gaps portion of the GSP grant.

Chair Engle asked for Director questions or comments. None were offered.

Chair Engle asked for public comments.

Burt Handy said there are several monitoring wells located at the Ojai "burn dump" site located near Highway 150 and the Ventura River. He wondered if those monitoring wells could be used. Executive Director Bondy said that site is overseen by the County of Ventura and wondered if Director Shephard could check with his staff. Directors Shephard said he could inquire.

Director Ayala moved to receive and file the annual data logger report, seconded by Director Rose.

Roll Call Vote:	B. Kuebler – Y	D. Engle – Y	L. Rose – Y	E. Ayala - Y
	S. Rungren – Y	G. Shephard – Y	A. Spandrio – Y	

Noes: None.

Absent: None.

c. **Rincon Consultants Work Order No. 1 Proposed Budget Increase (Grant Category (a): Grant Administration)**

Executive Director Bondy briefly summarized the staff report and recommended approval of the work order budget increase for Rincon Consultants to assist with GSP development.

Chair Engle asked for Director questions or comments.

Director Ayala asked why Kear Groundwater is no longer being used to help prepare the GSP. Executive Director Bondy explained that there have been work performance issues and Kear Groundwater does not have the biological expertise needed to support certain aspects of the GSP.

Chair Engle noted that she is familiar with Rincon Consultants and said they have staff who work on TMDL monitoring in the Basin. Director Shephard added that the Rincon Consultants has assisted the County with several projects. Executive Director Bondy added that Rincon Consultants helps Casitas MWD with permitting issues.

Chair Engle asked if the requested budget increase will be sufficient. Executive Director Bondy replied that he is hopeful that it will be and noted that he is working closely with Rincon Consultants staff to stay focused.

Director Kuebler asked when chapters of the GSP would be release for review. Executive Director Bondy replied that the basin setting section was released in mid-2020 for review and has been available on the website. He added that the staff reports on GSP topics and the recently

published water quality white paper should be considered draft GSP content, as these documents will relied upon to prepare various GSP sections.

Chair Engle asked for public comments. None were offered.

Director Kuebler moved to authorize the Executive Director to increase the non-to-exceed budget for Rincon Consultants Work Order No. 1 to $77,500. Motion seconded by Director Ayala.

Roll Call Vote: B. Kuebler – Y D. Engle – Y L. Rose – Y E. Ayala - Y
S. Rungren – Y G. Shephard – Y A. Spandrio - Y

Noes: None.

Absent: None.

d. **Groundwater Model Update (Grant Category (d); Task 11; GSP Development and Preparation)**

Executive Director Bondy introduced the item and provided an overview describing what numerical groundwater models are, why a numerical model was developed for the GSP, and the overall process for developing a numerical model. He then turned the presentation over to Abhishek Singh of Intera, Inc. who described the development of the UVRGA numerical model, including model construction and calibration. Executive Director closed the presentation by discussing next steps for the numerical model and GSP development. (Note: The presentation slides are attached to the minutes)

Director Engle complemented staff and Intera on an outstanding presentation and asked whether septic leachate was considered as a source of recharge. Mr. Singh confirmed that septic flows are included in the model.

Chair Engle asked for Director comments.

Director Shephard stated that he concurred with Chair Engle and added that he especially appreciated the closing slide concerning next steps.

Director Kuebler thanked staff and Intera, Inc. for an excellent presentation. He asked whether the model calculates the velocity of groundwater flow. Executive Director Bondy said that velocities can be calculated from the model output, but that volumetric flow rates, groundwater levels, and groundwater - surface water interaction are what will be looked at for the GSP.

Director Ayala thanked staff and Intera Inc. for the presentation. She asked about irrigation demand variability throughout a given year. Mr. Singh explained that the model accounts for variable irrigation demand throughout the year. Director Ayala asked about the Matilija Dam removal and the resulting sediment load. Executive Director Bondy stated that effects of dam removal will be considered in the GSP implementation period as dam removal planning moves toward implementation.

Director Rose asked about faulting. Executive Director Bondy explained that the impact of faults is primarily on alluvium thickness.

Director Rungren thanked staff and Intera Inc. for the presentation. No questions.

Director Spandrio said the presentation was very informative. No questions.

Chair Engle asked for public comments.

Burt Handy asked how rain gauge data are factored into the model. Mr. Singh explained that data from the local rain gauges were used to help develop the recharge portion of the model.

COMMITTEE REPORTS

a. Ad Hoc Stakeholder Engagement Committee

Director Rose stated there is nothing to report at this time.

11) FUTURE AGENDA ITEMS

No items were identified.

12) ADJOURNMENT – The meeting was adjourned at 3:55 p.m.

Action: _____

Motion: _____ Second: _____

B.Kuebler____ D.Engle____ A.Spandrio____ S.Rungren____ G.Shephard____ E.Ayala____ L.Rose___

UPPER VENTURA RIVER GROUNDWATER AGENCY BOARD MEETING FEBRUARY 11, 2021

Upper Ventura River GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

ITEM 10D GROUNDWATER MODEL UPDATE

1

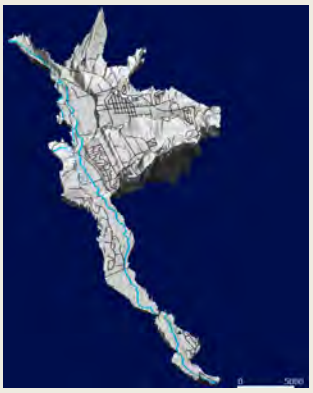
ITEM PURPOSE

1. Explain what models are and how they support planning
2. Describe UVRGA model construction and calibration results
3. Describe next steps for modeling to support GSP development

2

WHAT IS A NUMERICAL FLOW MODEL?

- Mathematical representation of the groundwater (GW) and surface water (SW) flow system
- Solves groundwater flow equation (GW level) and computes flows throughout the SW and GW systems
- A model is an approximation of the real system – only as good as the data upon which the model is based on



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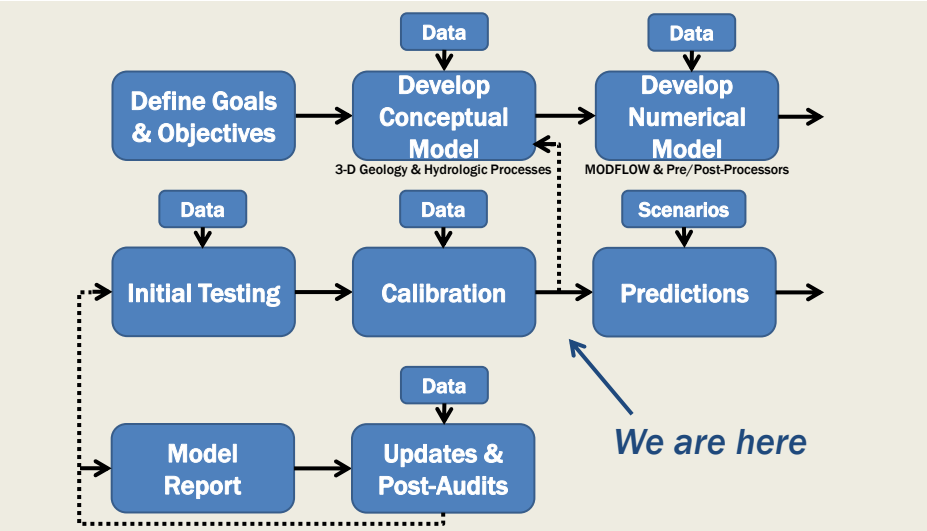
WHY DEVELOP A NUMERICAL FLOW MODEL?

- To make predictions and test unknowns:
  - Develop estimates of future groundwater conditions based on different assumptions
  - Estimate benefits of different projects or management actions (if needed)
  - Test hypotheses in areas with limited or no data
- To comply with SGMA
  - SGMA requires model or "equally effective tool" for:
    - Water budgets
    - Quantification of interconnected surface water depletion

4

GENERAL MODEL DEVELOPMENT PROCESS



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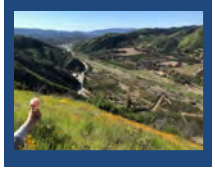
Upper Ventura River GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

NUMERICAL FLOW MODEL PRESENTATION



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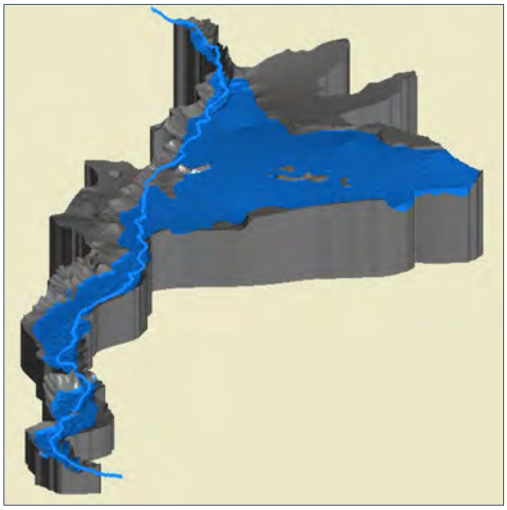
Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT



Groundwater Model of the Upper Ventura River Subbasin

INTERA
GEOSCIENCE & ENGINEERING SOLUTIONS

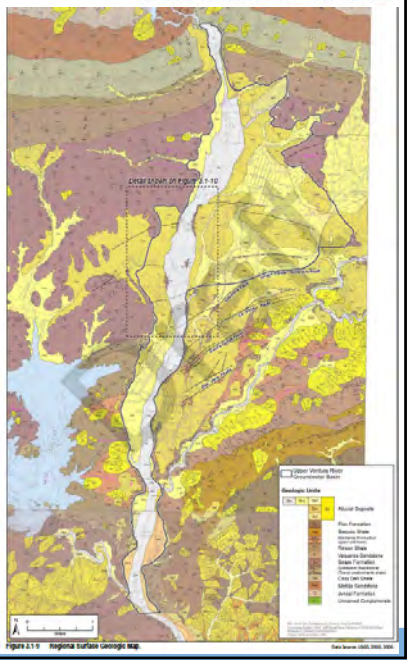
Feb 11, 2021

1

INTERA
GEOSCIENCE & ENGINEERING SOLUTIONS

1 Hydrogeologic Conceptual Model

- Basin consists of fluvial-origin alluvium derived from weathering/erosion from surrounding mountain
- Younger alluvium deposited within the river floodplain
- Older alluvium underlies young alluvium (in some areas) and tends to be less permeable
- Bedrock consists of older marine deposits, underlies and bounds much of the river floodplain
  - Key driver of groundwater/surface-water interactions
- Oldest alluvial units (Ojai Conglomerate) present in much of Mira Monte Area.
  - Very low permeability and behaves more like bedrock.
- UVRGA basin boundary (modified in 2016) includes mapped (older and younger) alluvium units



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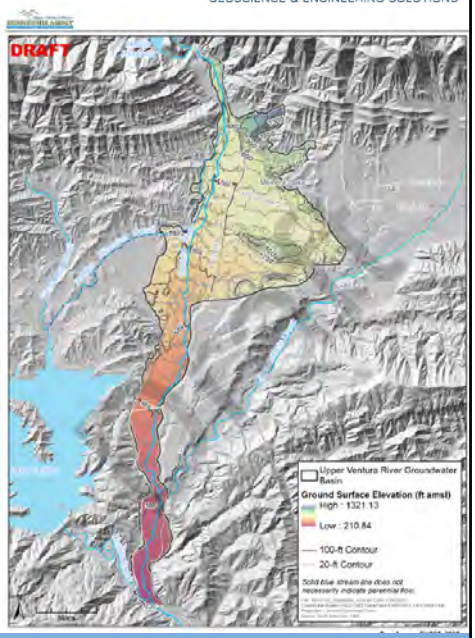
2 Hydrogeologic Conceptual Model

- Basin characterized by highly variable topography and stratigraphy
- Structure and hydrostratigraphy based on SWRCB surfaces
- Topography based on 10 ft Lidar data
- Refined stratigraphy based on review of well-boring logs, well construction records, surface geology maps, and published cross-sections



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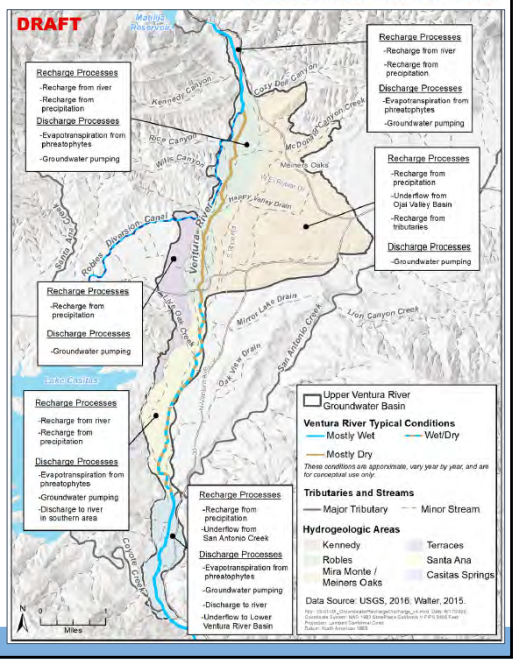
4

4 Key Recharge/Discharge Processes

- Primary inflow/outflow processes:
  - Flow to/from river
  - Precipitation-based recharge
  - Agricultural and M&I return flows
  - Pumping
  - Evapotranspiration
  - Underflows
- Spatial and temporal variability



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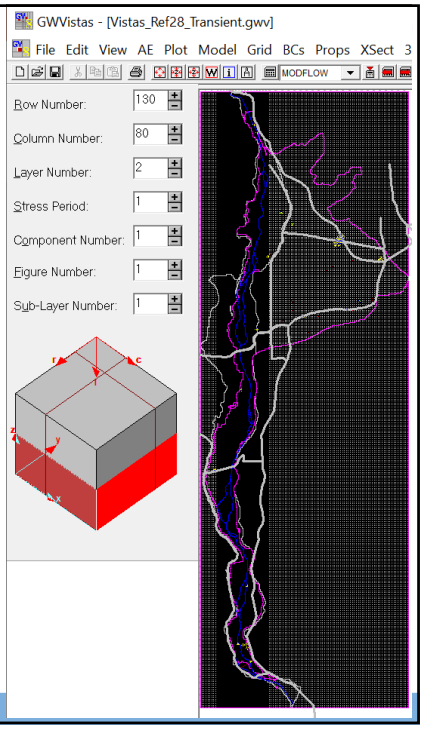
5 Numerical Groundwater Model

- Finite-Difference Groundwater Model developed in USGS code MODFLOW-NWT (Niswonger et al., 2011)
- Model simulates conditions from 2005 – 2019
  - Daily stress-periods: Nov – Mar; Monthly: Apr - Oct
- Model grid ranges from 50x100 to 100x100 ft
  - 505 rows, 213 columns, 2 layers
  - 215,130 total model grid cells
  - 46,180 active model grid cells
- Simulates groundwater/surface-water interaction using MODFLOW SFR (Prudic et al., 2004) module
- Model development and calibration consistent with ASTM standards (D5447, D5609, D5981)



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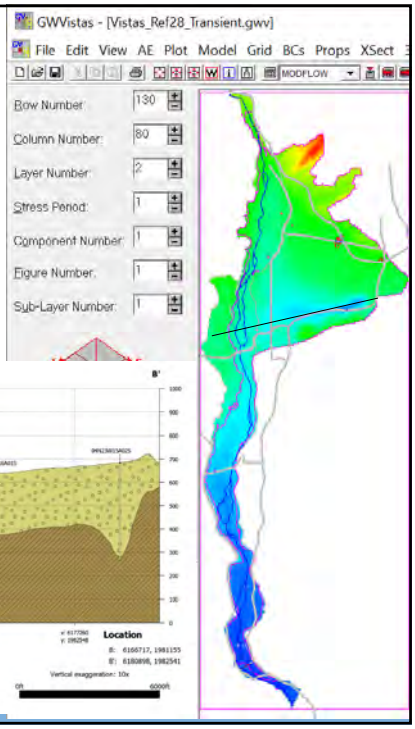
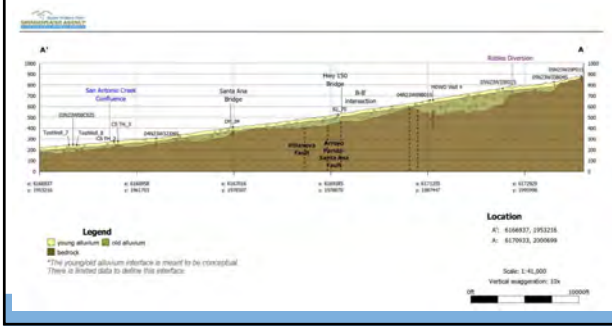
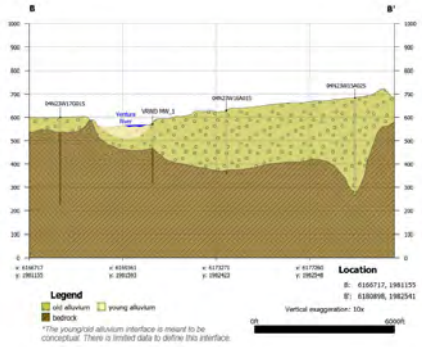
6 Numerical Groundwater Model - Structure

- Model structure based on 3D geologic model
- Depth to bedrock ranges from 200 – 1200 ft amsl
- Alluvium split into two layers
  - Younger alluvium in floodplain (<30 ft deep)
  - Older alluvium in the East and underlying the young alluvium in the floodplain







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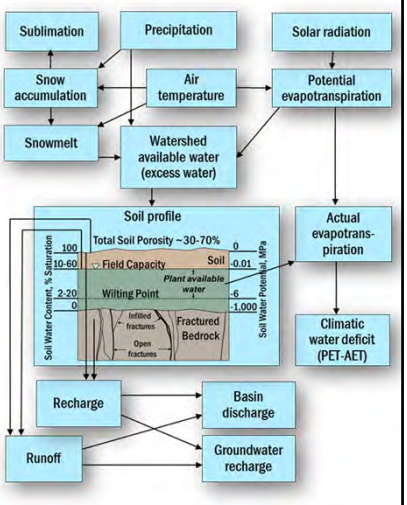
7 Numerical Groundwater Model - Recharge

- Monthly net recharge from precipitation calculated from California Basin Characterization Model (BCM) developed by USGS (Flints et al, 2013)
  - Regional-scale model incorporates rainfall, run-off, evapotranspiration in the surficial system
- Agricultural and M&I return flows estimated based on available data on water use



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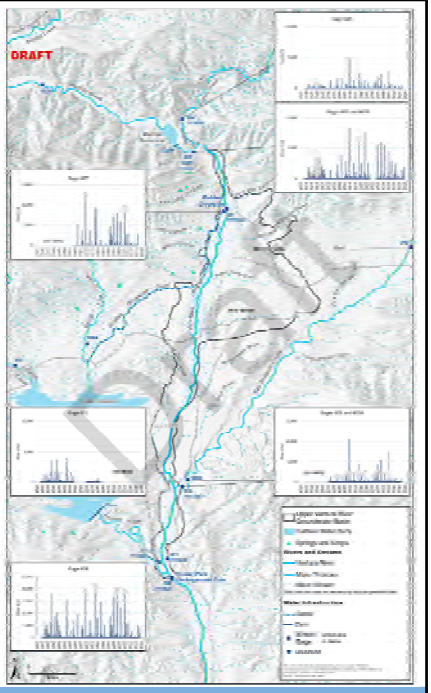
8 Numerical Groundwater Model - Streamflow

- River channel geometry based on areal imagery and Lidar data
  - Refined available NHD flowlines
  - Includes secondary braids
- Model routes gaged surface-flows from 602 (Matilija Creek) and 604 (North Fork Matilijia Creek)
- Robles Diversions based on daily data from CMWD
- Includes gaged tributary flows from San Antonio Creek and Coyote Creek
- Ungaged tributary flows estimated based on precipitation and size/characteristics of contributing catchment
- Outflow south of the Foster Park gage



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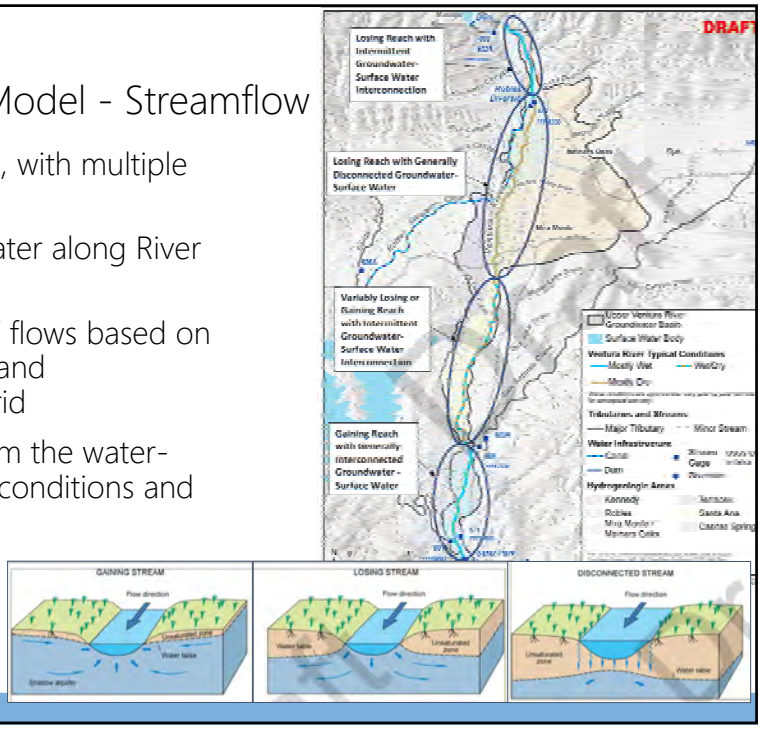
9 Numerical Groundwater Model - Streamflow

- River divided into 43 segments, with multiple reaches (total of 1462 reaches)
- SFR package routes surface-water along River channel
- Dynamically calculates GW/SW flows based on flow, stage, and width in River and groundwater table at model grid
- River can get disconnected from the water-table or dry up based on flow conditions and groundwater table
- Gaining/losing/intermittent reaches simulated by the model



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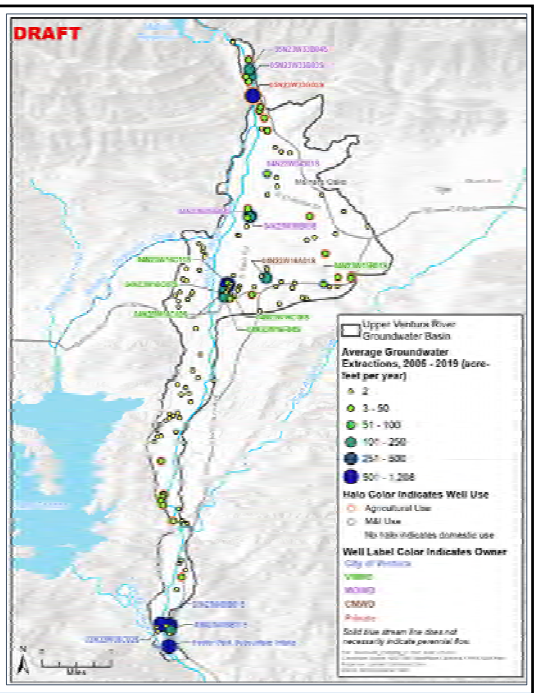
10 Numerical Groundwater Model - Pumping

- Model simulates all known groundwater pumping and subsurface intakes between 2005 – 2019
- Data for pumping based on:
  - M&I pumping based on reports and data received from City of Ventura, VRWD, CMWD, and MOWD
  - Ag pumping based on estimates provided by UVRGA Executive Director and Adhoc Committee
- Subsurface dam modeled as a 'hydraulic flow barrier'
- Subsurface intake modeled as series of wells along lateral intake



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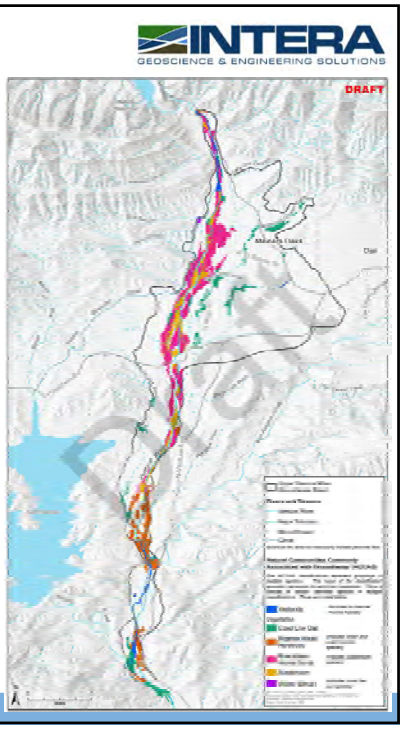
11 Numerical Groundwater Model - Evapotranspiration

- Groundwater ET by riparian phreatophytes within the River floodplain modeled using the evapotranspiration (EVT) module
- Based on TNC GDE dataset
- Worked with Rincon to develop spatial distributed ET parameters based on type and density of vegetation
- Incorporated time-varying Arundo coverages provided by Rincon
- ET rates incorporate data from two CMWD ET stations



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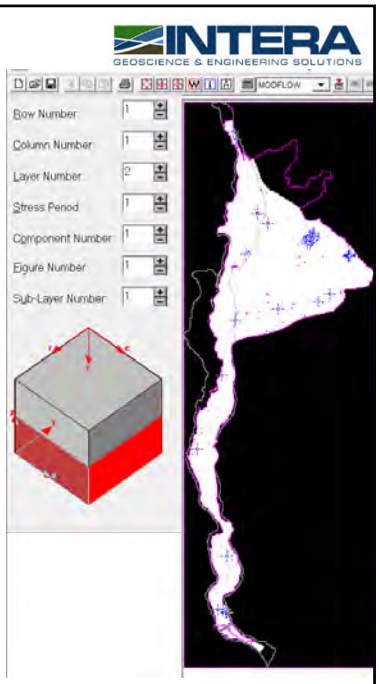
12

Numerical Groundwater Model - Calibration

- Model calibrated to historical conditions (2005 – 2019)
- Groundwater model calibrated by varying aquifer hydraulic conductivities and storage properties to match observed groundwater levels
  - Root Mean Square Error = 2% of Range of Observations
  - Well within industry standard of 10%
- Surface-water flows calibrated by varying riverbed depth/conductance as well as groundwater parameters (conductivities and storage)
  - Match simulated and observed flows at Foster Park gauge and Robles Diversion gage
  - Match gaining/losing/intermittent reaches in different parts of the river



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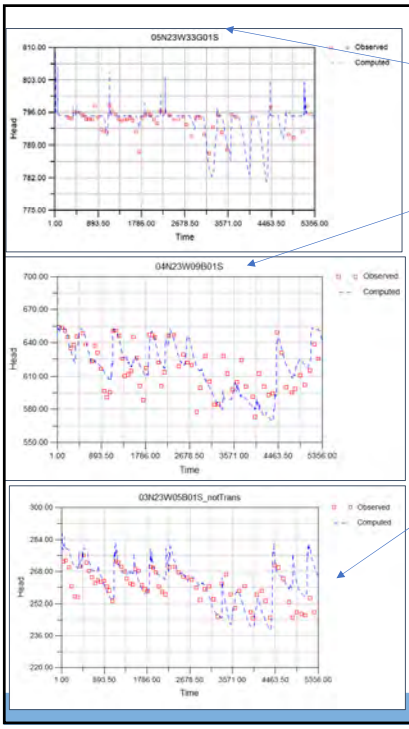
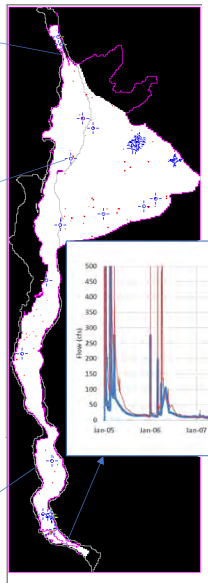
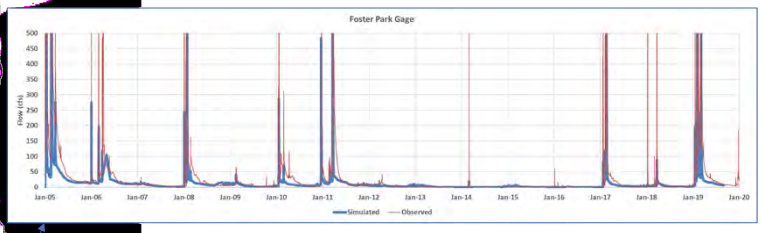




Numerical Groundwater Model - Calibration



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14 Model Use and Limitations

- Groundwater:
  - Model well calibrated to trends in groundwater elevations
  - Can be reliably used to estimate future trends in water levels, storage, and pumping impacts
  - Eastern area has limited area and complex structure – additional data would improve predictive capabilities
- Surface-water
  - Model matches low flows during summer/fall (within 1 cfs uncertainty)
  - Simulated spring baseflows lower than measured
  - Error/data-gaps in gage records impact model calibration
- Depth to bedrock is a key driver for groundwater levels and SW/GW interactions – additional geophysical/seismic data would help improve understanding
- Additional GW monitoring (near the river) and SW gages will reduce model uncertainty

15

15 Next Steps

- Finalize calibration and compile historical water budget information for GSP historical and "current" water budget requirements
- 50-year simulations for GSP future water budget projection requirements
- Simulations to evaluate depletion of interconnected surface water depletion sustainability indicator
- Model documentation TM – for GSP

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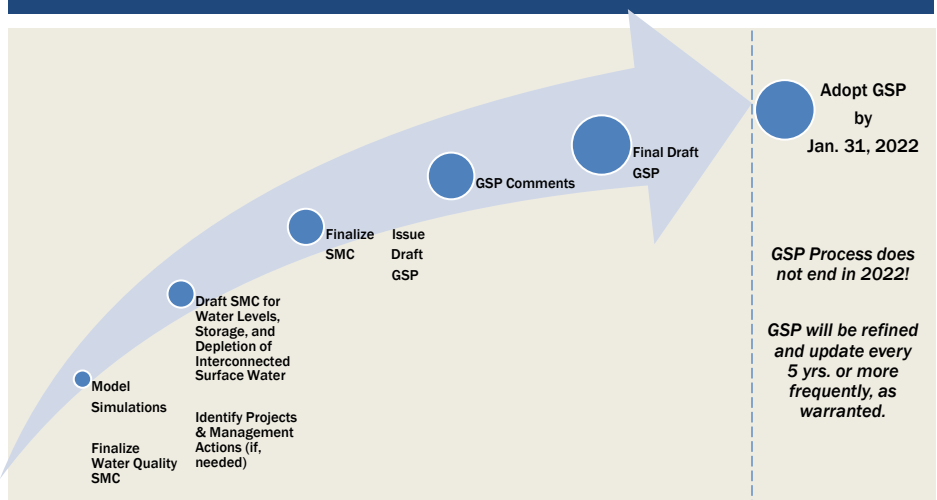
NEXT STEPS



GSP Process does not end in 2022!

GSP will be refined and update every 5 yrs. or more frequently, as warranted.

7

QUESTIONS?

8

UPPER VENTURA RIVER GROUNDWATER AGENCY
MINUTES OF SPECIAL MEETING MARCH 2, 2021
(GROUNDWATER SUSTAINABILITY PLAN STAKEHOLDER WORKSHOP NO. 2)

The Board meeting was held via on-line webinar, in accordance with California Executive Order N-25-20. Directors present were: Diana Engle, Bruce Kuebler, Emily Ayala, Larry Rose, Angelo Spandrio, and Glenn Shephard. Director Susan Rungren arrived at approximately 4:10 p.m. Executive Director and GSP Project Manager Bryan Bondy was also present. Public Attendees: 19 (registered).

1) **CALL TO ORDER AND ROLL CALL** – Chair Engle called the meeting to order at 4:03 pm.

   Executive Director Bondy called the roll call.

   Directors present: Diana Engle, Bruce Kuebler, Larry Rose, Angelo Spandrio, Glenn Shephard, and Emily Ayala

   Directors absent: Susan Rungren (arrived at approximately 4:10 p.m.)

2) **PLEDGE OF ALLEGIANCE** – Chair Engle led the pledge of allegiance.

3) **PUBLIC COMMENTS ON ITEMS NOT APPEARING ON THE AGENDA –** Chair Engle asked if there were any public comments on items not appearing on the agenda. No public comments were offered.

4) **STAKEHOLDER WORKSHOP**
   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. The full presentation is attached to these minutes and is posted on the Agency website at https://uvrgroundwater.org/wp-content/uploads/2021/03/20210302-UVRGA-Workshop-No-2_Final.pdf.

   Favorable feedback was received from the stakeholders concerning the proposed SMC for the degraded water quality sustainability indicator.

   Information item only. The Board took no action.

5) **ADJOURNMENT** – The meeting was adjourned at 5:51 pm.

Action: _____

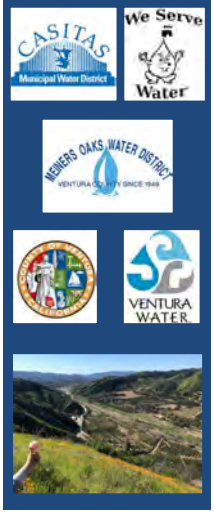
Motion: _____ Second: _____

B.Kuebler____ D.Engle____ A.Spandrio____ S.Rungren____ G.Shephard____ E.Ayala____ L.Rose___

UPPER VENTURA RIVER GROUNDWATER AGENCY GROUNDWATER SUSTAINABILITY PLAN WORKSHOP NO. 2

Upper Ventura River GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

MARCH 2, 2021
4PM



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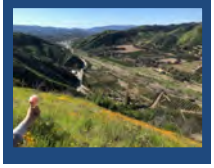
WORKSHOP AGENDA

No.	TIME	TOPIC
1	4:00 – 4:05 pm	Meeting Call to Order, Roll Call, and Public Comments
2	4:05 – 4:10 pm	• Welcome • Overview of Webinar Features • Agenda Review
3	4:10 – 4:15 pm	Get to Know the Audience (Attendee Polls Nos. 1 - 3)
4	4:15 – 4:45 pm	Sustainable Management Criteria • Presentation • Q & A
5	4:45 – 5:20 pm	Numerical Flow Model • Presentation • Q & A
6	5:20 – 5:25 pm	Next Steps – What to Expect March-Dec 21
7	5:25 – 5:50 pm	• Stakeholder Questions and Feedback • Attendee Poll Nos. 4 - 7
8	5:50 – 6:00 pm	UVRGA Director Comments
9	6:00 pm	Wrap-up

2

Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

ATTENDEE POLL NOS. 1 - 3

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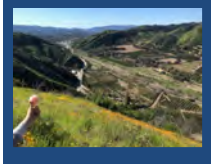
Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

SUSTAINABLE MANAGEMENT CRITERIA

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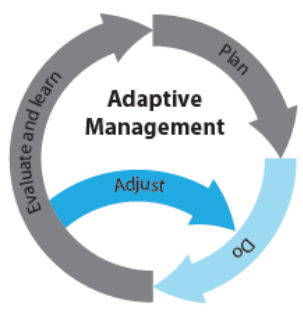
SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA) REQUIREMENTS

1. Form a Groundwater Sustainability Agency (GSA)
2. Adopt a Groundwater Sustainability Plan (GSP)
   - Due January 31, 2022
3. Achieve Sustainable Groundwater Management
   - 20 years following GSP adoption

5

WHAT IS A GSP?

The GSP is a flexible road map for how a groundwater basin will achieve long term sustainability by avoiding undesirable results through data-driven, adaptive management



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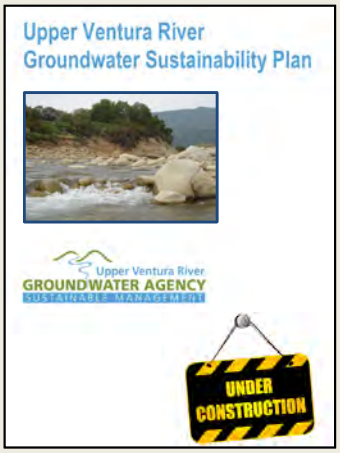
WHAT MUST A GSP INCLUDE?

- GSP Contents
  - Administrative Information
  - Basin Setting
  - Sustainable Management Criteria
  - Monitoring Networks
  - Projects and Management Actions
  - Implementation



*** *Draft Basin Setting Available On MBGSA Website****

7

SUSTAINABLE MANAGEMENT CRITERIA

- Overarching goal of SGMA is to <u>avoid undesirable results</u> for each of the six SGMA sustainability indicators:

- Undesirable results and actions to prevent them are <u>defined at the local level by the GSA</u>

8

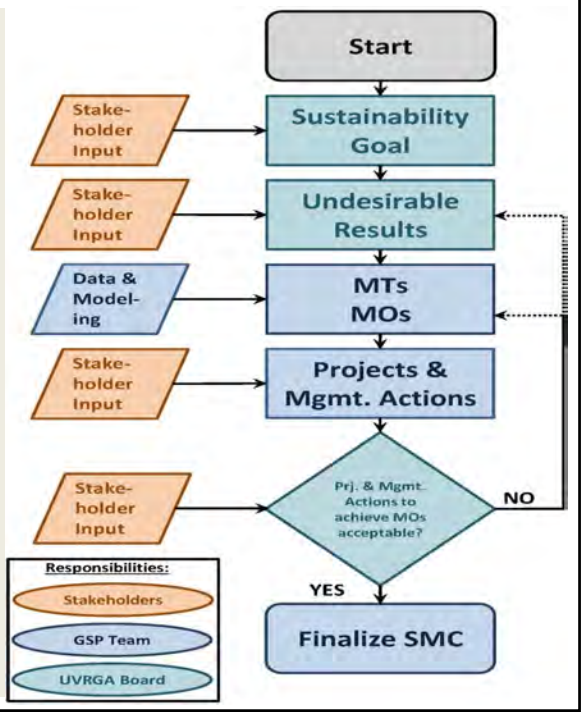
SUSTAINABLE MANAGEMENT CRITERIA

- Sustainability Goal
- Undesirable Results
  - Significant and unreasonable effects for sustainability indicators caused by groundwater conditions occurring throughout the basin
- Minimum Thresholds
  - Quantitative metrics indicating significant and unreasonable effects likely exist
- Measureable Objectives
  - Quantitative metrics that reflect basin desired conditions

9

SUSTAINABLE MANAGEMENT CRITERIA DEVELOPMENT PROCESS

SMC will be the central focus of the GSP



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SUSTAINABILITY GOAL

- High-level policy framework to guide development of Sustainable Management Criteria & Plan Actions
- Adopted August 13, 2020
- Available on-line

Sustainability Goal
Adopted August 13, 2020

The goal of this GSP is to sustainably manage the groundwater resources of the Upper Ventura River Basin for the benefit of current and anticipated future beneficial users of groundwater, including the environment, and the welfare of the general public who rely directly or indirectly on groundwater. Sustainable groundwater management will ensure the long-term reliability of the Upper Ventura River Basin groundwater resources by avoiding SGMA undesirable results no later than 20 years from Plan adoption through implementation of a data-driven and performance-based adaptive management framework. It is the express goal of this GSP to develop sustainable management criteria and plan implementation measures to avoid undesirable results for the applicable SGMA sustainability indicators by:

1. *Using best available science and information, including consideration of uncertainty in the basin setting and groundwater conditions and future opportunities to address data gaps;*
2. *Conducting active and meaningful stakeholder engagement;*
3. *Developing a pragmatic and financially realistic approach to sustainable groundwater management that seeks the triple bottom line of vibrant and well-functioning ecological, social, and economic systems by:*
   a. *Considering the economic, social, and environmental impacts and benefits associated with the all current and anticipated future beneficial users of groundwater;*
   b. *Considering water supply reliability for agriculture, domestic, and municipal users;*
   c. *Considering the availability of alternative water sources for domestic groundwater beneficial users;*
   d. *Considering potential impacts to groundwater dependent ecosystems;*
   e. *Considering State, federal, or local standards relevant to applicable sustainability indicators;*
   f. *Considering the feasibility of projects and management actions necessary to achieve proposed measurable objectives; and*
   g. *Considering the economic impact of projects and management actions necessary to achieve proposed measurable objectives on all beneficial users, with special consideration of disadvantaged communities and agricultural enterprises lacking alternative land use options.*
   h. *Coordinating planning and implementation actions with local and State agencies, non-governmental organizations, and, as necessary, the California Judicial Branch.*

11

UNDESIRABLE RESULTS

"Significant and unreasonable effects for sustainability indicators caused by groundwater conditions occurring throughout the basin.

1. Significant and Unreasonable Effects: Undesirable results are significant and unreasonable effects related to a sustainability indicator. For example, seawater intrusion that impacts beneficial uses of groundwater.
2. Caused by Groundwater Conditions: The significant and unreasonable effects must be caused by managed groundwater conditions (i.e., pumping or GSP projects).
3. Throughout the Basin: The significant and unreasonable effects must occur or be caused by conditions throughout a large portion of the basin.

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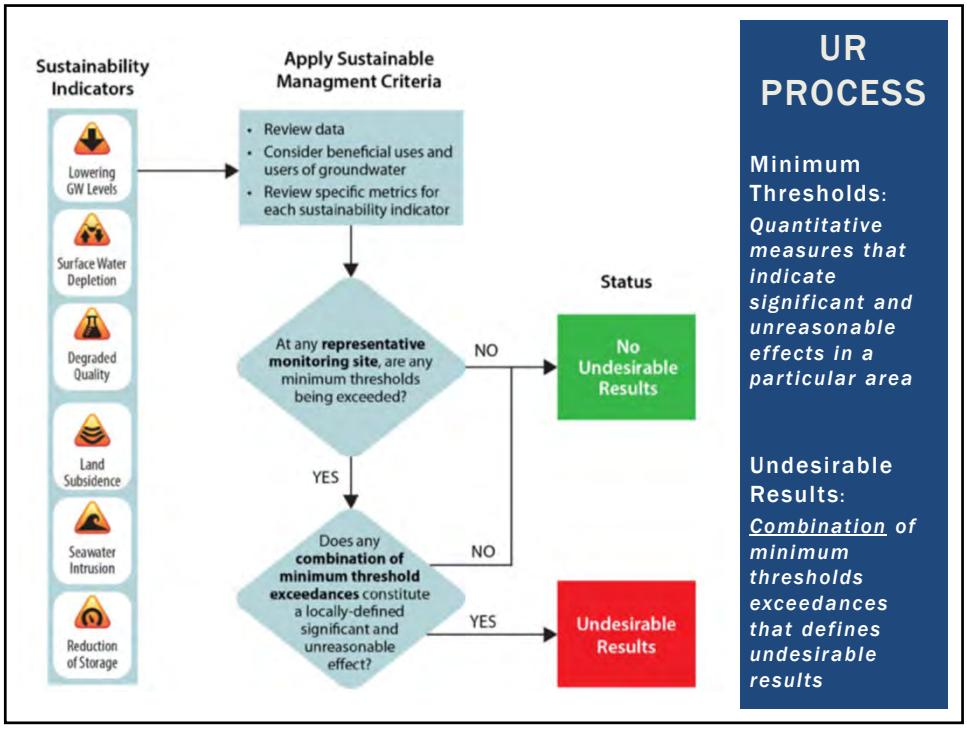

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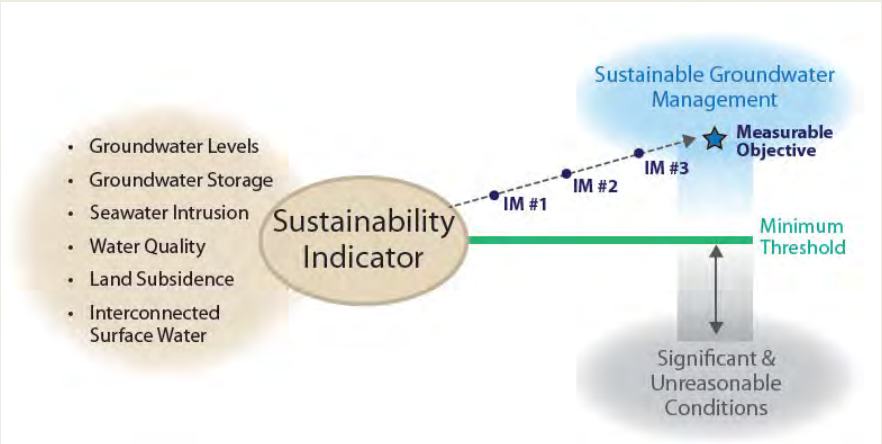
SUSTAINABLE MANAGEMENT CRITERIA

The overarching goal of SGMA is to avoid undesirable results



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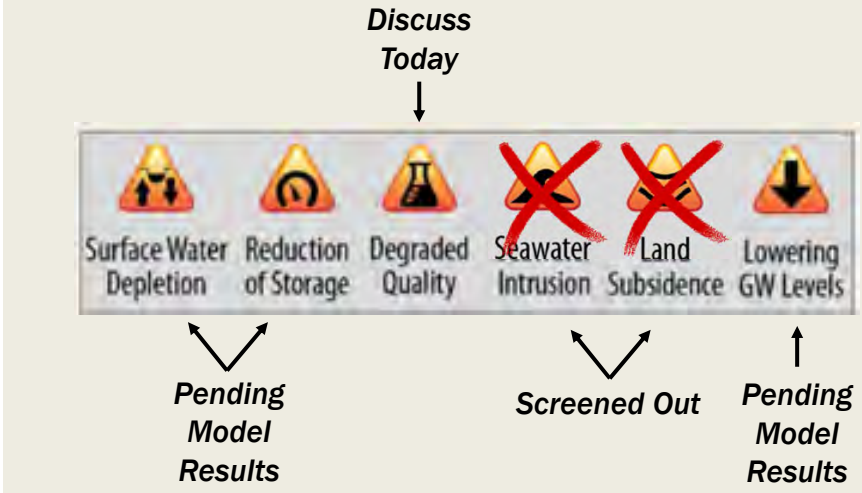
SMC DEVELOPMENT STATUS



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SUSTAINABILITY INDICATOR SCREENING RESULTS

Seawater intrusion is not physically possible (aquifer is ~200 ft above sea level and ~6 miles from the ocean)

Significant and unreasonable land subsidence is highly unlikely due aquifer properties and groundwater conditions

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DRAFT WATER QUALITY SMC

- Current water quality supports beneficial uses (currently no undesirable results)
- Nexus between URs and groundwater conditions
  - Water quality degrades with declining water table.
  - SMCs only apply if basin management (pumping) causes degradation
    - i.e. - drought-induced quality degradation is not a SGMA UR

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DRAFT WATER QUALITY MINIMUM THRESHOLDS

- Criteria for Minimum Threshold Development
  - Maximum Contaminant Levels (MCLs)
  - RWQCB Water Quality Objectives
  - Agricultural Toxicity Thresholds
  - Existing Water Quality
- MTs based on significant and unreasonable effects consistent with sustainability goal
  - Health effects of nitrate in the ~100 domestic wells (testing not required – may have unknown exposure)
  - Treatment costs for financially prohibitive (brine disposal for reverse osmosis)

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DRAFT WATER QUALITY MINIMUM THRESHOLDS

- Nitrate: Maximum Contaminant Level[1]
- TDS: Upper Consumer Acceptance Level[1]
- Sulfate: Upper Consumer Acceptance Level[1]
- Chloride: Toxicity threshold for chloride-sensitive crops[2]
- Boron: Toxicity threshold for boron-sensitive crops[2]

[1]Treatment required when these levels are exceeded. Reverse osmosis would require brine discharge. Brine disposal pipeline is not likely feasible from a cost perspective.

[2]Treatment for irrigation beneficial use is likely cost prohibitive.

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DRAFT WATER QUALITY UNDESIRABLE RESULTS

- Criteria for Undesirable Results:
  - SGMA undesirable results are considered to be occurring when two-thirds (2/3) of the primary water quality monitoring wells exceed a minimum threshold concentration continuously for two years and UVRGA determines that the exceedances are caused by groundwater pumping.

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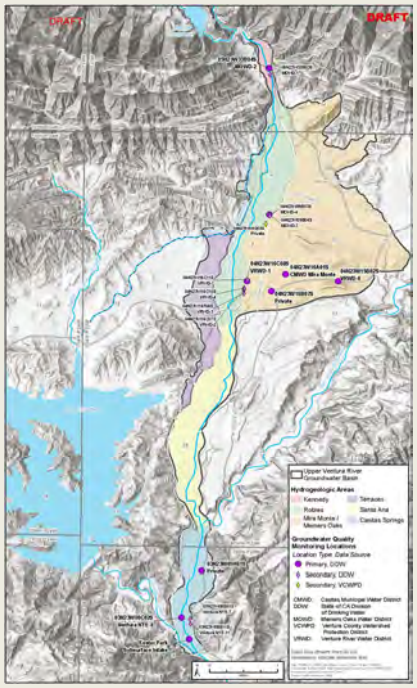
Degraded Quality

GROUNDWATER QUALITY MONITORING LOCATIONS

- *Nine Areas*
- *Primary locations identified in areas with multiple closely spaced wells*
- *Monitoring performed by well owner or Ventura County*
- *Gaps to be addressed during GSP implementation*



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DRAFT WATER QUALITY MEASURABLE OBJECTIVES

Degraded Quality

- Nitrate
  - Percolating Groundwater Areas
    - Lower than RWQCB WQO for groundwater to preserve existing water quality (7.5 vs. 10 mg/L)
  - Rising Groundwater Areas
    - Lower than RWQCB WQO for surface water to preserve existing water quality (3 vs. 5 mg/L)
- TDS – RWQCB WQO
- Sulfate – RWQCB WQO
- Chloride – Lower than RWQCB WQO to preserve existing water quality (75 vs. 100 mg/L)
- Boron – RWQCB WQO

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DRAFT WATER QUALITY SMC

Degraded Quality

Table 1. Proposed Minimum Thresholds and Measurable Objectives

Constituent	MCL (mg/L)	Sec. MCL (R/U/ST)[1] (mg/L)	RWQCB WQO (mg/L)	Range of Average Historical Concentrations for Primary Wells (mg/l)	Proposed MT[2] (mg/L)	MT Rationale	Proposed MO[3] (mg/L)	MO Rationale
TDS	N/A	500/1,000/1,500	800	407 - 760	1,000	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with Upper Consumer Acceptance Level.	800	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses consistent with RWQCB WQO.
Sulfate	N/A	250/500/600	300	35 - 300	500	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with Upper Consumer Acceptance Level.	300	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses consistent with RWQCB WQO.
Chloride	N/A	250/500/600	100	29 - 61	100	Prevent significant and unreasonable impact to agricultural beneficial use of groundwater for chloride sensitive crops[4].	75	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses.
Boron	N/A	N/A	0.5	0.09 - 0.77	0.75	Prevent significant and unreasonable impact to agricultural beneficial use of groundwater for boron sensitive crops.[5]	0.5	Preserve existing groundwater quality for agricultural beneficial use consistent with RWQCB WQO.
Nitrate (as N)								
Percolating Groundwater Areas (Kennedy, Robles, Mira Monte/Meiners Oaks, and Terraces Hydrogeologic Areas)								
Nitrate (as N)	10	N/A	10	0.6 – 12.6	10	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with the MCL.	7.5	Preserve existing groundwater quality for municipal and domestic beneficial uses.
Areas with Rising Groundwater (Santa Ana and Casitas Springs Hydrogeologic Areas)								
Nitrate (as N)	10	N/A	5 (Surface Water WQO)	1.0 – 1.5	10	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with the MCL.	3	Preserve existing groundwater quality for municipal and domestic beneficial uses. Protect surface water beneficial uses consistent with the RWQCB surface water WQO (MO is lower than surface water WQO).

[1] Consumer Acceptance Levels, where R = Recommended, U = Upper, and ST = Short Term
[2] Undesirable results for TDS, sulfate, chloride, and boron are considered to occur when two-thirds (2/3) of the primary monitoring wells exceed the minimum threshold concentration for a constituent continuously for two years and are determined by UVRGA to be the result of groundwater pumping. Undesirable results for nitrate are evaluated in the two distinct areas noted in the table. The 2/3 criterion applies separately within the two areas for nitrate.
[3] Sustainability Goal for TDS, sulfate, chloride, or boron is considered to be met when at least one-third (1/3) of the primary monitoring wells are below the measurable objective for the constituent being considered.
[4] Avocados are a chloride sensitive crop grown in the Basin and is used as a proxy. The Avocado Production Handbook states that "When chloride and sodium exceed 100 ppm in the water there should be an alerted concern for ensuring adequate leaching of the root zone." Accordingly it is concluded that significant and unreasonable effects may occur at concentrations in excess of 100 mg/L. [illegible]
[5] Upper limit of boron tolerance for citrus and avocado is 0.75. US Department of Agriculture: [illegible]

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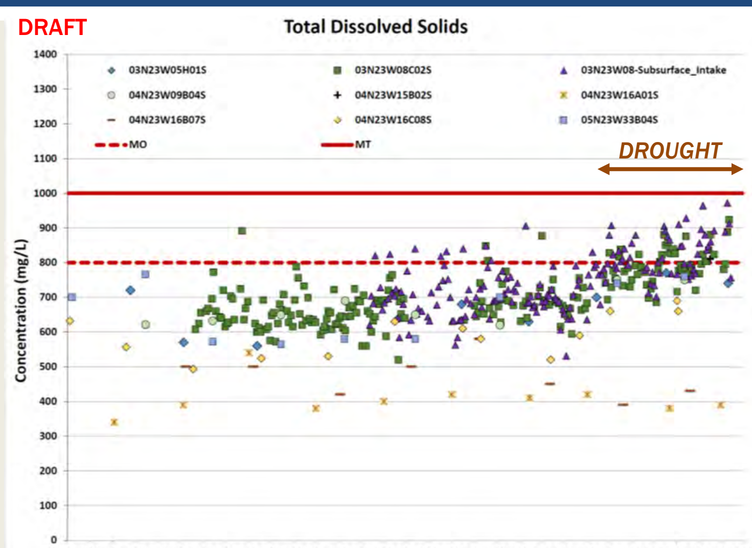
EXAMPLE WQ SMC CHART

Degraded Quality



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SCM NEXT STEPS

- For more information, please see the Degraded Water Quality White Paper available at https://uvrgroundwater.org/
- UVRGA Board will consider adopting Degraded Water Quality SMC during its March 11 meeting
- Remaining Sustainability Indicators will be developed in March and April

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SUSTAINABLE MANAGEMENT CRITERIA QUESTIONS

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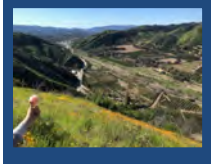
Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

NUMERICAL FLOW MODEL



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WHAT IS A NUMERICAL FLOW MODEL?

- Mathematical representation of the groundwater (GW) and surface water (SW) flow system
- Solves groundwater flow equation (GW level) and computes flows throughout the SW and GW systems
- A model is an approximation of the real system – only as good as the data upon which the model is based on

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WHY DEVELOP A NUMERICAL FLOW MODEL?

- To comply with SGMA
  - SGMA requires model or "equally effective tool" for:
    - Water budgets
    - Quantification of interconnected surface water depletion
    - Estimate benefits of different projects or management actions (if needed)

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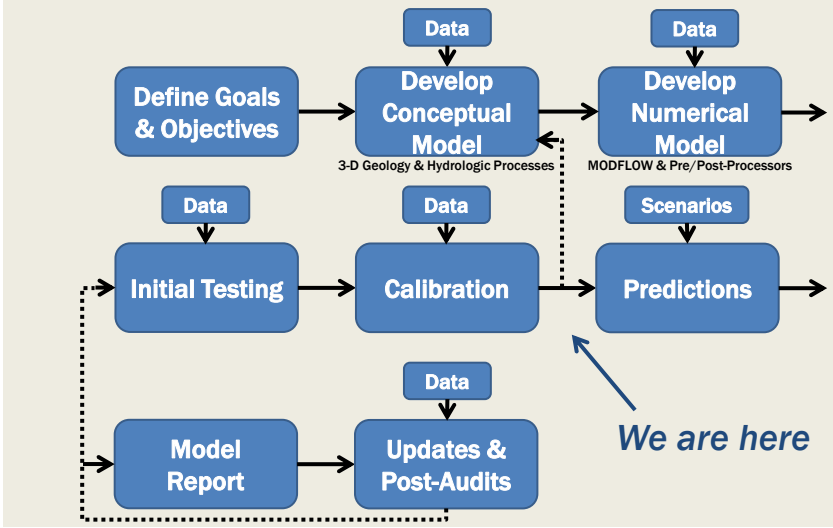
GENERAL MODEL DEVELOPMENT PROCESS



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Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

Groundwater Model of the Upper Ventura River Subbasin

INTERA
GEOSCIENCE & ENGINEERING SOLUTIONS

Mar 11, 2021

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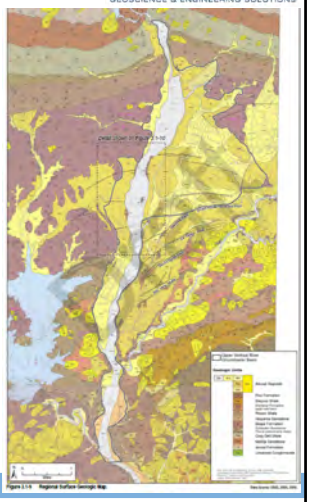
INTERA
GEOSCIENCE & ENGINEERING SOLUTIONS

1 Hydrogeologic Conceptual Model

- Basin consists of fluvial-origin alluvium derived from weathering/erosion from surrounding mountain
- Younger alluvium deposited within the river floodplain
- Older alluvium underlies young alluvium (in some areas) and tends to be less permeable
- Bedrock consists of older marine deposits, underlies and bounds much of the river floodplain
  - Key driver of groundwater/surface-water interactions
- Oldest alluvial units (Ojai Conglomerate) present in much of Mira Monte Area.
  - Very low permeability and behaves more like bedrock.
- UVRGA basin boundary (modified in 2016) includes mapped (older and younger) alluvium units



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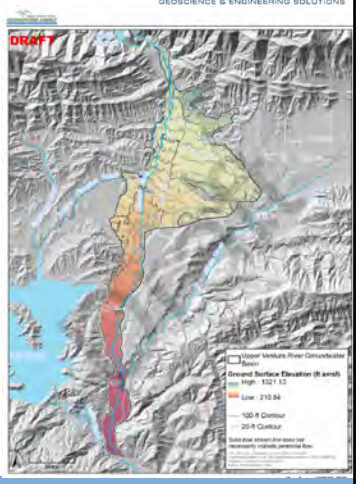
2 Hydrogeologic Conceptual Model

- Basin characterized by highly variable topography and stratigraphy
- Structure and hydrostratigraphy based on SWRCB surfaces
- Topography based on 10 ft Lidar data
- Refined stratigraphy based on review of well-boring logs, well construction records, surface geology maps, and published cross-sections



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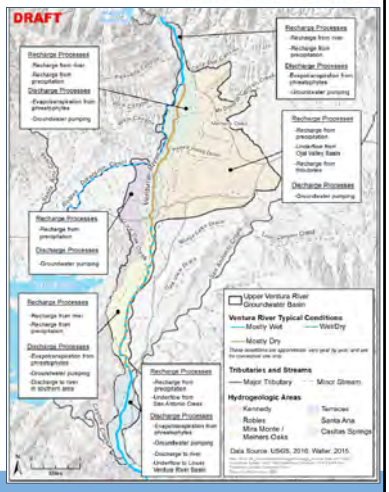
4 Key Recharge/Discharge Processes

- Primary inflow/outflow processes:
  - Flow to/from river
  - Precipitation-based recharge
  - Agricultural and M&I return flows
  - Pumping
  - Evapotranspiration
  - Underflows
- Spatial and temporal variability



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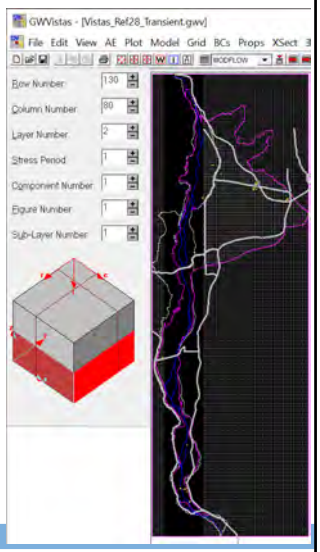
5 Numerical Groundwater Model

- Finite-Difference Groundwater Model developed in USGS code MODFLOW-NWT (Niswonger et al., 2011)
- Model simulates conditions from 2005 – 2019
  - Daily stress-periods: Nov – Mar; Monthly: Apr - Oct
- Model grid ranges from 50x100 to 100x100 ft
  - 505 rows, 213 columns, 2 layers
  - 215,130 total model grid cells
  - 46,180 active model grid cells
- Simulates groundwater/surface-water interaction using MODFLOW SFR (Prudic et al., 2004) module
- Model development and calibration consistent with ASTM standards (D5447, D5609, D5981)



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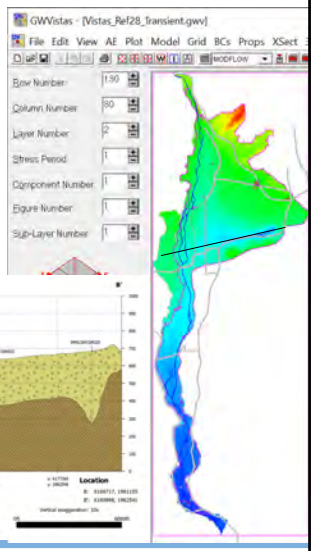
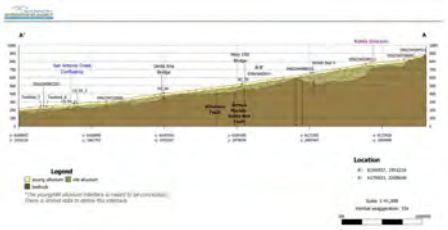
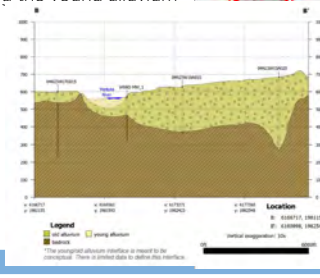
6 Numerical Groundwater Model - Structure

- Model structure based on 3D geologic model
- Depth to bedrock ranges from 200 – 1200 ft amsl
- Alluvium split into two layers
  - Younger alluvium in floodplain (<30 ft deep)
  - Older alluvium in the East and underlying the young alluvium in the floodplain



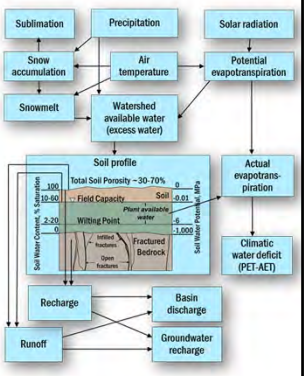




37

7 Numerical Groundwater Model - Recharge

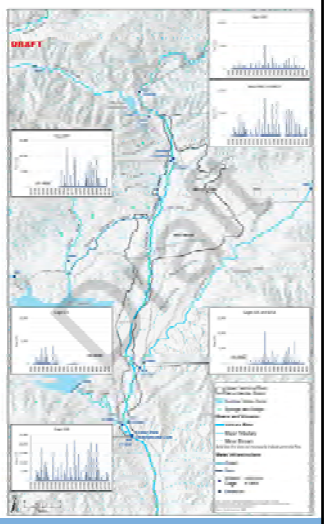
- Monthly net recharge from precipitation calculated from California Basin Characterization Model (BCM) developed by USGS (Flints et al, 2013)
  - Regional-scale model incorporates rainfall, run-off, evapotranspiration in the surficial system
- Agricultural and M&I return flows estimated based on available data on water use



38

8 Numerical Groundwater Model - Streamflow

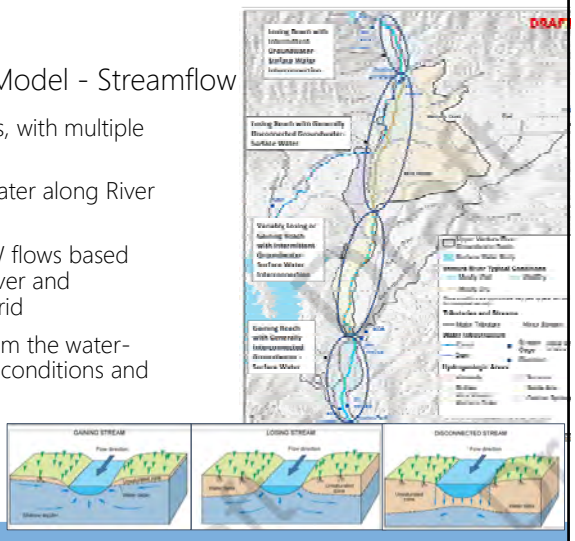
- River channel geometry based on areal imagery and Lidar data
  - Refined available NHD flowlines
  - Includes secondary braids
- Model routes gaged surface-flows from 602 (Matilija Creek) and 604 (North Fork Matilijia Creek)
- Robles Diversions based on daily data from CMWD
- Includes gaged tributary flows from San Antonio Creek and Coyote Creek
- Ungaged tributary flows estimated based on precipitation and size/characteristics of contributing catchment
- Outflow south of the Foster Park gage



39

9 Numerical Groundwater Model - Streamflow

- River divided into 43 segments, with multiple reaches (total of 1462 reaches)
- SFR package routes surface-water along River channel
- Dynamically calculates GW/SW flows based on flow, stage, and width in River and groundwater table at model grid
- River can get disconnected from the water-table or dry up based on flow conditions and groundwater table
- Gaining/losing/intermittent reaches simulated by the model



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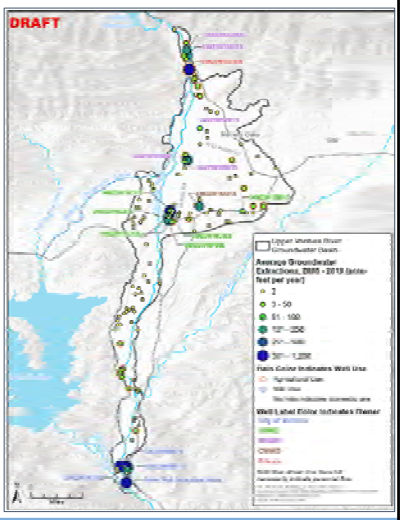
10 Numerical Groundwater Model - Pumping

- Model simulates all known groundwater pumping and subsurface intakes between 2005 – 2019
- Data for pumping based on:
  - M&I pumping based on reports and data received from City of Ventura, VRWD, CMWD, and MOWD
  - Ag pumping based on estimates provided by UVRGA Executive Director and Adhoc Committee
- Subsurface dam modeled as a 'hydraulic flow barrier'
- Subsurface intake modeled as series of wells along lateral intake



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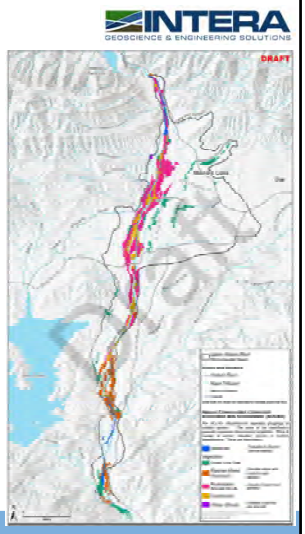
11 Numerical Groundwater Model - Evapotranspiration

- Groundwater ET by riparian phreatophytes within the River floodplain modeled using the evapotranspiration (EVT) module
- Based on TNC GDE dataset
- Worked with Rincon to develop spatial distributed ET parameters based on type and density of vegetation
- Incorporated time-varying Arundo coverages provided by Rincon
- ET rates incorporate data from two CMWD ET stations



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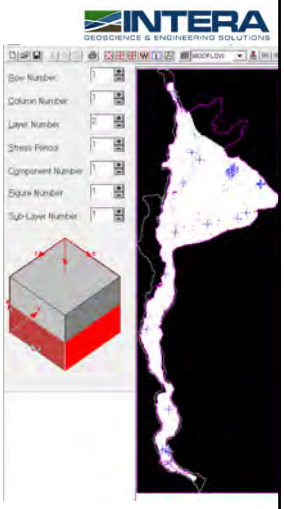
12 Numerical Groundwater Model - Calibration

- Model calibrated to historical conditions (2005 – 2019)
- Groundwater model calibrated by varying aquifer hydraulic conductivities and storage properties to match observed groundwater levels
  - Root Mean Square Error = 3% of Range of Observations
  - Well within industry standard of 10%
- Surface-water flows calibrated by varying riverbed depth/conductance as well as groundwater parameters (conductivities and storage)
  - Match simulated and observed flows at Foster Park gauge and Robles Diversion gage
  - Match gaining/losing/intermittent reaches in different parts of the river



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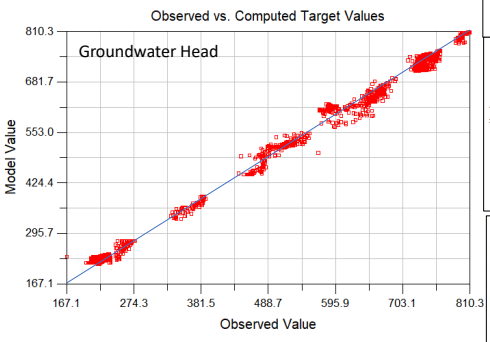
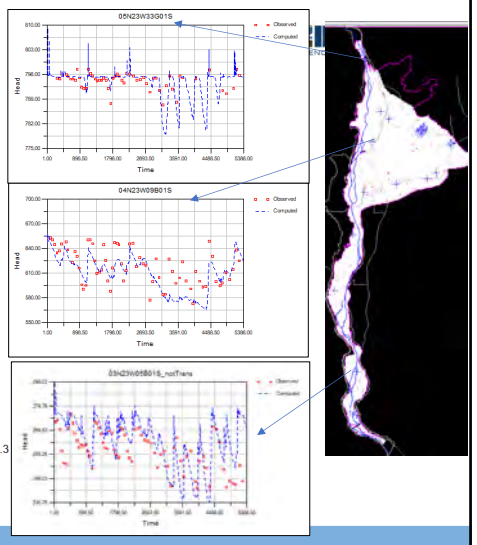
13 Numerical Groundwater Model - Calibration





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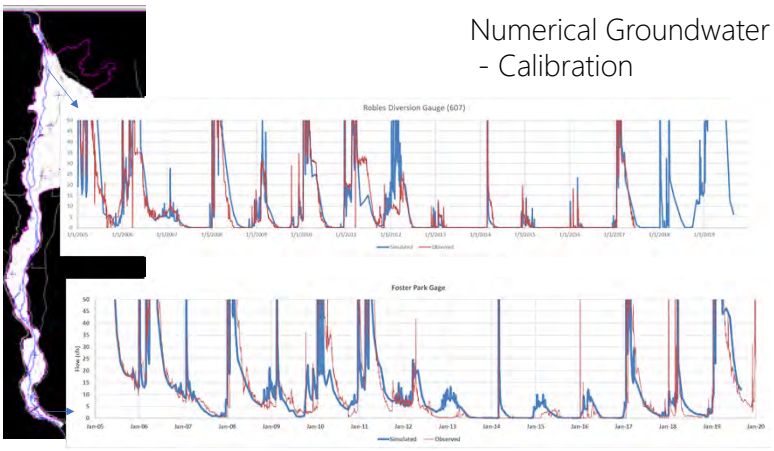

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14 Model Use and Limitations

- Groundwater:
  - Model well calibrated to trends in groundwater elevations
  - Can be reliably used to estimate future trends in water levels, storage, and pumping impacts
  - Eastern area has limited area and complex structure – additional data would improve predictive capabilities
- Surface-water
  - Model matches low flows during summer/fall (within 1 cfs uncertainty)
  - Simulated spring baseflows lower than measured
  - Error/data-gaps in gage records impact model calibration
- Depth to bedrock is a key driver for groundwater levels and SW/GW interactions – additional geophysical/seismic data would help improve understanding
- Additional GW monitoring (near the river) and SW gages will reduce model uncertainty

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15 Next Steps

- Finalize calibration and compile historical water budget information for GSP historical and "current" water budget requirements
- 50-year simulations for GSP future water budget projection requirements
- Simulations to evaluate depletion of interconnected surface water depletion sustainability indicator
- Model documentation TM – for GSP

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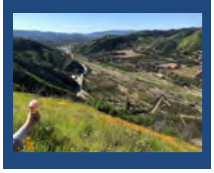
Upper Ventura River GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

NEXT STEPS

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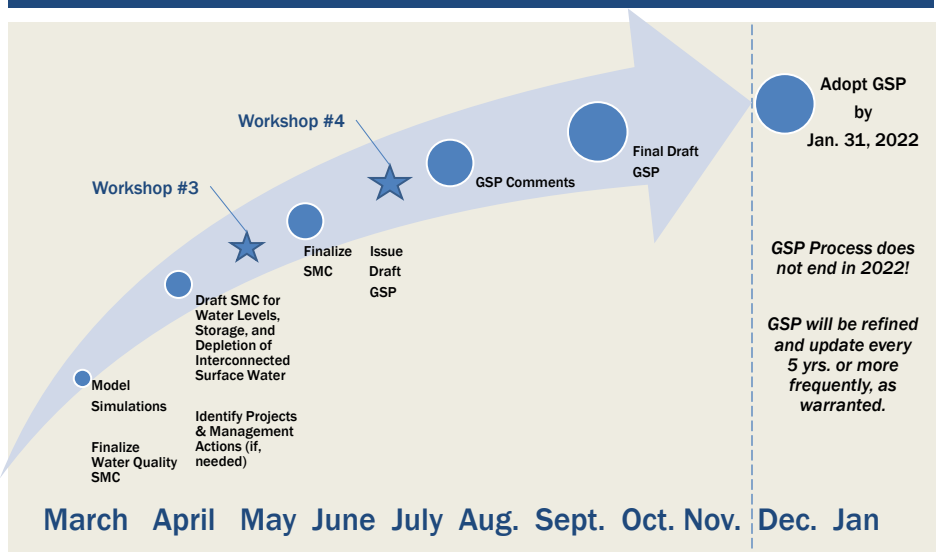
NEXT STEPS



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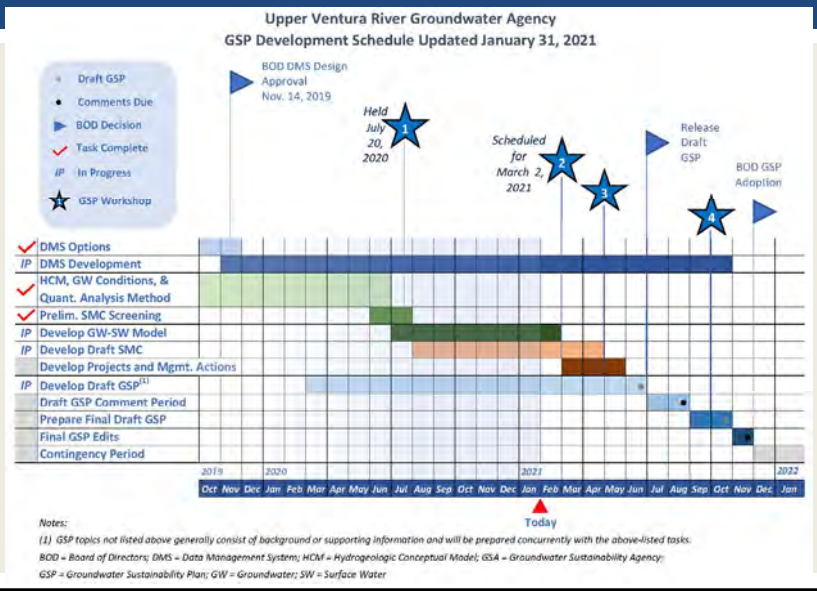
GSP DEVELOPMENT SCHEDULE WILL BE UPDATED ON UVRGA WEBSITE



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NEXT STEPS
QUESTIONS

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Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

STAKEHOLDER Q&A & FEEDBACK

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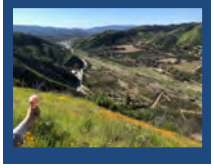
Upper Ventura River GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

ATTENDEE POLL NOS. 4 - 7

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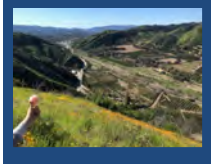
Upper Ventura River GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

UVRGA DIRECTOR COMMENTS

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PLEASE STAY ENGAGED!!!

- Track status at: https://uvrgroundwater.org/
- Join the UVRGA Interested Parties List: https://uvrgroundwater.org/join-interested-parties-list/
- Email inquiries to: bbondy@uvrgroundwater.org

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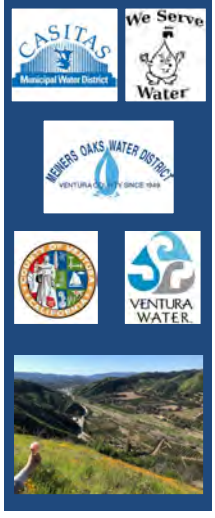
Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

WRAP UP
THANK YOU FOR PARTICIPATING!

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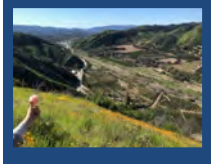
Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

EXTRA SLIDES



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

DATE: March 4, 2021

TO: Board of Directors

FROM: Carrie Troup C.P.A., Treasurer

SUBJECT: Approve Financial Report for February 2021

January 2021 UVRGA Balance			$	333,935.31
February 2021 Activity:				
Revenues:				
	CA Dept. of Water Resources DWR		$	80,848.22
	February Expenditures Paid:			
	Checks Pending Signature:			
2203	Carrie Troup, C.P.A.	February services	$	1,193.25
2204	Intera Incorporated	February services	$	13,916.00
2205	Olivarez, Madruga, Lemieux, O'Ne	January services	$	1,313.54
2206	Intera Incorporated	January services	$	10,187.50
2207	Ventura River Water District	Audit services	$	12,500.00
2208	Bondy Groundwater Consulting, In	February services	$	13,634.85
	Total Expenditures Paid & To Be Paid		$	52,745.14
February 2021 UVRGA Ending Balance:			**$**	**362,038.39**

Action: _____

Motion: _____ Second: _____

B. Kuebler___ G. Shephard___ D. Engle___ A. Spandrio___ 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: March 11, 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 fourth round of semi-annual extraction fee invoices was mailed on January 15, 2021. Payments were due on February 19, 2021. ***As of March 1, six entities have not paid, totaling $4,638.78.***

        ii. The third round of semi-annual extraction fee invoices was mailed on July 16, 2020. Payments were due August 16, 2020. ***One entity remains unpaid, totaling $870.76.***

    b. GSP Grant:

        i. Grant Progress Report and Invoice No. 6 were submitted to DWR on November 5 and approved on December 24. ***Payment in the amount of $80,848.22 was received on February 9, 2021.***

        ii. Grant Progress Report and Invoice No. 7 were submitted to DWR on January 17, 2021. ***DWR approved the progress report and invoice on March 3, 2021. Payment in the amount of $77,410.36 is expected in 1-2 months.***

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

4. Sustainable Groundwater Management:

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

    b. Groundwater and Surface Water Monitoring: ***The property on which well 04N23W20A01S is located was sold recently. Staff sent a request for continued access to the new property owner on February 24, 2021. The request is pending.***

c. Camino Cielo Crossing Surface Water Flow Gauge: ***The gauge will be activated in Spring 2021.***

d. DWR Surface Water Flow Gauge: ***DWR is scheduled to install the gauge in Spring 2021***.

5. Wildlife Conservation Board (WCB) Grant: WCB is expected to announce grant awards on April 22. ***Rincon Consultants completed a draft CEQA Notice of Exemption for the proposed grant monitoring sites (CEQA compliance must be completed 15 days before grant award). The Ad Hoc Stakeholder Engagement Committee continued to pursue access for the monitoring sites.***

6. SWRCB / CDFW Instream Flow Enhancement Coordination: ***CDFW presented draft Ventura River flow recommendations during a webinar held on February 26, 2021 and released the corresponding draft report for a 30-day public comment period.***

7. Ventura River Watershed Instream Flow & Water Resilience Framework (VRIF): ***No reportable activity since the last Board meeting.***

8. 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___ A. Spandrio___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

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

DATE: March 11, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: California Environmental Quality Act Notice of Exemption for Wildlife Conservation Board Grant Monitoring Sites (Resolution 2021-01)

SUMMARY

Twenty monitoring sites were proposed in the Wildlife Conservation Board (WCB) grant application, including seventeen monitoring well cluster sites and three stream gauge sites. California Environmental Quality Act (CEQA) compliance must be completed fifteen days before the WCB Board Meeting in which the grant awards are approved, which is scheduled for April 22, 2021.

Rincon Consultants, Inc. completed a streamlined analysis to ensure applicability of certain CEQA categorical exemptions (Exhibit B of Attachment A). Rincon concluded that the project is exempt from CEQA pursuant to Sections 15303, 15304, and 15306 of Title 14 of the California Code of Regulations. Although the project has been determined to be exempt from CEQA, Rincon's memorandum includes recommended avoidance and minimization measures (AMMs) to ensure no significant impacts to the environment result from the project.

RECOMMENDED ACTIONS

Adopt Resolution 2021-01 approving a notice of exemption covering the monitoring sites identified for the WCB grant (Exhibit A of Attachment A).

BACKGROUND

On February 11, 2021, the Board approved professional services to complete a streamlined CEQA analysis and a NOE.

FISCAL SUMMARY

There is a minor unbudgeted expense associated with filing the NOE.

ATTACHMENTS

A. Draft Resolution 2021-01 and Exhibits

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ A. Spandrio___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

Item 9a

Attachment A

Draft Resolution 2021-01

BOARD OF DIRECTORS

UPPER VENTURA RIVER GROUNDWATER AGENCY

RESOLUTION NO. 2021-01

A RESOLUTION OF THE UPPER VENTURA RIVER GROUNDWATER AGENCY APPROVING THE NOTICE OF EXEMPTION PER THE CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) FOR THE STREAM FLOW DEPLETION AND BASELINE GROUNDWATER-SURFACE WATER INTERACTION MONITORING OF THE VENTURA RIVER PROJECT

WHEREAS, the Board of Directors of the Upper Ventura Groundwater Agency (the "Board") conducted a preliminary environmental impact analysis (**Exhibit B**) for the project known as the Stream Flow Depletion and Baseline Groundwater-Surface Water Interaction Monitoring of the Ventura River Project ("Project") and included measures in the project design to avoid and minimize environmental impacts, and

WHEREAS, the Board conducted an exemption analysis (**Exhibit B**) identifying that the Class 3, Class 4, and Class 6 Categorical Exemptions under CEQA and the CEQA Guidelines are applicable to the project and that none of the exceptions under CEQA Guidelines Section 15300.2 apply to the project.

NOW, THEREFORE, the Board of Directors of the Upper Ventura River Groundwater Agency does hereby resolve, find, determine and order as follows:

1. The attached Notice of Exemption for the Project (**Exhibit A**) is approved, and the Executive Director is hereby authorized to file the Notice of Exemption with the County Clerk and Recorder of Ventura County and the State Clearinghouse in conformance with the procedures provided for the filing of such notices in the CEQA and the CEQA Guidelines.

2. Effective Date. This Resolution shall become effective immediately upon adoption.

3. Certification. The Secretary shall certify to the adoption of this Resolution.

4. Recitals. All the recitals in this Resolution are true and correct, and this Board of Directors so finds, determines and represents.

PASSED, APPROVED, AND ADOPTED this 11th day of March 2021.

[Signature page follows]

_____
Diana Engle, Board Chair

ATTEST:

_____
Angelo Spandrio, Secretary

APPROVED AS TO FORM:

_____
Upper Ventura River Groundwater Agency
General Counsel

Notice of Exemption

Appendix E

To: Office of Planning and Research
P.O. Box 3044, Room 113
Sacramento, CA 95812-3044

County Clerk
County of: Ventura
800 South Victoria Avenue
Ventura, CA 93009

From: (Public Agency): Upper Ventura River Groundwater Agency
202 West El Roblar Drive
Ojai, California 93023
(Address)

Project Title: Stream Flow Depletion and Baseline Groundwater-Surface Water Interaction Monitoring of the Ventura River

Project Applicant: Upper Ventura River Groundwater Agency (UVRGA)

Project Location - Specific:

The project consists of 17 groundwater monitoring well sites and two stream gauge sites generally located along the Upper Ventura River in the city of Ojai and unincorporated Ventura County.

Project Location - City: unincorporated Project Location - County: Ventura

Description of Nature, Purpose and Beneficiaries of Project:

The proposed project) would include the design, construction, and operation of up to 17 groundwater monitoring well clusters and three stream gauges. The proposed project would address significant and unreasonable depletion of interconnected surface water of the Ventura River within the Upper Ventura River Basin as provided for under the Sustainable Groundwater Management Act, particularly during dry weather conditions when surface water flow that is critical for maintaining essential aquatic habitat for special status species is dependent on groundwater discharge. The proposed project would be an initial step in implementation of UVRGA's forthcoming Groundwater Sustainability Plan, which is currently under development .The monitoring facilities and baseline monitoring will provide data to understand what actions in the region can address stream flows.

Name of Public Agency Approving Project: Upper Ventura River Groundwater Agency

Name of Person or Agency Carrying Out Project: Upper Ventura River Groundwater Agency

Exempt Status: **(check one):**

- ☐ Ministerial (Sec. 21080(b)(1); 15268);
- ☐ Declared Emergency (Sec. 21080(b)(3); 15269(a));
- ☐ Emergency Project (Sec. 21080(b)(4); 15269(b)(c));
- ☒ Categorical Exemption. State type and section number: Class 3 (15303), Class 4 (15304), Class 6 (15306)
- ☐ Statutory Exemptions. State code number: _____

Reasons why project is exempt:

The proposed project would involve construction of a limited number of new monitoring wells and stream gauges. Monitoring wells would occupy approximately three square feet at the surface if vaulted individually or approximately 40 square feet at the surface if vaulted as a cluster. Stream gauges would consist of small segments of one-inch steel or PVC housing/standpipe. Therefore, these elements would be classified as small new equipment and facilities, and the Class 3 exemption is applicable. In addition, construction of the proposed project would consist only of minor public alterations in the condition of land and vegetation and would not involve the removal of healthy, mature, scenic trees. Therefore, the Class 4 exemption is applicable. Moreover, the proposed project would involve a monitoring well and stream gauge network to provide data to understand what actions in the region can enhance stream flows and to manage interconnected surface water depletion, evaluate stream flow conditions, and evaluate stream responses to enhancement efforts by all entities in the region. Furthermore, the proposed project would not result in a serious or major disturbance to an environmental resource. Therefore, the Class 6 exemption is applicable.

Lead Agency
Contact Person: Bryan Bondy Area Code/Telephone/Extension: 805-212-0484

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a Notice of Exemption been filed by the public agency approving the project? ☐ Yes ☐ No

Signature: _____ Date: _____ Title: _____

☐ Signed by Lead Agency ☐ Signed by Applicant

Authority cited: Sections 21083 and 21110, Public Resources Code.
Reference: Sections 21108, 21152, and 21152.1, Public Resources Code.

Date Received for filing at OPR: _____

Rincon Consultants, Inc.
180 North Ashwood Avenue
Ventura, California 93003

805 644 4455 OFFICE AND FAX

info@rinconconsultants.com
www.rinconconsultants.com

March 4, 2021
Project No: 20-10008

Bryan Bondy, Executive Director and GSP Manager
Upper Ventura River Groundwater Agency
202 West El Roblar Drive
Ojai, California 93023
Via email: bbondy@uvrgroundwater.org

Subject: **Work Order No. 4: CEQA Categorical Exemption Memorandum for the Stream Flow Depletion and Baseline Groundwater-Surface Water Interaction Monitoring of the Ventura River Project**

Dear Mr. Bondy:

This memorandum provides an analysis to support the determination by the Upper Ventura River Groundwater Agency (UVRGA; the lead agency) that the proposed Stream Flow Depletion and Baseline Groundwater-Surface Water Interaction Monitoring of the Ventura River Project is exempt from the California Environmental Quality Act (CEQA) pursuant to Sections 15303, 15304, and 15306 of Title 14 of the California Code of Regulations.

Project Location

The project consists of up to 17 groundwater monitoring well sites and two stream gauge sites generally located within the Upper Ventura River Basin in unincorporated Ventura County. Table 1 provides a summary of the monitoring well and stream gauge sites and their surroundings. The monitoring well sites are located in areas designated Open Space, Open Space – Urban Reserve, Rural, and Existing Community in the County of Ventura General Plan and zoned OS-10 (Open Space with minimum lot area of 10 acres), OS-20 (Open Space with minimum lot area of 20 acres), OS-40 (Open Space with minimum lot area of 40 acres), RA-2 (Residential Agricultural with minimum lot area of two acres), RE-1 (Rural Exclusive with minimum lot area of one acre), and AE-40 (Agricultural Exclusive with minimum lot area of 40 acres) with overlay zones of TRU (Temporary Rental Unit Regulation), DKS (Dark Sky), HCWC (Habitat Connectivity and Wildlife Corridors), and CWPA (Critical Wildlife Passage Areas). See Figure 1 for a map of the project area in a regional context and Figure 2 through Figure 4 for maps of the approximate locations of the well clusters and stream gauges. The final locations of the well clusters and stream gauges will be determined in the coordination with property owners, technical experts, and contractors.

Figure 1 Regional Location

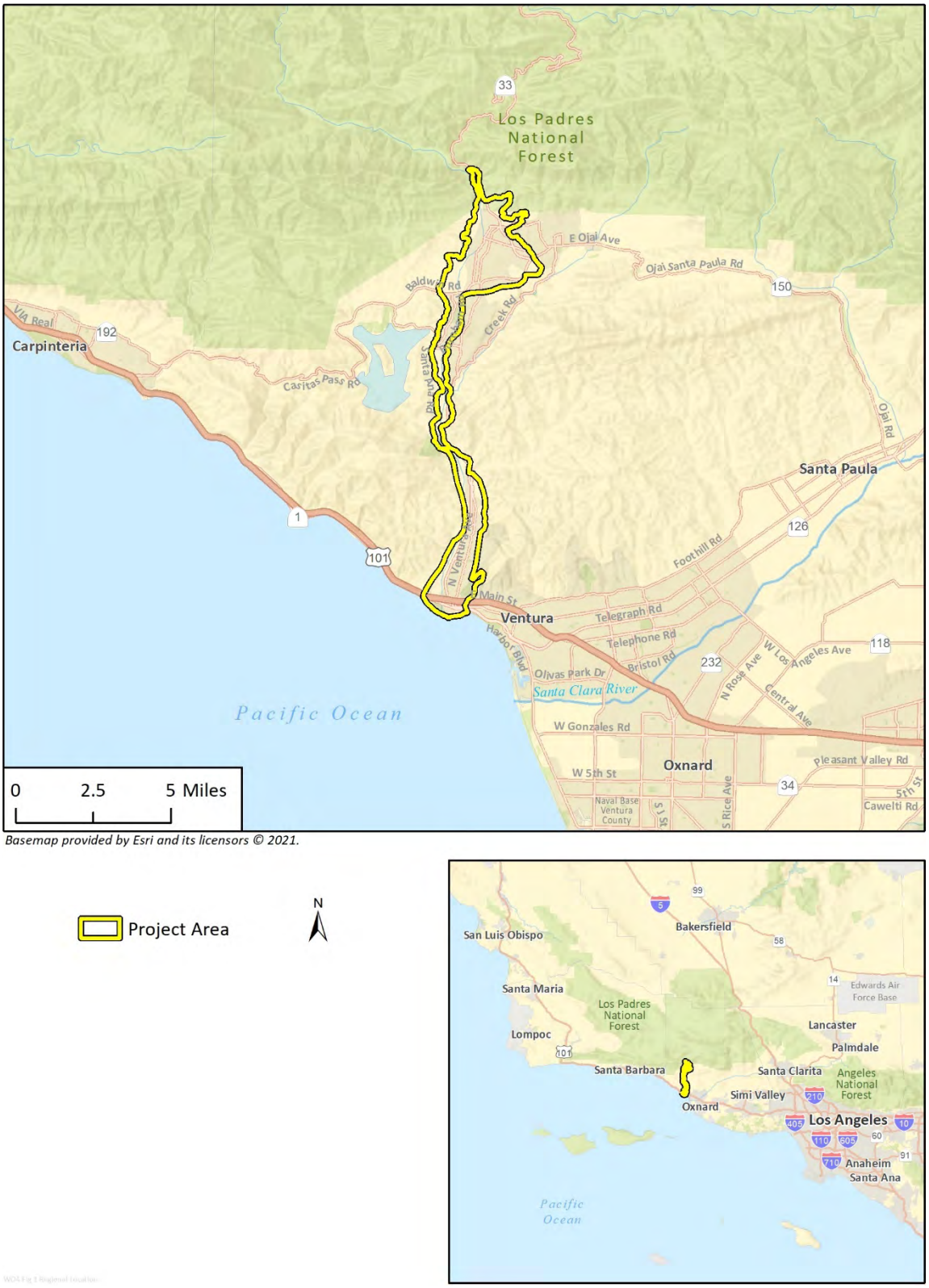


Figure 2 Approximate Well Locations – Northern Extent

Figure 3 Approximate Well Locations – Central Extent

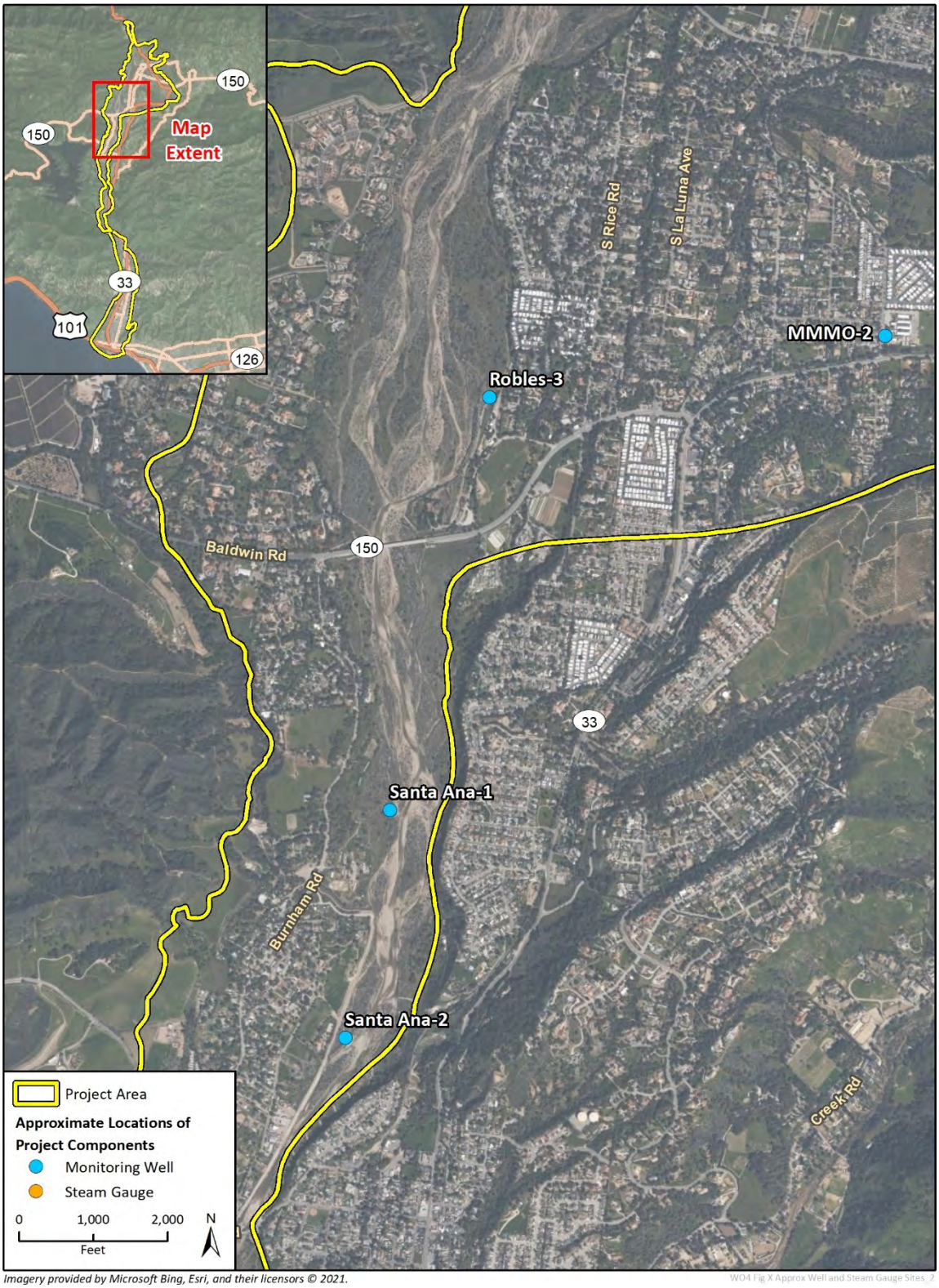


Figure 4 Approximate Well Locations – Southern Extent

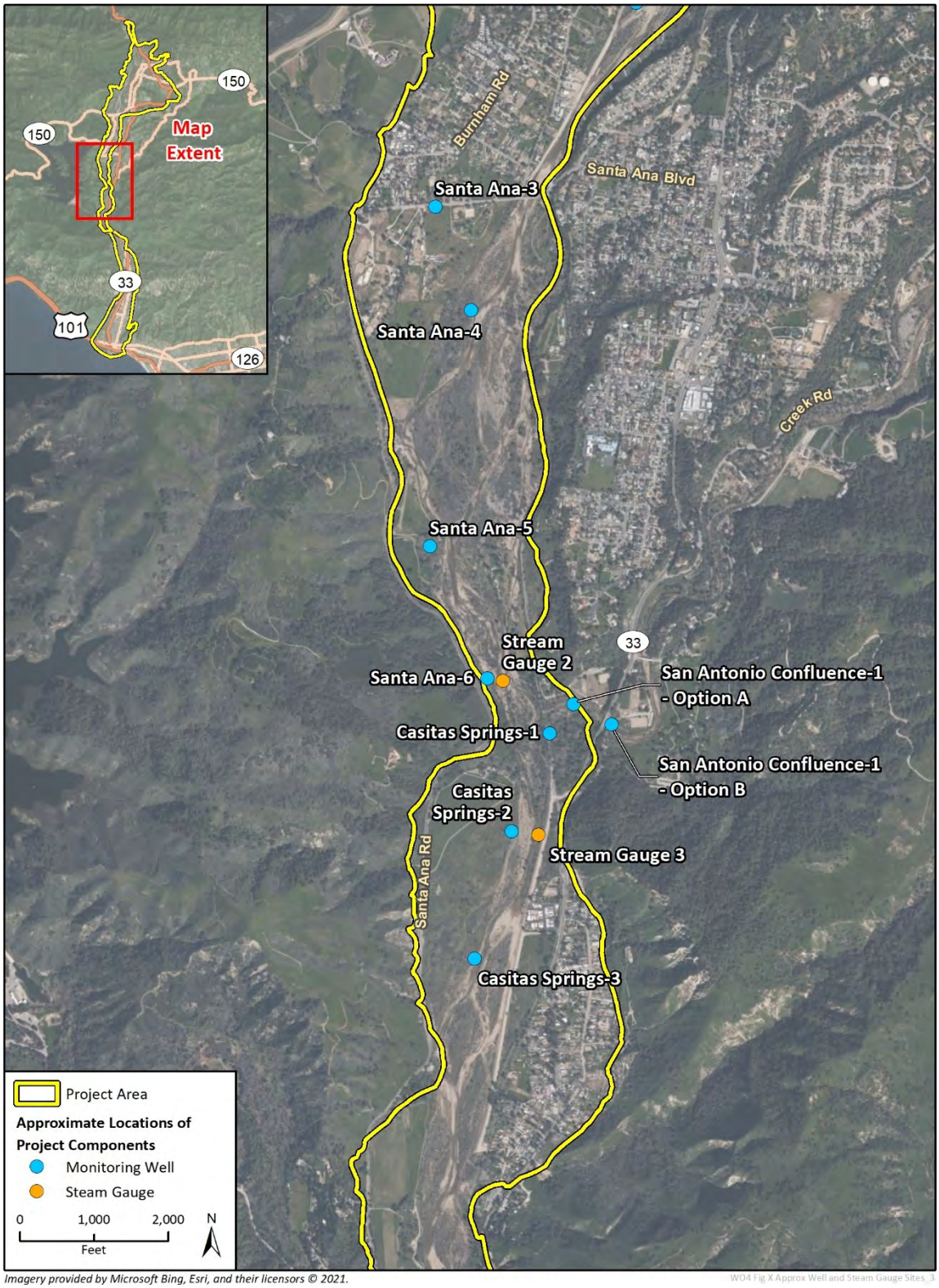


Table 1 Summary of Monitoring Well and Stream Gauge Sites

Project Component	APN	Existing Condition	Surrounding Land Uses
Kennedy-1	010-0-050-22	Agricultural land	Agricultural land and open space
Kennedy-2			
Option A	None	Paved right-of-way of Rice Road	Agricultural land and open space
Option B	010-0-080-21	Open space	Agricultural land and open space (including Upper Ventura River)
Option C	010-0-050-05	Open space	Open space (including Upper Ventura River)
Robles-1	011-0-010-11	Unpaved parking lot	Open space, trails, and Meyer Road
Robles-2	011-0-030-05	Unpaved trail	Open space and trails
Robles-3	011-0-070-06	Open space	Open space, trails, and unpaved road
MMMO-1	017-0-330-30	Former agricultural land	Meiners Oaks Elementary School, unpaved road, residential development, and open space
MMMO-2	018-0-050-04	Bus drop-off area of Meyers Oaks Elementary School	Residential development and Loma Drive
Santa Ana-1	032-0-202-10	Open space	Open space (including Upper Ventura River)
Santa Ana-2	031-010-115	Open space	Open space (including Upper Ventura River) and residential development
Santa Ana-3	None	Paved right-of-way of Santa Ana Boulevard	Residential development and open space
Santa Ana-4	060-0-180-13	Open space	Open space (including Upper Ventura River)
Santa Ana-5	060-0-200-13	Open space	Open space (including Upper Ventura River)
Santa Ana-6	060-0-200-13	Open space	Open space (including Upper Ventura River) and Santa Ana Road
San Antonio Confluence-1			
Option A	035-0-120-25	Open space	Open space (including San Antonio Creek)
Option B	035-0-120-10	Open space	Open space (including San Antonio Creek), State Route 33, and agricultural/ranching uses
Casitas Springs-1	061-0-160-12	Open space	Open space and Ojai Valley Trail
Casitas Springs-2	061-0-160-34	Open space	Open space (including Upper Ventura River)
Casitas Springs-3	060-0-220-20	Open space	Open space (including Upper Ventura River)
Stream Gauge 1[1]	010-0-180-36	Upper Ventura River west of	Upper Ventura River, open space,

Project Component	APN	Existing Condition	Surrounding Land Uses
		intersection of State Route 33 and Camino Cielo	and State Route 33
Stream Gauge 2	060-0-200-13	Upper Ventura River east of Santa Ana Road between Newman Ranch Road and Hollingsworth Ranch Road	Upper Ventura River and open space
Stream Gauge 3	061-0-160-20	Upper Ventura River east of State Route 33 between Sulphur Mountain Road and Nye Road	Upper Ventura River, unpaved road, and open space

APN = Assessor's Parcel Number

[1] Stream Gauge 1 is an existing project component.

Project Description

The Stream Flow Depletion and Baseline Groundwater-Surface Water Interaction Monitoring of the Ventura River Project (herein referred to as "project" or "proposed project") would include the design, construction, and operation of 17 groundwater monitoring well clusters and three stream gauges.

Purpose of the Project

Ventura River stream flow is connected with the groundwater of the Upper Ventura River Basin (UVRB or Basin) at certain locations and times. During dry weather, stream flow in the southern UVRB that provides critical habitat for steelhead and other species is dependent on groundwater discharge. Additionally, groundwater pumping may potentially impact migration flows for steelhead and Pacific lamprey during winter and spring. A key issue for UVRGA and other entities that are working to understand and manage streamflow in the Ventura River is the lack of monitoring facilities and baseline monitoring data to assess the interconnection of groundwater and surface water. Importantly, there are only a few wells located within the Ventura River floodplain to measure groundwater-surface water interaction and there are relatively few stream gauges to develop relationships between groundwater levels and surface water flow. Of the seven existing wells that are currently monitored, most are affected by pumping within or nearby the well, greatly limiting UVRGA's ability to evaluate depletion of interconnected surface water.[1] The gaps in monitoring infrastructure limit UVRGA's ability to manage depletion of interconnected surface water and the region's ability to develop the most effective and cost-efficient projects to manage dry weather stream flow. The monitoring facilities and baseline monitoring will provide data to understand what actions in the region can actually address stream flow versus simply conserving water. In the future, the monitoring network can be used by UVRGA to manage interconnected surface water depletion, evaluate stream flow conditions, and evaluate stream responses to enhancement efforts by other entities in the region.

The proposed project would address significant and unreasonable depletion of interconnected surface water of the Ventura River within the UVRB as provided for under the Sustainable Groundwater

[1] Interconnected surface water is a Sustainable Groundwater Management Act term that refers to 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.

Management Act (SGMA), particularly during dry weather conditions when surface water flow that is critical for maintaining essential aquatic habitat for special status species is dependent on groundwater discharge. The proposed project would be an initial step in implementation of UVRGA's forthcoming Groundwater Sustainability Plan (GSP), which is currently under development pursuant to SGMA (due January 31, 2022). It should be noted that although preparation and adoption of a GSP is not subject to the requirements of CEQA, projects that implement actions taken pursuant to a GSP are subject to CEQA (California Water Code Division 6, Part 2.74, Chapter 6, Section 10728.6).

Project Components

Groundwater Monitoring Wells

Up to seventeen monitoring well clusters would be installed along the Ventura River. Each well cluster would consist of two to three closely-spaced monitoring wells (i.e., within five to ten feet of each other). Each well would consist of an approximately two- to four-inch polyvinyl chloride (PVC) well casing and screen placed in an approximately eight- to ten-inch borehole. The annular space in the boreholes[2] would be backfilled with #3 filter sand adjacent to the well screen interval[3] and bentonite clay (or other sealing material) above the screen interval. Wells would be drilled to a variety of depths ranging from approximately 75 to 350 feet in order to obtain data from different hydrogeologic units, including young alluvium, older alluvium, and bedrock. Each well would be completed at land surface with a flush-mounted manhole vault, monument style standpipe with a lid, or other cover, as determined by property owner preference. Single-well vaults would occupy approximately three square feet at the surface. The clusters would occupy approximately 40 square feet at the surface.

The proposed monitoring wells would be constructed primarily between March and December 2022. The wells would be constructed using sonic drilling, which uses high-frequency, resonant energy generated inside a sonic drilling head to advance into subsurface formations. The sonic drilling method would be capable of drilling in difficult conditions such as flowing sands, cobbles, boulders, and hard bedrock formations that are anticipated at several monitoring well locations. In addition, the sonic drilling method does not require drilling fluids and creates approximately 70 to 80 percent less waste than other drilling methods. Each well would be developed to remove fine sediment from the filter pack to ensure that high-quality water samples can be obtained. Well development would consist of bailing, surging, and pumping the well until specific industry standard turbidity readings are obtained and water quality parameters stabilize. Groundwater produced during well development would be disposed of via one of two options: 1) transport via truck for disposal at a nearby wastewater treatment plant (e.g., Ojai Valley Sanitary District's Treatment Plant), or 2) discharge to the Upper Ventura River, which would require coverage under Statewide General Waste Discharge Requirements for Discharges to Land with a Low Threat to Water Quality (Order No. 2003-0003-DWQ). Access to each monitoring well site during construction activities would occur primarily using existing paved and unpaved roads and trails. In some locations, existing unpaved roads and trails would be widened slightly to accommodate construction equipment. In addition, at some locations, minor vegetation and tree trimming would be required to accommodate the drill rig. Any required surficial grading would be less than three feet in depth.

[2] Annular space refers to the space between the well casing and the outer edge of the borehole.
[3] The well screen interval is the intake portion of the well that allows water from the surrounding aquifer to enter.

Upon completion, a contractor would complete four consecutive semi-annual water quality sampling events at each well. Continuous monitoring of groundwater levels would be accomplished using pressure transducers equipped with data loggers. A transducer would be installed in each of the individual monitoring wells following well development. Raw water level data would be downloaded from the transducers semi-annually concurrently with water quality sampling activities.

Surface Water Stream Gauges

Two sets of stream gauging equipment would be installed to monitor surface water flow immediately upstream and downstream of the San Antonio Creek confluence to help quantify changes in the groundwater contributions to stream flow along the UVRVB as compared to flows entering from San Antonio Creek. For this project, stream gauges would consist of either a one-inch steel or PVC housing/standpipe (screened to allow surface water inflow) and a pressure transducer secured within the housing/standpipe. Stream gauging equipment would be installed by attaching equipment directly to bedrock, boulders, other suitable substrate types, or existing structures to avoid channel alteration. Stream gauge installation would be completed using hand tools, and the locations would be accessed by foot. Depending on installation location, the housing/standpipe would be attached to the substrate/structure using stainless steel concrete anchors and/or conduit straps. The stream gauging equipment would be deployed during the dry season (approximately May through September) to record both baseline and receding flows and would be demobilized prior to the onset of winter storm events and associated elevated flows.

After installation, stream gauges would be monitored and maintained periodically. During each monitoring and maintenance event, a contractor would visit each location to download monitoring data, visually confirm gauging equipment is properly positioned and that continuous data loggers are functioning properly and re-deploy the data collection program. Data loggers and associated equipment (e.g., enclosures) would be periodically cleaned manually using a soft bristle brush and deionized water.

Project Design Features: Avoidance and Minimization Measures

UVRGA and its contractor(s) and representative(s) will implement the following avoidance and minimization measures (AMMs) as part of the proposed project. Table 2 provides a summary of which AMMs apply to specific project components.

AMM-1 Avoidance of School Year

To avoid disruption to Mira Monte Elementary School and Meiners Oaks Elementary School, MMMO-1 and MMMO-2 will be constructed during the summer of 2022 when these schools are not in session.

AMM-2 Restoration of Land

Vegetation and land impacted drilling activities will be restored in coordination with landowner preferences.

AMM-3 Worker Environmental Awareness Training

Prior to initiation of project construction activities, all personnel associated with project construction activities will be required to attend a Worker Environmental Awareness Program (WEAP) training,

conducted by a qualified biologist, to aid workers in recognizing special status biological resources that may occur in the project area.

The specifics of this program will include identification of local species and habitats, a description of the regulatory status and general ecological characteristics of special status resources, and review of the limits of construction and measures required to avoid and minimize impacts to biological resources within the work area. The program will also educate construction supervisors and managers on weed identification and the importance of controlling and preventing the spread of noxious weed infestations. A fact sheet conveying this information will also be prepared for distribution to all contractors, their employees, and other personnel involved with construction of the project. All employees will sign a form provided by the trainer documenting they have attended the WEAP training and understand the information presented to them. The crew foreman will be responsible to ensure crew members adhere to the guidelines and restrictions designed to avoid or minimize impacts to sensitive species.

Additionally, UVRGA will require all personnel associated with project ground disturbance activities to attend a WEAP training conducted by a qualified archaeologist on archaeological sensitivity prior to the commencement of any ground-disturbing activities. The training will be conducted by an archaeologist who meets or exceeds the Secretary of Interior's Professional Qualification Standards for archaeology.[4] Archaeological sensitivity training will include a description of the types of cultural material that could be encountered, cultural sensitivity issues, regulatory issues, and the proper protocol for treatment of the materials in the event of a find.

AMM-4 Pre-construction Surveys and Biological Monitoring

A qualified biological monitor will be on site to conduct a biological survey of each construction area prior to initial ground disturbance activities (i.e., vegetation clearing and initial well drilling). The monitor will discuss survey findings and biological resources with the construction crew prior to the commencement of work as part of the WEAP conducted under AMM-3. Once the crew is trained, the monitor will provide the construction foreman his or her contact information prior to leaving the site. If sensitive species are observed during construction, the foreman will contact the monitor for guidance on implementing additional measures to avoid impacts to sensitive species.

AMM-5 Construction Best Management Practices

UVRGA will require its construction contractor(s) to implement the following best management practices (BMPs) during construction activities:

- Staging and laydown areas will be unvegetated and previously disturbed sites.
- All vehicles and equipment will be in good working condition and free of leaks. The contractor will prevent petroleum products, or any other pollutant, from contaminating the soil or entering a watercourse (dry or otherwise). When vehicles or equipment are stationary, mats or drip pans will be placed below vehicles to contain fluid leaks. The contractor will prevent the discharge of silt or

[4] National Parks Service. 1983. Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines. Washington, DC. https://www.nps.gov/history/local-law/arch_stnds_0.htm (accessed February 2021).

pollutants off-site when working adjacent to potentially jurisdictional waters. The contractor will also install BMPs (i.e., silt barriers, sandbags, straw bales) as appropriate.

To further protect water quality and sensitive habitat areas, no refueling, cleaning, or maintenance of equipment and vehicles will occur at least 100 feet from the river channel. A spill kit will be on the project site and readily available, and should a spill accidentally occur in the riverbed, clean-up will be conducted immediately. The contaminated area will be cleaned, and any contaminated materials will be properly disposed. For all spills, the project foreman or other designated liaison will notify the biological monitor and UVRGA immediately.

- Materials will be stored on impervious surfaces or plastic ground covers to prevent any spills or leakage on the ground or into a watercourse. Material storage shall be at least 100 feet from flowing water that could come in contact with the Upper Ventura River. Any material/spoils from project activities will be located and stored 100 feet from potential jurisdictional areas as practicable. Construction materials and spoils will be protected from stormwater run-off using temporary perimeter sediment barriers such as berms, silt fences, fiber rolls, covers, sand/gravel bags, and straw bale barriers, as appropriate.
- BMPs will be implemented to prevent the off-site tracking of loose construction and landscape materials, as appropriate. All food-related trash will be disposed of in closed containers and removed from the project area each day during the construction period. Construction personnel will not feed or otherwise attract wildlife to the construction area. At project completion, all project-generated debris, vehicles, building materials, and rubbish will be removed from the project area.
- Work during times of precipitation will be avoided to the maximum extent feasible.
- Work conducted near the riverbank that could result in bank instability will include erosion protection features such as silt fencing, etc. to minimize the risk of erosion.
- All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities shall be restricted to designated areas. These designated areas shall be located in previously compacted and disturbed areas to the maximum extent possible in such a manner as to prevent runoff from entering existing native vegetation areas. These areas shall be clearly designated in the construction plans.
- Where warranted, internal combustion engines will be equipped with spark arresters maintained in effective working order.
- Where warranted, a water truck with adequate hoses for fire control shall be maintained on site during all construction activities.
- Smoking shall be allowed only in designated areas equipped with sand boxes for the disposal of cigarette butts.
- To avoid the introduction or spread of noxious weeds into previously un-infested areas, equipment entering the project site will be monitored to ensure noxious weeds are not transferred to the project site.

AMM-6 Traffic Control Plan

For monitoring wells located on the public right-of-way (i.e., Kennedy-2 Option A and Santa Ana-3), UVRA will require the project contractor to prepare and implement a traffic control plan that specifies how traffic will be safely and efficiently redirected during work within the public right-of-way (ROW).

Traffic control measures in the event of a lane closure will be included, and priority access will be given to emergency vehicles. The traffic control plan will also include requirements to notify local emergency response providers, including the Ventura County Fire Department, Ventura County Sheriff's Department, ambulance services, and paramedic services at least one week prior to the start of work within the public ROW if a lane closure is required.

AMM-7 Waste Soil Sampling and Disposal

If the upper five feet of soil will be disposed off-site from the proposed wells located in areas currently and/or formerly used for agriculture (i.e., Kennedy-1, Kennedy-2 Option A, Kennedy-2 Option B, San Antonio Confluence-1 Option A, and San Antonio Confluence-1 Option B), or if contamination appears to be present (based on visual observation or detection of odor), a qualified environmental professional (EP), under the direction of a California Professional Geologist (PG) or California Professional Engineer (PE), will segregate the shallow soil cuttings derived during drilling, sample the segregated the soil, and transport the samples to an analytical laboratory for organochlorine pesticides and arsenic analysis. The EP will utilize the results of the analyses for waste characterization purposes prior to off-site transportation or disposal of the potentially impacted soils. The PG or PE will provide disposal recommendations, and arrange for proper disposal of the waste soils, as necessary. UVRGA will review and approve the disposal recommendations prior to transportation of waste soils off-site.

AMM-8 Avoidance of Known Cultural Resources

All monitoring wells will be sited outside the boundaries of all known cultural resources as recorded in the California Historical Resources Information System.

AMM-9 Archaeological Survey and Archaeological and Native Monitors

Prior to initial construction activities at each monitoring well site, a pedestrian survey of the project site to identify potential surficial archaeological resources shall be conducted by a qualified archaeologist meeting the Secretary of the Interior's standards in archaeology. If no cultural resources are identified during the pedestrian survey, no further measures will be taken. If cultural resources are identified during the pedestrian survey, these resources will be avoided and preserved in place. In addition, if cultural resources are identified at a monitoring well site, both a qualified archaeologist and a locally affiliated Native American monitor will monitor construction activities within that monitoring well site during initial ground disturbing activities. Initial ground disturbance is defined as disturbance within previously undisturbed (i.e. intact) native soils (i.e., within the top 15 feet of soils). If, during initial ground disturbance, the qualified archaeologist determines that the construction activities have little or no potential to impact cultural resources (e.g., excavations are within previously disturbed, non-native soils, or within soil formation not expected to yield cultural resources deposits), the qualified archaeologist may recommend that monitoring be reduced or eliminated. The locally affiliated Native American monitor may consult with the archaeological monitor to inform this decision to reduce or eliminate monitoring based on private Tribal knowledge. The archaeological and Native monitors will collaboratively determine if reduced or eliminated monitoring is recommended.

AMM-10 Stop Work Orders

Consistent with the Ventura County General Plan and Ojai Valley Area Plan OJ-44.1, if cultural resources are encountered during ground-disturbing activities, whether or not a monitor is present, work in the immediate area will halt and an archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for archaeology (National Park Service 1983) will be contacted immediately to evaluate the find. If the discovery proves to be eligible for listing in the California Register of Historical Resources, additional work such as data recovery excavation and Native American consultation may be warranted to avoid or minimize impacts. UVRGA will be contacted immediately following all on-site stop work orders if they occur.

The discovery of human remains is always a possibility during ground disturbances. State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. The county coroner must be notified of the find immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission, which will determine and notify a Most Likely Descendant (MLD). The MLD shall complete the inspection of the site within 24 hours of being granted site access and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

AMM-11 Construction Noise Reduction Measures

The following construction noise reduction measures will be implemented during project construction activities:

- Whenever possible, construction activities will be scheduled so as to avoid operating several pieces of equipment simultaneously, which causes high noise levels.
- Where feasible, heavy-duty stationary construction equipment will be placed so that emitted noise is directed away from the nearest sensitive receivers.
- During construction, all equipment, fixed or mobile, will be operated with closed engine doors and shall be equipped with properly operating and maintained mufflers consistent with manufacturers' standards.
- Where warranted, UVRGA's contractor(s) will use portable sound enclosures for all generators and air compressors that provide at least a 10-dBA reduction in noise levels.
- Where warranted, UVRGA will provide a non-automated telephone number for local residents to call to submit complaints associated with construction noise during all phases of construction. UVRGA shall maintain a log of complaints and shall address complaints to minimize noise issues for neighbors.

Table 2 Summary of AMMs

Project Component	1	2	3	4	5	6	7	8	9	10	11
Kennedy-1		•	•	•	•		•	•	•	•	•
Kennedy-2			•	•	•			•	•	•	•
Option A		•	•	•	•	•	•	•	•	•	•
Option B		•	•	•	•		•	•	•	•	•
Option C		•	•	•	•			•	•	•	•
Robles-1		•	•	•	•			•	•	•	•
Robles-2		•	•	•	•			•	•	•	•
Robles-3		•	•	•	•			•	•	•	•
MMMO-1	•	•	•	•	•			•	•	•	•
MMMO-2	•	•	•	•	•			•	•	•	•
Santa Ana-1		•	•	•	•			•	•	•	•
Santa Ana-2		•	•	•	•			•	•	•	•
Santa Ana-3		•	•	•	•	•		•	•	•	•
Santa Ana-4		•	•	•	•			•	•	•	•
Santa Ana-5		•	•	•	•			•	•	•	•
Santa Ana-6		•	•	•	•			•	•	•	•
San Antonio Confluence-1		•	•	•	•			•	•	•	•
Option A		•	•	•	•		•	•	•	•	•
Option B		•	•	•	•		•	•	•	•	•
Casitas Springs-1		•	•	•	•			•	•	•	•
Casitas Springs-2		•	•	•	•			•	•	•	•
Casitas Springs-3		•	•	•	•			•	•	•	•
Stream Gauge 1[1]											
Stream Gauge 2			•	•	•						
Stream Gauge 3			•	•	•						

[1] Stream Gauge 1 is an existing project component.

Exemption Analysis

Suitability of Use of Categorical Exemption

The project qualifies for a Categorical Exemption (CE) under the California Environmental Quality Act (CEQA). Public Resources Code Section 21084 requires the *State CEQA Guidelines* to include a list of classes of projects that have been determined not to have a significant effect on the environment and that are, therefore, exempt from CEQA (see Chapter 19 Sections 15301 through 15333 of the *State CEQA Guidelines*). Categorically Exempt projects under CEQA fall into several distinct categories; Classes 3, 4 and 6 apply to the project.

Section 15303 – New Construction or Conversion of Small Structures: Class 3 consists of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. The numbers of structures described in this section are the maximum allowable on any legal parcel. Examples of this exemption include, but are not limited to:

- One single-family residence, or a second dwelling unit in a residential zone. In urbanized areas, up to three single-family residences may be constructed or converted under this exemption.
- A duplex or similar multi-family residential structure, totaling no more than four dwelling units. In urbanized areas, this exemption applies to apartments, duplexes and similar structures designed for not more than six dwelling units.
- A store, motel, office, restaurant, or similar structure not involving the use of significant amounts of hazardous substances, and not exceeding 2500 square feet in floor area. In urbanized areas, the exemption also applies to up to four such commercial buildings not exceeding 10,000 square feet in floor area on sites zoned for such use if not involving the use of significant amounts of hazardous substances where all necessary public services and facilities are available and the surrounding area is not environmentally sensitive.
- Water main, sewage, electrical, gas, and other utility extensions, including street improvements, of reasonable length to serve such construction.
- Accessory (appurtenant) structures including garages, carports, patios, swimming pools, and fences.
- An accessory steam sterilization unit for the treatment of medical waste at a facility occupied by a medical waste generator, provided that the unit is installed and operated in accordance with the Medical Waste Management Act (Section 117600, et seq., of the Health and Safety Code) and accepts no offsite waste.

Section 15304 – Minor Alterations to Land. Class 4 consists of minor public or private alterations in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees except for forestry or agricultural purposes. Examples include, but are not limited to:

- Grading on land with a slope of less than 10 percent, except that grading shall not be exempt in a waterway, in any wetland, in an officially designated (by federal, state, or local government action) scenic area, or in officially mapped areas of severe geologic hazard such as an Alquist-Priolo Earthquake Fault Zone or within an official Seismic Hazard Zone, as delineated by the State Geologist.
- New gardening or landscaping, including the replacement of existing conventional landscaping with water efficient or fire resistant landscaping.
- Filling of earth into previously excavated land with material compatible with the natural features of the site.
- Minor alterations in land, water, and vegetation on existing officially designated wildlife management areas or fish production facilities which result in improvement of habitat for fish and wildlife resources or greater fish production.

- Minor temporary use of land having negligible or no permanent effects on the environment, including carnivals, sales of Christmas trees, etc.
- Minor trenching and backfilling where the surface is restored.
- Maintenance dredging where the spoil is deposited in a spoil area authorized by all applicable state and federal regulatory agencies.
- The creation of bicycle lanes on existing rights-of-way.
- Fuel management activities within 30 feet of structures to reduce the volume of flammable vegetation, provided that the activities will not result in the taking of endangered, rare, or threatened plant or animal species or significant erosion and sedimentation of surface waters. This exemption shall apply to fuel management activities within 100 feet of a structure if the public agency having fire protection responsibility for the area has determined that 100 feet of fuel clearance is required due to extra hazardous fire conditions.

Section 15306 – Information Collection: Class 6 projects consist of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted, or funded.

The proposed project would involve construction of a limited number of new monitoring wells and stream gauges. Monitoring wells would occupy approximately three square feet at the surface if vaulted individually. Stream gauges would consist of small segments of one-inch steel or PVC housing/standpipe. Therefore, these elements would be classified as small new equipment and facilities, and the Class 3 exemption is applicable. In addition, construction of the proposed project would consist only of minor public alterations in the condition of land and vegetation and would not involve the removal of healthy, mature, scenic trees. Therefore, the Class 4 exemption is applicable. Moreover, the proposed project would involve a monitoring well and stream gauge network to provide data to understand what actions in the region can enhance stream flows and to manage interconnected surface water depletion, evaluate stream flow conditions, and evaluate stream responses to enhancement efforts by all entities in the region. Furthermore, as discussed in detail under Exception 15300.2(c), the proposed project would not result in a serious or major disturbance to an environmental resource. Therefore, the Class 6 exemption is applicable.

Discussion of CEQA Guidelines 15300.2 Exceptions

Projects that are consistent with the categorical exemptions identified in *CEQA Guidelines* sections 15301 through 15333 are not automatically exempt from CEQA review. Section 15300.2 (Exceptions) of the *State CEQA Guidelines* outlines the cases in which projects that would normally be exempt from CEQA review would not be exempt. These exceptions are as follows:

a. **Location**. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

b. **Cumulative Impact**. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

c. **Significant Effect**. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

d. **Scenic Highways**. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

e. **Hazardous Waste Sites**. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

f. **Historical Resources**. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

The following sections address each one of the potential exceptions and demonstrate that none apply to the proposed project.

15300.2(a) **Location**. Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply in all instances, except where the project may impact an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

As detailed further under Exception 15300.2(c), although the project site does contain suitable habitat for special-status species, including designated critical habitat for southwestern willow flycatcher, California red-legged frog, and southern California steelhead, the project is located along the Ventura River and not in the active river channel. As a result, the project would not result in significant adverse impacts to these species and habitats. Furthermore, the monitoring well and stream gauge sites are not located within the jurisdiction of an adopted Habitat Conservation Plan, Natural Community Plan, or other approved local, regional, or state habitat conservation plan. Therefore, construction and operation of the proposed project would not impact an environmental resource of critical biological concern. The presence or absence of cultural and tribal cultural resources in the project area is currently unknown. The project is located within the traditional home of the Barbareño/Ventureño Band of Mission Indians of Chumash descent. The Tribe actively participates in tribal monitoring for projects on their ancestral lands. Through a limited desktop analysis of peer reviewed articles and historical aerials, Rincon has determined that the area is highly sensitive for cultural resources. A records search at the South Central Coast Information Center (SCCIC) of the California Historical Resources Information System (CHRIS) for the presence of cultural resources located in the project area is underway. However, if cultural resources are determined to be present within the project area, implementation of AMM-3 and AMM-8 through AMM-10 would avoid significant impacts through implementation of a WEAP for archaeological resources, avoidance of known cultural resources, archaeological and Native American monitoring,

where warranted, and stop work orders in the event of an unanticipated discovery of cultural or tribal cultural resources. In addition, as stated below in the discussion of Exception 15300.2(e) Hazardous Waste Sites, the project site is not listed as containing or being contaminated by hazardous materials. Therefore, construction and operation of the proposed project would not impact an environmental resource of hazardous concern. Therefore, this exception to a CE does not apply to the proposed project.

15300.2(b) **Cumulative Impact**. All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.

As discussed under Exception 15300.2(c) below, the project would not result in significant environmental impacts. The project may provide information that ultimately leads to implementation of other projects under the GSP; however, these projects would be required to undergo their own CEQA review. In addition, due to the temporary and short-term nature of project construction and the minimal maintenance and monitoring activities associated with operation, the potential for cumulative impacts to occur is low. Approved and pending projects within and near the project area include a request to extend operation of the Montessori School of Ojai for an additional 30-year period, a request to extend operation of the Ojai Valley Organics Recycling Facility for an additional 10-year period, a new agricultural contract for a 106.6-acre property at 10999 Santa Ana Road, subdivision of a 3.29-acre parcel (Assessor's Parcel Number [APN] 032-0-201-105) into three lots, a lot line adjustment at 197 Villanova Road, operation of a bed and breakfast out of two existing dwellings at 334 East Villanova Road, expansion of a cemetery through construction of a 37-square-foot columbarium at APN 033-0-070-040, preservation of 6.5 acres of native grassland at APN 010-0-060-030, and installation of a 40-foot-tall mono-eucalyptus tree with various antennas, radio units, cabinets, and a generator at 511 West Fairview Road.[5] The proposed project in combination with existing development and these future projects would not have the potential to result in significant cumulative impacts. Therefore, no significant cumulative impacts would result from successive projects in the same place over time. This exception to a CE does not apply to the proposed project.

15300.2(c) **Significant Effect**. A categorical exemption shall not be used for an activity where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances.

The circumstances of the proposed project, which would result in the construction of 17 clusters of groundwater monitoring wells and two stream gauges are not considered unusual because:

1. Most wells would be located in previously disturbed areas, and those located in undisturbed areas would not result in significant impacts to biological or cultural resources, as discussed further below.
2. Most wells would be accessed by existing paved or unpaved roads and trails, and those accessed through undisturbed areas would not result in significant impacts to biological or cultural resources, as discussed further below.

[5] Ventura, County of. 2021. "Recently Approved & Pending Projects." Last modified: February 2021. https://www.vcrma.org/recently-approved-pending-projects (accessed February 2021).

3. Installation of a monitoring well and stream gauge network is a typical activity for performing investigations of surface water-groundwater interactions; and
4. Sonic drilling activities associated with project construction would be typical of those associated with well installation.

Furthermore, as detailed in Attachment 1, the proposed project would not have a significant effect on the environment due to unusual circumstances. Given the above analysis, this exception to a CE does not apply to the proposed project.

15300.2(d) **Scenic Highways**. A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.

According to the California Department of Transportation, the segments of State Routes 33 and 150 that run through the project area are not designated State scenic highway. Therefore, this exception to a CE does not apply to the proposed project.

15300.2(e) **Hazardous Waste Sites**. A categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to Section 65962.5 of the Government Code.

According to a search of the Department of Toxic Substances Control EnviroStor database and the State Water Resources Control Board GeoTracker database conducted in February 2021, the monitoring well and stream gauge sites are not located on hazardous waste sites covered by Section 65962.5 of the Government Code.[6, 7] Therefore, this exception to a CE does not apply to the proposed project.

15300.2(f) **Historical Resources**. A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource.

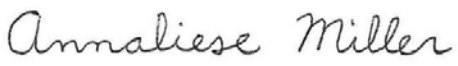
The presence or absence of historical resources in the project area is currently unknown. A records search at the SCCIC of the CHRIS for the presence of historical resources located in the proposed project area is underway. However, if historical resources are determined to be present at any of the monitoring well or stream gauge sites, implementation of AMM-3 and AMM-8 through AMM-10 would avoid significant impacts through implementation of a WEAP for archaeological resources, avoidance of known cultural resources, archaeological and Native American monitoring where warranted, and stop work orders in the event of an unanticipated discovery of cultural or Tribal cultural resources. Therefore, this exception to a CE does not apply to the proposed project.

[6] Department of Toxic Substances Control (DTSC). 2019. EnviroStor Database. https://www.envirostor.dtsc.ca.gov/public/ (accessed February 2021).
[7] State Water Resources Control Board (SWRCB). 2019. GeoTracker Database. https://geotracker.waterboards.ca.gov/ (accessed February 2021).

Determination

Based on this analysis, the proposed project meets the qualifications of the Classes 3, 4, and 6 (15303. New Construction or Conversion of Small Structures; 15304. Minor Alterations to Land; 15306. Information Collection) categorical exemptions as provided in Article 19 and is exempt from CEQA pursuant to the State CEQA Guidelines Section 15300.

Sincerely,
Rincon Consultants, Inc.



Annaliese Miller
Environmental Planner

Jennifer Haddow, PhD
Principal Environmental Scientist

Attachments

Attachment 1 Environmental Impact Analysis

Attachment 1

Environmental Impact Analysis

Environmental Impact Analysis

Aesthetics

During construction, well drilling equipment may obscure views of scenic vistas (such as the foothills and the Upper Ventura River) and scenic resources (such as trees) from public vantage points including State Routes 33 and 150, which are eligible for designation as State scenic highways. [8] However, this impact would be temporary, and the obstruction would be incremental. Upon completion, the proposed monitoring wells and stream gauges would not be visible from public roadways or other public vantage points. Temporary lighting would not be required during construction, and upon completion of construction, the project would not include permanent light sources that would affect nighttime or daytime views. Therefore, aesthetic impacts would not be significant.

Agriculture/Forestry Resources

According to the California Department of Conservation, the proposed wells and stream gauges would be located either on land mapped as Grazing Land, Farmland of Local Importance, or Urban and Built-Up Land or on land unmapped by the California Department of Conservation. None of the project components are located on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.[9] Although some of the monitoring wells would be constructed on Farmland of Local Importance, the surface footprint of these wells would be relatively small (three to 40 square feet) and would not result in the conversion of farmland to non-agricultural use. No forest land is located in the immediate vicinity of the project site, and the proposed project would not involve changes to the existing environment that could result in the conversion of forest land to non-forest use. Impacts to agricultural and forest resources would not be significant.

Air Quality

Project construction would generate temporary air pollutant emissions from the use of heavy-duty construction equipment and transport of workers, materials, and produced groundwater to and from the sites. Vehicle trips associated with project monitoring and maintenance activities would also periodically generate air pollutant emissions each year. However, given the small scale and limited duration of construction activities and the low number of vehicle trips required for operational monitoring and maintenance of the project, air pollutant emissions (including criteria air pollutant emissions, toxic air contaminant emissions, and odors) would be *de minimis* and would not have the potential to exceed applicable thresholds. Therefore, air quality impacts would not be significant.

Biological Resources

Local, state, and federal agencies regulate special status species and require an assessment of their presence, or potential presence, to be conducted on the site prior to the approval of any proposed

[8] California Department of Transportation. 2019. "List of eligible and officially designated State Scenic Highways." Last updated: July 2019. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways (accessed February 2021).
[9] California Department of Conservation. 2021. *"California Important Farmland Finder."* https://maps.conservation.ca.gov/dlrp/ciff/app/ (accessed February 2021).

development. Assessments for the potential occurrence of special status species are based upon known ranges, habitat preferences for the species, species occurrence records from the California Natural Diversity Database (CNDDB) and other databases, and species occurrence records from other sites near the proposed project sites. The potential for each special status species to occur in the areas of each project site was evaluated according to the following criteria:

- **No Potential.** Habitat on and adjacent to the site is clearly unsuitable for the species requirements (foraging, breeding, cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).
- **Low Potential.** Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.
- **Moderate Potential**. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.
- **High Potential.** All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.
- **Present.** Species is observed on the site or has been recorded (e.g., CNDDB, other reports) on the site recently (within the last five years).

Special Status Plant Species

A total of 15 special status plant species have been recorded in the CNDDB from the project region. Special status plant species have specialized habitat requirements, including plant community types, soils, and other components. The disturbed areas of most of the project sites do not provide suitable habitat for special status plant species. The California sycamore woodland associated with the Upper Ventura River and San Antonio Creek provides moderately suitable habitat for California satintail (*Imperata brevifolia*). However, the species is a conspicuous perennial grass and has only been documented in Matilija Canyon above Matilija Reservoir; therefore, it is not expected to occur at any of the project sites. No special status plants are expected to occur at any of the project sites.

Special Status Wildlife

A total of 18 special status wildlife species have been recorded in the CNDDB for the project region. The monitoring well and stream gauge sites include suitable habitat for wildlife species that typically occur in semi-rural, high use residential and recreational areas. Many wildlife species that have the potential to be present are common, widely distributed, and adapted to living in proximity to human development. Five special status wildlife species were determined to have a low to moderate potential to occur in the project region based upon known ranges, habitat preferences for the species, species occurrence records from the CNDDB, and existing conditions. These species include:

- California red-legged frog (*Rana draytonii,* CRLF)*:* Federally Threatened, State Species of Special Concern
- Two-striped garter snake (*Thamnophis hammondii*): State Species of Special Concern
- Western pond turtle (*Emys marmorata*): State Species of Special Concern

- Least Bell's vireo (*Vireo bellii pusillus*): Federally Endangered, State Endangered
- Yellow warbler (*Setophaga petechial*): State Species of Special Concern

Due to the perennial and intermittent nature of various reaches of the Upper Ventura River watershed, it is anticipated that flowing water could be present in close proximity to the some of the project sites depending on the rain year type (i.e., Kennedy-1, Kennedy-2 Option B, Kennedy-2 Option C, Kennedy-3, Santa Ana-1, Santa Ana-2, Santa Ana-4, Santa Ana-5, Santa Ana-6, San Antonio Confluence-1 Option A, San Antonio Confluence-1 Option B, Casitas Springs-1; Casitas Springs-3, and Stream Gauges 1 through 3) during project implementation, depending on the season. However, none of the project well sites are located in the active river channel. To avoid effects to CRLF, work will be scheduled at sites where designated CRLF critical habitat exists (Casitas Springs-1, Casitas Springs-2, San Antonio Confluence-1 Option A, San Antonio Confluence-1 Option B, Kennedy-1, and Stream Gauge 3) during the non-breeding season (July 1 to September 30) to the extent feasible, and a pre-construction survey will be conducted at sites in close proximity to flowing or isolated waters or within or adjacent to a riparian corridor. Any CRLF encountered during the survey would be allowed to leave the work area on their own accord before work starts or resumes. State Species of Special Concern, including western pond turtle and two-striped garter snake, have a moderate potential to be present during project implementation at sites within a riparian corridor; however, most sites are located outside of the riparian corridor. The federally and state endangered least Bell's vireo (*Vireo belli pusillus*) is known to occur in the Ventura River watershed. However, the project region, including sites near river or stream channels, has minimal dense stands of willow riparian habitat preferred by the species; therefore, the potential for the species to occur is moderate. The yellow warbler has been documented in the project region. The yellow warbler is commonly associated with riparian plant communities and prefers to nest and forage in willows, cottonwoods, aspens, sycamores, and alders. Suitable habitat including both foraging and nesting habitat occurs within the riparian areas of the Ventura River. As such this species has high potential to occur within the project region; however, most of the sites are located on disturbed lands that do not contain sufficient habitat for the species. Given the minimal impacts to vegetation, the location of many sites in open and disturbed areas, and implementation of AMM-3 through AMM-5, project impacts to CRLF, least Bell's vireo, as well as western pond turtle, two-striped garter snake, and yellow warbler would not be significant.

Suitable roosting habitat for special status bat species including the pallid bat, Mexican long-tongued bat, and western mastiff bat is lacking at all project sites. Bat foraging habitat and food sources are not present at all project sites and it would be expected that bats would avoid areas where the project would occur with the onset of disturbance. Therefore, project activities would not impact foraging bats.

Sensitive Natural Communities

According to the CNDDB, four sensitive natural communities occur in the project region. These include California Walnut Woodland, Southern California Steelhead Stream, Southern Coast Live Oak Riparian Forest, and Southern Sycamore Alder Riparian Woodland. A Southern California steelhead stream exists in the project region as the Upper Ventura River and San Antonio Creek. Construction would occur outside of the active channel and construction BMPs would be in place for all sites near riparian vegetation (see AMM-5); therefore, the project would have no direct or indirect impacts to the Southern

California Steelhead Stream. The Southern Sycamore Alder Riparian Woodland within the project region is ranked G3S3 and is considered a sensitive natural community.[10] A portion of this sensitive vegetation community has the potential to be impacted by the project through vegetation trimming. However, many of the sites are located outside of the riparian zone and minimal trimming is expected, resulting in a minor disturbance to this community. These impacts would be temporary in nature and would be minimized through implementation of AMM-2, through AMM-5, which are included in the project design. Accordingly, the minimal impacts to sensitive vegetation communities would not be significant.

Critical Habitat

Some of the project sites also occur within or near federally designated critical habitat for southwestern willow flycatcher (SWFL), although the project sites do not contain the Primary Constituent Elements (PCEs)[11] needed for SWFL. Due to the lack of PCEs for this species at any of the project sites, no impact to designated critical habitat would occur.

Designated critical habitat for CRLF exists at Casitas Springs-1, Casitas Springs-2, San Antonio Confluence-1 Option A, San Antonio Confluence-1 Option B, Kennedy-1, and Stream Gauge 3. These sites are located in disturbed areas on private and agricultural lands that do not provide the PCEs of aquatic breeding habitat, non-breeding aquatic habitat, or upland habitats required for the species. Dispersal habitat is present; however, each site has a blockage between potential breeding sites of either developed private property or roads. Casitas Springs-1 has the best dispersal habitat, but is located adjacent to the heavily used, paved Ojai Valley Trail creating sub-par conditions for CRLF dispersal. Stream Gauge 3 is located in the Ventura River toward the downstream terminus of designated critical habitat. Stream Gauge 3 will be temporary gauge that will be deployed by hand on existing substrate resulting in no impacts to designated critical habitat for CRLF. Some PCEs (dispersal habitat) for CRLF do exist within the project region, but factors stated above may preclude CRLF from successfully utilizing habitats in this area. Due to the lack of many of the PCEs for this species, impacts to designated critical habitat would not be significant.

Designated critical habitat for southern California steelhead exists below impassible barriers throughout the Ventura River watershed. Monitoring well construction would be conducted outside of the active river channel and designated critical habitat for steelhead. The proposed stream gauges would be deployed during the dry season in the active channel using hand tools and access would be by foot. Equipment would be attached to existing structures such as boulders, and no channel alteration would occur. Therefore, no impact to designated critical habitat for southern California steelhead would occur.

Jurisdictional Waters

The project region is located within the Ventura River floodplain, which is subject to the jurisdiction of the United States Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Wildlife. Each well and gauge site is located outside of the active river channel; therefore, each project site is not expected to have any direct impact on wetlands or other waters of the United States/State.

[10] California Department of Fish and Wildlife (CDFW). 2021. CDFW California Natural Diversity Data Base (CNDDB), Rarefind V. 5.
[11] PCEs are those physical and biological features of a landscape a species needs to survive and reproduce.

Construction-related materials (e.g., stockpiled materials, construction equipment, and trash) potentially stored at the project sites during construction could adversely affect water quality (e.g., increased turbidity, altered pH, decreased dissolved oxygen levels, etc.) within the Ventura River if runoff were to occur during storm events. However, the construction period would occur during dry conditions. Implementation of AMM-3 through AMM-5 would avoid potential indirect impacts to water quality within jurisdictional areas. Accordingly, indirect impacts to jurisdictional areas, if they occurred, would not be significant.

Wildlife Movement

The proposed project would not hinder wildlife movement in the region because no project features would create a barrier to wildlife movement. Accordingly, no impact would occur.

Local Policies and Ordinances Protecting Biological Resources

The Ventura County General Plan contains policies related to protecting potentially jurisdictional waters, wildlife migration corridors, and locally important species. As previously discussed, several AMMs are incorporated into the project design to avoid and/or minimize potential impacts to jurisdictional waters and special status species, and project impacts to wildlife movement would not occur. Therefore, the project would not conflict with local policies or ordinances protecting locally important species, and impacts would not be significant.

Conservation Plans

There are currently no adopted habitat conservation plans, natural community conservation plans, or other approved local, regional, or state habitat conservation plans that include the project sites. Therefore, no impact would occur.

Cultural Resources

The proposed project is located along the Upper Ventura River in unincorporated Ventura County. Rincon archaeologists performed a desktop analysis of the project area from material within the Rincon library and other publicly available sources. A records search with the SCCIC branch of CHRIS is pending. The project is located within the traditional home of the Barbareño/Ventureño Band of Mission Indians of Chumash descent. The Tribe actively participates in Tribal monitoring for projects on their ancestral lands. A general review of the Ojai Valley identified at least two village sites adjacent to the Ventura River, approximately within 0.5 mile of the project site along the drainage of the Ventura River. The Chumash village of Matilija is referenced as being located in Meiners Oaks, located approximately 0.25 mile east of Robles-2.[12] The Ventura River is flanked by a variety of acorn producing oaks and shrubs providing a nutrient rich environment. As hunter-gatherers, acorns were a food staple of the Chumash.[13] Prehistoric food processing sites have been identified throughout the Ventura River Valley, especially within the oak groves near the banks of the Ventura River. Analysis of historical aerials shows that the majority of the area was being utilized for agricultural activities prior to 1929. Through a limited desktop

[12] Tumamait-Stenslie, Julie. 2011. My Chumash Ancestral Legacy. Ojai Valley Museum. http://ojaihistory.com/my-chumash-ancestral-legacy/ (accessed February 2021).
[13] Landberg, L. C. W. 1965. The Chumash Indians of Southern California. Southwest Museum Papers No. 19. Southwest Museum, Los Angeles.

analysis of peer reviewed articles and historic aerials, Rincon has determined that the area is highly sensitive for cultural resources. If cultural resources are determined to be present within the project area, implementation of AMM-3 and AMM-8 through AMM-10 would avoid significant impacts through implementation of a WEAP for archaeological resources, avoidance of known cultural resources, archaeological and Native American monitoring where warranted, and stop work orders in the event of an unanticipated discovery of cultural resources.

Energy

Project construction would temporarily consume energy to power heavy-duty construction equipment and transport workers, materials, and produced groundwater to and from the sites. Vehicle trips associated with operational monitoring and maintenance activities would also periodically result in energy consumption. Energy use during construction would be temporary in nature, and equipment used would be typical of similar-sized construction projects in the region. Furthermore, in the interest of cost efficiency, contractors would not utilize fuel in a manner that is wasteful or unnecessary. In addition, these types of monitoring projects are necessary to evaluate groundwater conditions prior to implementation of future GSP projects. In the absence of these monitoring projects, there would be potential for wasteful and unnecessary energy consumption should GSP projects be constructed and then determined to be ineffective upon completion. Monitoring and maintenance events would only occur periodically as needed to obtain relevant data, and vehicle trips would be conducted in vehicles subject to increasingly stringent fuel efficiency standards. Therefore, the project would not result in a potential impact due to wasteful, inefficient, or unnecessary consumption of energy resources, and no energy impacts would occur.

Geology/Soils

Seismic Hazards and Soils

Only one monitoring well site (Santa Ana-1) is located within an Alquist-Priolo Earthquake Fault Zone.[14] However, the project does not include land divisions or construction of any structures for human occupancy that would require compliance with the provisions of the Alquist-Priolo Earthquake Fault Zoning Act. A large seismic event, such as a fault rupture, seismic shaking, or ground failure, could result in breakage of the wells at any of the sites. In such an event, the wells would be inspected and repaired. According to the Ventura County 2040 General Plan Background Report, several monitoring well and stream gauge sites are located in areas susceptible to liquefaction and landslides. In addition, portions of the Ojai Valley are identified as susceptible to expansive soils.[15] However, the monitoring wells and stream gauges would be unmanned and therefore would not expose people to risk of loss, injury, or death involving seismic shaking, liquefaction, or landslides. Well construction activities would require minimal ground disturbance, and pursuant to AMM-5, UVRGA would require implementation of BMPs for dust control and to prevent erosion and sedimentation into nearby water bodies. Therefore, the project's potential to result in erosion would be low. The project would not include activities with the

[14] California Department of Conservation. 2021. "Earthquake Zones of Required Investigation." https://maps.conservation.ca.gov/cgs/EQZApp/app/ (accessed February 2021).

[15] Ventura, County of. 2020. *Ventura County 2040 General Plan Update Background Report – Chapter 11, Hazards*. September 2020. https://docs.vcrma.org/images/pdf/planning/plans/VCGPU_11_Adopted_Hazards_Safety_September_2020.pdf (accessed February 2021).

potential to result in subsidence, which typically include long-term withdrawal of groundwater, pumping of oil and gas from underground, the collapse of underground mines, liquefaction, and hydrocompaction. The project does not include the use of a septic or alternative wastewater system and does not include components that would induce lateral spreading or collapse. Therefore, impacts related to earthquake faults, seismic ground shaking, liquefaction, landslides, erosion, expansive soils, lateral spreading, collapse, and septic tanks/alternative wastewater disposal systems would not be significant.

Paleontological Resources

Paleontology is the study of prehistoric life preserved as fossils in geologic deposits. The paleontological sensitivities of the geologic units underlying the monitoring well and stream gauge sites were evaluated to determine if the project could result in significant impacts to paleontological resources. The analysis was based on the results of an online paleontological locality search and review of existing information in the scientific literature concerning known fossils within geologic units mapped within the project site. Fossil collections records from the Paleobiology Database and University of California Museum of Paleontology (UCMP) online database were reviewed for known fossil localities in Ventura County.[16, 17] Based on the available information contained within existing scientific literature and the UCMP database, paleontological sensitivities were assigned to the geologic units underlying the project site. The potential for impacts to scientifically important paleontological resources is based on the potential for ground disturbance to directly impact paleontologically sensitive geologic units. The Society of Vertebrate Paleontology (SVP) has developed a system for assessing paleontological sensitivity and describes sedimentary rock units as having high, low, undetermined, or no potential for containing scientifically significant nonrenewable paleontological resources (SVP 2010). This system is based on rock units within which vertebrate or significant invertebrate fossils have been determined by previous studies to be present or likely to be present. The project area includes 19 mapped geologic units at the surface: Holocene artificial fill (af), Holocene landslide debris (Qls), Quaternary young (Holocene) alluvial deposits (Qa, Qya), Quaternary young (Holocene) stream channel deposits (Qg), Intermediate (late Pleistocene) alluvial deposits, terrace levels 1 through 3 and 6 (Qia, Qia1, Qia2, Qia3, Qia6), Quaternary old (Pleistocene) alluvial deposits (Qoa, Qog), Pleistocene Conglomerate of Ojai (Qco), Pleistocene Las Posas Sandstone (QTip), Pleistocene Saugus Formation (QTs), Pliocene to Pleistocene Pico Formation (QTpm, Tps), and Oligocene Sespe Formation (Tsp, Tspu).[18, 19, 20] Based on the results of the online paleontological locality searches and a literature review, the mapped geologic units in the project site were determined to have paleontological sensitivities ranging from low to high.[21, 22, 23] Late to middle

[16] Paleobiology Database. 2021. Online fossil locality database. https://www.paleobiodb.org/#/ (accessed February 2021).
[17] University of California Museum of Paleontology (UCMP). 2021. UCMP online database specimen search portal, http://ucmpdb.berkeley.edu/ (accessed February 2021).
[18] Dibblee, T.W., and Ehrenspeck, H.E. 1987. Geologic map of the Matilija quadrangle, Ventura County, California. Dibblee Geological Foundation: Dibblee Foundation Map DF-12, scale 1:24,000.
[19] Dibblee, T.W., and Ehrenspeck, H.E. 1988. Geologic map of the Ventura and Pitas Point quadrangles, Ventura County, California. Dibblee Geological Foundation: Dibblee Foundation Map DF-21, scale 1:24,000.
[20] Minor, S.A., and Brandt, T.R. 2015. Geologic map of the southern White Ledge Peak and Matilija quadrangles, Santa Barbara and Ventura Counties, California. U.S. Geological Survey: Scientific Investigations Map SIM-3321, scale 1:24,000.
[21] Paleobiology Database. 2021. Online fossil locality database. https://www.paleobiodb.org/#/ (accessed February 2021).
[22] University of California Museum of Paleontology (UCMP). 2021. UCMP online database specimen search portal, http://ucmpdb.berkeley.edu/ (accessed February 2021).

Holocene sedimentary deposits within the project site (i.e, Qa, Qg, Qoa, Qya, Qls, and Af) are typically too young (i.e., less than 5,000 years old) to preserve paleontological resources and are determined to have a low paleontological sensitivity.[24] Furthermore, project areas underlain by Quaternary young (Holocene) fluvial deposits (Qg) have been subject to various flooding events from the hydrologically-active Ventura River, resulting in an environment which is not conducive for the preservation of paleontological resources. However, exposures of older deposits/formations mapped within the project site and the stratigraphic setting in the vicinity are indicative that Pleistocene, Pliocene and Oligocene geologic units underlie the late to middle Holocene alluvial sediments (i.e., Qa, Qya) mapped at the surface at shallow to moderate depths. In accordance with the SVP guidelines, Pleistocene, Pliocene, and Oligocene sedimentary deposits mapped within the project site (i.e., Qia, Qia1, Qia2, Qia3, Qia6, Qoa, Qog, Qco, QTip, QTs, QTpm, Tps, Tsp, and Tspu) have each been assigned high paleontological sensitivity.[25] Accurately assessing the boundaries between late to middle Holocene alluvial units (i.e., Qa, Qya) and older sedimentary units of Pleistocene, Pliocene, and Oligocene age is generally not possible without site-specific stratigraphic data, some form of radiometric dating, or fossil analysis. The depths at which these units become old enough to yield fossils is highly variable, but generally does not occur at depths of less than five feet based on the proximity of geologic units with high paleontological sensitivity mapped near project areas underlain by late to middle Holocene alluvial deposits (Qa, Qya). Pleistocene, Pliocene, and Oligocene sedimentary deposits mapped within the project site have yielded a well-documented record of scientifically significant vertebrate fossils throughout California, including Ventura County, and have a high potential for buried paleontological resources.[26, 27] Most of the project construction activities would occur along the Ventura River and within project areas mapped as having low paleontological sensitivity (e.g., Qa, Qya, and Qg) and would require minimal ground disturbance. In addition, surficial ground disturbing activities in previously undisturbed portions of the project area underlain by geologic units with a high paleontological sensitivity (i.e., Qia, Qia1, Qia2, Qia3, Qia6, Qoa, Qog, Qco, QTip, QTs, QTpm, Tps, Tsp, and Tspu) would not exceed three feet in depth.

Impacts to paleontological resources would be significant if construction activities result in the destruction, damage, or loss of scientifically important paleontological resources and associated stratigraphic and paleontological data. The activities may include grading, excavation, or other activities that disturb substantial quantities of the surface or subsurface geologic units with a high paleontological sensitivity. However, due to constraints in paleontological monitoring during drilling activities and the quality of identifiable fossils exhumed from boreholes during drilling, a process which typically pulverizes sediments and removes the stratigraphic context of any fossil material, the recovery of significant fossils during well drilling when the drilling diameter is less than three feet, as is the case for the proposed project, is not possible. Therefore, paleontological monitoring is not effective for assessing impacts and not recommended during drilling when the drilling diameter is less than three feet, as is the case for 8- to 10-inch boreholes required for the proposed project. Furthermore, surficial grading activities would not extend to depths of greater than three feet and therefore would not have the

[23] SVP. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.
[24] Ibid.
[25] SVP. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee.
[26] Paleobiology Database. 2021. Online fossil locality database. https://www.paleobiodb.org/#/ (accessed February 2021).
[27] University of California Museum of Paleontology (UCMP). 2021. UCMP online database specimen search portal, http://ucmpdb.berkeley.edu/ (accessed February 2021).

potential to adversely impact highly sensitive paleontological resources potentially located in subsurface formations, which are typically located at depths of greater than three feet. Therefore, impacts to paleontological resources would not be significant.

Greenhouse Gas Emissions

Project construction would generate temporary greenhouse gas (GHG) emissions from the use of heavy-duty construction equipment and transport of workers, materials, and produced groundwater to and from the sites. Vehicle trips associated with operational monitoring and maintenance activities would also periodically generate GHG emissions each year. However, given the small scale and limited duration of construction and the low number of vehicle trips required for monitoring and maintenance of the project, GHG emissions would be *de minimis* and would not have the potential to result in a significant direct or indirect impact on the environment. Therefore, GHG impacts would be not be significant.

Hazards and Hazardous Materials

Hazardous Materials

Project construction and operation would not involve the use of hazardous materials. According to a search of the Department of Toxic Substances Control (DTSC) EnviroStor database and the State Water Resources Control Board (SWRCB) GeoTracker database conducted in February 2021, the monitoring well and stream gauge sites are not located on listed hazardous waste sites covered by Section 65962.5 of the Government Code. In addition, a review of nearby GeoTracker and EnviroStor release sites indicates that no nearby hazardous material release sites would not impact the monitoring well and stream gauge sites.

A review of oil fields and oil wells in the vicinity of the project site indicates that Robles-2, MMMO-1, and MMMO-2 would be located within the Ojai oil/gas field and Santa Ana-5 would be located within the Oakview oil/gas field. In addition, other oil wells located within one-half mile of the monitoring well and stream gauge sites are as follows:

- One plugged dry hole well located approximately 0.3 mile southeast of Santa Ana-1
- One plugged dry hole well located approximately 350 feet northeast of Santa Ana-5
- Three plugged oil and gas production wells located between approximately 0.3 to 0.5 mile northwest of Santa Ana-5
- Three idle dry hole wells located approximately 0.5 mile east of Santa Ana-5

Based on the distance from the nearby oil wells to the monitoring well and stream gauge sites, status of the oil wells, and the typical presence of oil and gas deposits at greater depths (e.g., 1,000 to 2,000 feet) in the Oakview and Ojai oil/gas fields than those at which the wells and stream gauges will be installed (up to 350 feet), the project would not be impacted by typical oil field contaminants and/or associated hazardous materials.

Additionally, the monitoring well and stream gauge sites are not located within 0.5 mile of hazardous material and natural gas pipelines and are not anticipated to be impacted by these potential hazardous material concerns. A review of facilities associated with per- and polyfluoroalkyl substances (PFAS) in

groundwater indicates that the monitoring well and stream gauge sites are not located within two miles of these facilities and would not be impacted by these potential hazardous material concerns.

The monitoring well and stream gauge sites would be located approximately 14 miles east of the nearest airport (the Santa Paula Airport); therefore, construction workers and staff conducting maintenance and monitoring would not be exposed to safety hazards or excessive aircraft noise.

Construction of Kennedy-2 Option A and Santa Ana-3 in the public ROW may result in temporary traffic lane closures; however, as detailed in AMM-6, UVRGA would require the project contractor to prepare and implement a traffic control plan that specifies how traffic (including emergency vehicles) would be safely and efficiently redirected during a lane closure. The traffic control plan would also include requirements to prioritize emergency vehicles during a lane closure and to notify local emergency response providers.

The proposed monitoring wells and stream gauges would be located on or near lands designated as Moderate, High, and Very High Fire Hazard Severity Zones. However, pursuant to AMM-5, UVRGA would require the construction contractor to implement fire prevention BMPs to minimize potential sources of ignition. In addition, during operation, the monitoring wells and stream gauges would be unmanned and would not include ignition sources. Therefore, the project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires.

Based on the locations of the proposed monitoring wells in areas currently and/or formerly used for agricultural land use (e.g., Kennedy-1, Kennedy-2 Option, Kennedy-2 Option B, San Antonio Confluence-1 Option A, and San Antonio Confluence-1 Option B), there is the potential for shallow soil impacted by organochlorine pesticides (OCPs) and/or arsenic to be encountered during construction of the monitoring wells. However, as detailed in AMM-7, if the top five feet of soil at these properties is disposed of off-site, UVRGA would require the project contractor to engage an EP to determine if the shallow disturbed soils in current and/or former agricultural areas would require special handling and/or disposal. Therefore, impacts related to hazards and hazardous materials would not be significant.

Other Issues (Airport Safety, Emergency Access, Wildland Fires)

The monitoring well and stream gauge sites would be located approximately 14 miles east of the nearest airport (the Santa Paula Airport); therefore, construction workers and staff conducting maintenance and monitoring would not be exposed to safety hazards or excessive aircraft noise. Construction of Kennedy-2 Option A and Santa Ana-3 in the public ROW may result in temporary lane closures; however, as detailed in AMM-6, UVRGA would require the project contractor to prepare and implement a traffic control plan that specifies how traffic (including emergency vehicles) would be safely and efficiently redirected during a lane closure. The traffic control plan would also include requirements to prioritize emergency vehicles during a lane closure and to notify local emergency response providers. The proposed monitoring wells and stream gauges would be located on or near lands designated as Moderate, High, and Very High Fire Hazard Severity Zones.[28] However, pursuant to AMM-5, UVRGA would require the construction contractor to implement fire prevention BMPs to minimize potential sources of ignition. In addition, during operation, the monitoring wells and stream gauges would be unmanned and would not include ignition sources. Therefore, the project would not expose people or

[28] California Department of Forestry and Fire Protection. 2021. "FHSZ Viewer." https://egis.fire.ca.gov/FHSZ/ (accessed February 2021).

structures to a significant risk of loss, injury, or death involving wildland fires. Accordingly, impacts related to other hazards issues, including airports, emergency access, and wildland fires, would not be significant.

Hydrology and Water Quality

Well construction activities would require minimal ground disturbance; therefore, the project's potential to result in erosion would be low, and pursuant to AMM-5, UVRGA would require implementation of BMPs to prevent erosion into nearby water bodies. Groundwater would temporarily be pumped from the UVRB during well development; however, upon completion, small volumes of groundwater would only be purged and collected periodically for monitoring purposes. The temporary extraction of groundwater during well development would not represent a significant effect on the environment due to unusual circumstances because this is a typical activity associated with construction of monitoring wells and would not constitute an unusual circumstance that would preclude the use of a Categorical Exemption for an otherwise exempt activity. The proposed project would incrementally increase impervious surface at each monitoring well site by approximately three to 40 square feet, which would not substantially alter drainage patterns. Several monitoring well and stream gauge sites are located within a 100-year flood zone and near a water body that would be susceptible to seiche (i.e., Lake Casitas), but none of the sites are located in a tsunami inundation zone.[29, 30] Nevertheless, the proposed project does not include long-term storage of potential pollutant sources. Therefore, the proposed project would not substantially increase the risk of release of pollutants due to project inundation. Accordingly, impacts related to hydrology and water quality would not be significant.

Land Use and Planning

The proposed monitoring wells and stream gauges would have relatively small surface footprints and would not have the potential to physically divide an established community. Well drilling for use only on the lot of the well location is exempt from the zoning standards for the OS, AE, RA, and RE zones pursuant to Ventura County Code Section 8105-4. In addition, as discussed throughout this section, the proposed project would not result in significant adverse impacts to environmental resources. Therefore, the proposed project would not conflict with any applicable land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating environmental effects. No impact related to land use and planning would occur.

Mineral Resources

The monitoring well and stream gauge sites are classified as Mineral Resource Zones (MRZ) 3, 3a, and 4. MRZ-3 indicates an area containing known mineral deposits that may qualify as mineral resources (3a) or an area containing inferred mineral deposits that may qualify as mineral resources (3b).[31] MRZ-4

[29] Federal Emergency Management Agency (FEMA). 2021. "Flood Maps 0611C0556F, 06111C0558F, 06111C0566F, 06111C0568F, and 06111C0731F." January 29, 2021. https://msc.fema.gov/portal/home (accessed February 2021).

[30] California Department of Conservation. 2009. Tsunami Inundation Map for Emergency Planning – Ventura Quadrangle [map]. February 15, 2009. https://www.conservation.ca.gov/cgs/Documents/Publications/Tsunami-Maps/Tsunami_Inundation_Ventura_Quad_Ventura.pdf (accessed February 2021).

[31] Ventura, County of. 2020. *Ventura County 2040 General Plan Update Background Report – Chapter 8, Natural Resources Element*. September 2020. https://docs.vcrma.org/images/pdf/planning/plans/VCGPU_08_Adopted_Natural_Resources_September_2020.pdf (accessed February 2021).

indicates an area where geologic information does not rule out either the presence or absence of mineral resources. No mineral resource extraction is currently occurring at any of the sites, and none are zoned for mineral extraction. In addition, the project does not propose increased or altered mineral extraction on the project sites or in the surrounding area. Therefore, the project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state or of a locally-important mineral resources recovery site. No impact to mineral resources would occur.

Noise

Construction activities would generate temporary increases in ambient noise and vibration levels in the project area. However, this increase would be typical of well drilling activities and would occur during daytime hours. In addition, in accordance with AMM-1, construction activities for MMMO-1 and MMMO-2 would be scheduled during the summer to avoid generating elevated noise levels when Mira Monte Elementary School and Meiners Oaks Elementary School are in session. Moreover, pursuant to AMM-11, UVRGA would require its contractors to implement BMPs for construction noise reduction. During operation, the monitoring wells and stream gauges would not generate noise because they do not include noise-generating components such as pumps. Furthermore, the monitoring well and stream gauge sites would be located approximately 14 miles east of the nearest airport (the Santa Paula Airport); therefore, construction workers and staff conducting maintenance and monitoring events would not be exposed to excessive aircraft noise. Accordingly, noise impacts would not be significant.

Population and Housing

The project does not include residences and would not generate new employment opportunities. As a result, the project would not directly or indirectly induce population growth. No impacts related to population and housing would occur.

Public Services

As discussed above under *Population and Housing*, the project would not directly or indirectly induce population growth. Therefore, no impacts to public services would occur.

Recreation

As discussed above under *Population and Housing*, the project would not directly or indirectly induce population growth. In addition, the project would not restrict the use of existing recreational areas or include construction of new recreational facilities. Therefore, no impacts related to recreation would occur.

Transportation

Construction of the project would involve daily vehicle trips to the monitoring well and/or stream gauge sites for construction worker transport, material delivery, and produced groundwater disposal. Operational monitoring and maintenance events would require infrequent, periodic vehicle trips to each site. The low level of vehicle traffic associated with construction and operation would not have the potential to adversely impact the transportation network. In addition, the small, periodic increase in trips on local roadways would not substantially alter the average daily vehicle miles traveled for the

region. No reconfigurations of roadways would be required. Construction of Kennedy-2 Option A and Santa Ana-3 in the public ROW may result in temporary lane closures; however, as detailed in AMM-6, UVRGA would require the project contractor to prepare and implement a traffic control plan that specifies how traffic (including emergency vehicles) will be safely and efficiently redirected during a lane closure. The traffic control plan would also include requirements to prioritize emergency vehicles during a lane closure and to notify local emergency response providers. Therefore, transportation impacts would not be significant.

Tribal Cultural Resources

As of July 1, 2015, California Assembly Bill (AB) 52 of 2014 was enacted and expands CEQA by defining a new resource category, "tribal cultural resources." AB 52 establishes that "a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment" (Public Resource Code Section 21084.2). AB 52 further states that the lead agency shall establish measures to avoid impacts that would alter the significant characteristics of a Tribal cultural resource, when feasible (Public Resource Code Section 21084.3). AB 52 also establishes a formal consultation process for California Tribes regarding those resources. AB 52 consultation is required for projects subject to CEQA. It is therefore not required for the proposed project because it is categorically exempt from CEQA under Sections 15303 (New Construction or Conversion of Small Structures, 15404 (Minor Alterations to Land), and 15306 (Information Gathering). Therefore, AB 52 consultation is not required for this project.

Utilities and Service Systems

The project would not include any new utility connections and would incrementally increase impervious surface at each monitoring well site. Solid waste produced during construction would be minimal and would be adequately accommodated by local landfills such as the Toland Road Landfill. Groundwater produced during well development may be transported to the Ojai Valley Sanitary District's Treatment Plant for disposal. The Treatment Plant has a capacity of 3.0 million gallons per day (mgd) and has an average daily flow of 1.5 mgd.[32, 33] Therefore, the Treatment Plant currently has an excess capacity of 1.5 mgd, which would be sufficient to accommodate disposal of produced groundwater during construction. As a result, impacts to utilities and service systems would not be significant.

Wildfire

The proposed monitoring wells and stream gauges would be located on or near lands designated as Moderate, High, and Very High Fire Hazard Severity Zones.[34] Construction of Kennedy-2 Option A and Santa Ana-3 in the public ROW may result in temporary lane closures; however, as detailed in AMM-6, UVRGA would require the project contractor to prepare and implement a traffic control plan that specifies how traffic (including emergency vehicles) will be safely and efficiently redirected during a lane closure. The traffic control plan would also include requirements to prioritize emergency vehicles during

[32] Ojai Valley Sanitary District. 2019. *Ojai Valley Sanitary District Sewer System Management Plan – California State Water Resources Control Board Order No. 2006.003-DWQ*. August 2019. http://www.ojaisan.org/reports/pdfs/SSMP-2019-FINAL.pdf (accessed February 2021).
[33] Ojai Valley Sanitary District. 2021. Board of Directors Meeting – Operations Report (Item 18). January 25, 2021. http://www.ojaisan.org/am/pdf_2021/Reg_p_1-25-21.pdf (accessed February 2021).
[34] California Department of Forestry and Fire Protection. 2021. "FHSZ Viewer." https://egis.fire.ca.gov/FHSZ/ (accessed February 2021).

a lane closure and to notify local emergency response providers. In addition, pursuant to AMM-5, UVRGA would require the construction contractors to implement fire prevention BMPs to minimize potential sources of ignition. Moreover, during operation, the monitoring wells and stream gauges would be unmanned and would not include ignition sources. The project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk or result in temporary or ongoing impacts to the environment. The project would incrementally increase impervious surface area at each site and would not have the potential to expose people or structures to significant risks as a result of runoff, post-fire slope instability, or drainage changes. Therefore, impacts related to wildfire would not be significant.

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

DATE: March 11, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: California Department of Fish and Wildlife Draft Instream Flow Regime Recommendations for the Lower Ventura River, Ventura County

SUMMARY

On February 26, 2021, California Department of Fish and Wildlife (CDFW) released the document *Draft Instream Flow Regime Recommendations for the Lower Ventura River, Ventura County*. The report is available on-line at https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=190389&inline. The 30-day comment period ends on March 29, 2021.

The Member Agencies may choose to submit their own comments.

RECOMMENDED ACTIONS

Discuss potential comments on the CDFW draft instream flow regime recommendations and consider providing direction concerning a comment letter.

BACKGROUND

During the January 14, 2021 Board meeting, several Directors asked for a Board agenda item to discuss potential comments on the CDFW instream flow recommendations document.

FISCAL SUMMARY

Coordination with CDWF is included in the Agency's budget.

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ A. Spandrio___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

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

DATE: March 11, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Groundwater Sustainability Plan Update (Grant Category (d); Task 11: GSP Development and Preparation)

SUMMARY

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

1. **GSP**:

    a. Intera continued work on the groundwater-surface water numerical model calibration and the baseline and climate change-affected 50-year future simulations. The Executive Director reviewed model results and provided technical feedback to the modeling team.

    b. The Executive Director reviewed information relevant to sustainable management criteria (SMC) for the depletion of interconnected surface water sustainability indicator and engaged Rincon Consultants, Inc. on this topic. The Executive Director prepared presentation slides for GSP Workshop No. 2.

2. **Outreach**:

    a. An article concerning UVRGA status and GSP Workshop No. 2 was published in the Ojai Valley News on February 19, 2021 (Attachment B).

    b. The Executive Director prepared for GSP Public Workshop No 2.

3. **GSP Development Schedule**: The updated GSP Development Schedule is provided in Attachment A. The schedule was updated based on progress to date.

4. **GSP Grant Data Gap Tasks**: All grant data gap tasks have been completed or were deleted by the grant agreement amendment.

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
B. Ojai Valley News Article dated February 19, 2021

Action: _____

Motion:_____ Second: _____

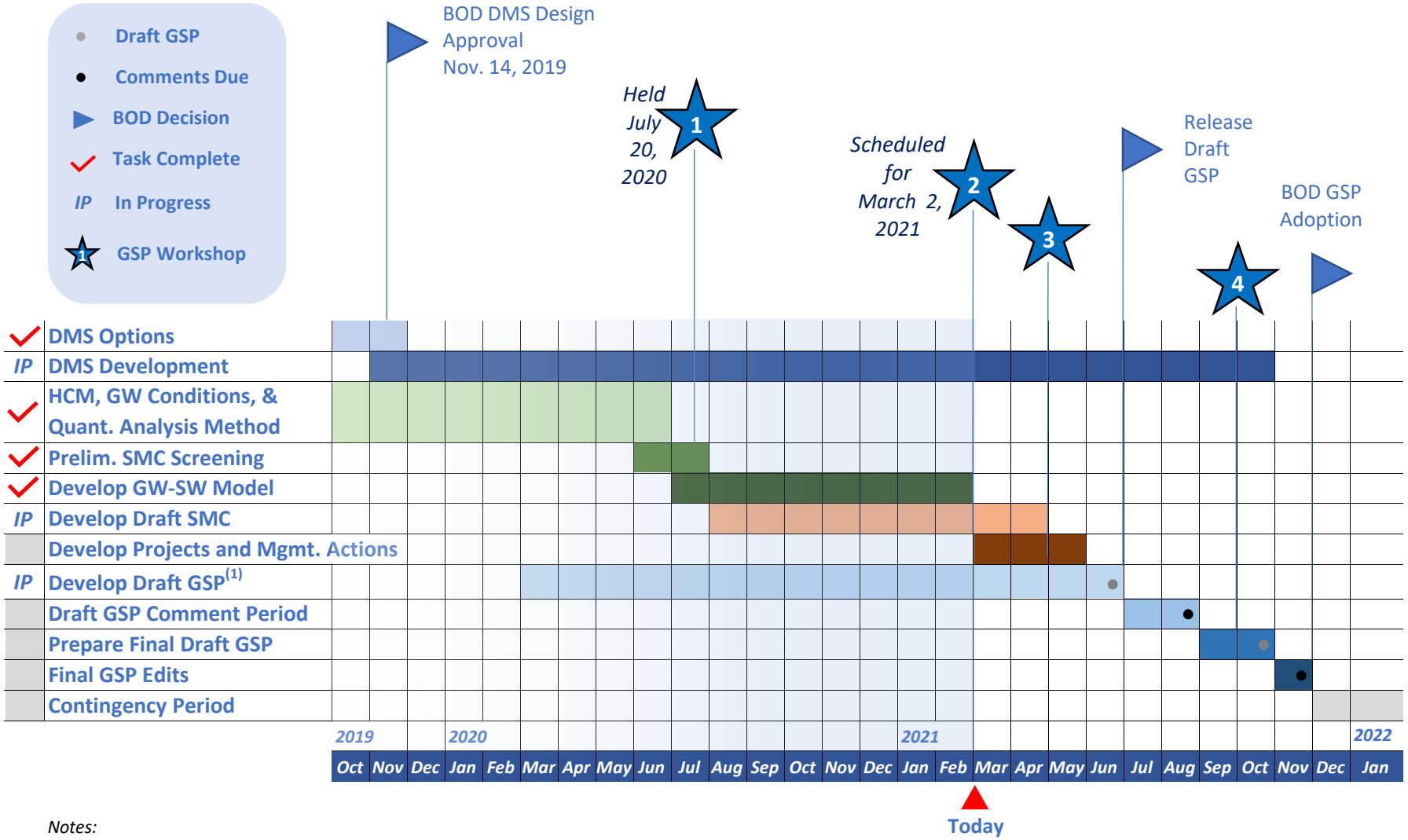
B. Kuebler___ D. Engle___ A. Spandrio___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

Item 10a

Attachment A

GSP Development Schedule

Upper Ventura River Groundwater Agency
GSP Development Schedule Updated February 28, 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

Item 10a

Attachment B

Ojai Valley News Article dated February 19, 2021

UVRGA wants public to weigh in on its groundwater sustainability plan

Perry Van Houten
pvh@ojaivalleynews.com

An online public workshop on the groundwater sustainability plan is scheduled for March 2 at 4 p.m.

Navigating until now uncharted waters, managers of the upper Ventura River's groundwater basin say they've begun the most important phase in developing a groundwater sustainability plan.

In January, the Upper Ventura River Groundwater Agency announced it had finished compiling technical information for the plan and was ready to move on to developing sustainable management criteria for the basin.

It's now seeking public input and has scheduled a workshop on March 2 to present the key aspects of the groundwater sustainability plan and give an opportunity for stakeholder participation.

The groundwater sustainability plan story goes back to 2014, when the state Legislature passed the Sustainable Groundwater Management Act, which identified more than 100 groundwater basins throughout the state that have a significant reliance on groundwater resources for water supply and other beneficial uses.

SGMA required the creation of groundwater sustainability agencies and made them responsible for developing a groundwater sustainability plan that seeks to achieve a condition of sustainable management of the groundwater source within 20 years after the plan is adopted.

"And for good reason," said UVRGA Executive Director Bryan Bondy. "A lot of the groundwater basins throughout our state have not been managed or have not been managed well."

Poor management of groundwater basins in the state has resulted in land subsidence in the Central Valley from groundwater pumping. Some coastal basins in the state, including one near Oxnard, have experienced seawater intrusion into the aquifer, Bondy said.

As opposed to surface water rights, which are administered and managed by the state, groundwater rights are managed by locals. "The state wanted to make sure we manage those resources effectively, and felt that that's best done by the locals who use the resource and are in the local basins," Bondy said.

Beginning in 2015, the agency spent the first two years developing the groundwater sustainability plan. "For the last few years we've been working on compiling the technical information that needs to go into the plan," Bondy said.

UVRGA has nine months to work out details of the plan, due by Jan. 31 of 2022.

The agency is now turning its focus to the management side of the plan. "We've established what the conditions are in the basin historically, for groundwater levels and groundwater connection to the river," Bondy said.

It's now working with stakeholders and the board of directors to determine the goals for the basin and how to avoid undesirable results — things that have happened in other basins that the agency wants to keep from happening here.

The groundwater sustainability plan must include criteria for each of six applicable sustainability indicators: land subsidence, seawater intrusion, depletion of surface water through groundwater use, lowering of groundwater levels, reduction of storage and degraded water quality.

Last year, UVRGA determined that the land subsidence and seawater intrusion indicators could be screened out of the process. "It really comes down to groundwater levels, groundwater storage, and the connection to the Ventura River and the depletion issue," Bondy said.

The overarching goal of the plan is to keep the basin filled up and not pumped out, Bondy said. "Basically, that we keep the basin operating in the cycles that we've seen historically. We're very fortunate with this basin. It doesn't take much of a wet condition to fill it up. But it does drain out when it's dry."

As for water quality indicators, "that's a challenging one for a lot of these GSAs because most of the groundwater quality issues are related to naturally occurring things in the water," Bondy said.

These include nitrates, Bondy said. "We know that those concentrations go up when groundwater levels go down, because there's less rainwater diluting those salts. We don't have a lot of control over that, but we want to keep the nitrate concentrations as low as reasonably possible," he explained.

To engage in the planning process, stakeholders can attend UVRGA board meetings held once a month. The next meeting is set for March 11 at 1 p.m. via teleconference.

The board consists of water district representatives, along with agriculture and environmental experts.

An online public workshop on the groundwater sustainability plan is scheduled for March 2 at 4 p.m. Participants need to register in advance on the agency's website, which also includes more information on the process and a form to submit comments and questions.

"We're looking to get a mostly complete draft or a complete draft out in the summer time frame, have a comment period and then finalize that into the document that ultimately the board will adopt late in the year," Bondy said.

Though SGMA is a regulatory program, the groundwater sustainability plan is an opportunity for the local community to decide how it wants its water resources managed, Bondy told the Ojai Valley News.

"SGMA does have a provision in it for the state to get involved if we don't make decisions and move forward, so I like to paint this as a positive opportunity for us to figure out what we want to do, as opposed to having the state tell us what to do," he said.

For more information and to register for the virtual workshop on March 2, visit uvrgroundwater.org.

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

DATE: March 11, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Groundwater Modeling Results (Grant Category (d); Task 11: GSP Development and Preparation)

SUMMARY
The Executive Director and Intera staff will present results of the baseline and climate change-impacted 50-year future model simulations.

RECOMMENDED ACTIONS
Receive an update concerning groundwater modeling results and consider providing feedback to staff.

BACKGROUND
Not applicable.

FISCAL SUMMARY
Not applicable.

ATTACHMENTS
None.

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ A. Spandrio___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

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

DATE: March 11, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Degraded Water Quality Sustainable Management Criteria (Grant Category (d); Task 11: GSP Development and Preparation)

SUMMARY

On January 14, 2021, staff presented draft sustainable management criteria (SMC) for the degraded water quality sustainability indicator. Following Board discussion of the draft SMC, staff was directed to prepare a white paper concerning the draft SMC and present the draft SMC at GSP Workshop No. 2.

The above-referenced white paper is attached hereto (Attachment A). Relevant slides from GSP Workshop No. 2 are also attached hereto (Attachment B).

A summary of feedback received during GSP Workshop No. 2 concerning the draft degraded water quality SMC will be provided during the Board meeting.

RECOMMENDED ACTIONS

Consider approving sustainable management criteria for the degraded water quality sustainability indicator for inclusion in forthcoming draft groundwater sustainability plan.

BAC KGROUND

Please see summary.

FISCAL SUMMARY

Not applicable.

ATTACHMENTS

A. Degraded Water Quality SMC White Paper
B. GSP Workshop No. 2 Degraded Water Quality SMC Slides

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ A. Spandrio___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

Item 10c

Attachment A

Degraded Water Quality SMC White Paper

DRAFT

White Paper

Proposed Sustainable Management Criteria

for the

Degraded Water Quality Sustainability Indicator

Introduction and Purpose

This white paper presents proposed sustainable management criteria (SMC) for the degraded water quality sustainability indicator for the Upper Ventura River Basin (UVRB) groundwater sustainability plan (GSP or Plan). The purpose of this document is to provide information to facilitate public feedback on the proposed SMC.

Definitions of Key Sustainable Groundwater Management Act Terms

"Measurable Objectives" refer to specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions that have been included in an adopted Plan to achieve the sustainability goal for the basin.

"Minimum Threshold" refers to a numeric value for each sustainability indicator used to define undesirable results.

"Sustainability Indicator" refers to any of the effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, cause undesirable results, as described in Water Code Section 10721(x). (Degraded water quality is one of six sustainability indicators included in the Sustainable Groundwater Management Act.)

"Undesirable Results" refers to *significant and unreasonable effects* for any of the sustainability indicators *caused by groundwater conditions* *occurring throughout the basin*.

Overview

The Sustainable Groundwater Management Act (SGMA) requires that Groundwater Sustainability Agencies (GSAs) address impacts on beneficial uses caused by groundwater pumping that spreads contaminant plumes or causes dissolved constituent concentrations to increase to levels that significantly and unreasonably impact beneficial uses.

Thankfully, there are no known contaminant plumes in the UVRB. However, nitrate, a non-point source contaminant, has impacted public and private potable water system wells in the Mira Monte area. Elevated nitrate concentrations in this area are currently mitigated by blending with other water sources. The vast majority of the remaining wells in the Basin typically have median Nitrate-N concentrations below 5 mg/L.

Boron concentrations are locally elevated in the Kennedy Area and northern Robles Area (please see Attachment A for Hydrogeologic Areas). Groundwater in these areas is reportedly unsuitable for some agricultural beneficial uses at times. The source of boron is natural springs in the upper drainages of the watershed, which contribute to surface water flow that ultimately percolates into the UVRB. Boron concentrations increase during droughts when base flow emanating from the upper drainages makes up a larger fraction of the Basin recharge. Boron concentrations are lower south of the northern Robles Area.

Overall, UVRB groundwater water quality does not appear to pose any widespread significant and unreasonable effects on beneficial uses across the Basin. However, concentrations of constituents of potential concern are known to generally increase with decreasing groundwater levels. Therefore, significant and unreasonable effects on beneficial uses related to pumping could potentially occur if the basin was to be managed such that groundwater levels are kept at consistently low levels by high rates of pumping over extended periods of time (many years). However, given historical pumping patterns, this outcome seems unlikely for the foreseeable future. Nonetheless SGMA requires that the GSP include SMC for the degraded water quality sustainability indicator because a potential cause-and-effect relationship between water quality and groundwater levels exists and the fact that pumping could potentially increase during the 50-year SGMA implementation period.

Sustainable Management Criteria Requirements

The following sections step through the required elements of the SMC for the degraded water quality sustainability indicator.

Undesirable Results

The term "Undesirable Results" is central to the goal of SGMA, which is to manage groundwater basins to avoid undesirable results. SGMA defines undesirable results as *significant and unreasonable effects* for sustainability indicators *caused by groundwater conditions occurring throughout the basin*. The underlined text emphasizes the three elements that must be present in order to have undesirable results as defined by SGMA:

1. *Significant and Unreasonable Effects*: Undesirable results are significant and unreasonable effects related to a sustainability indicator. For example, water quality so poor that it cannot be used for one or more beneficial uses might be considered a significant an unreasonable effect. UVRGA is required to determine what conditions would constitute significant and unreasonable effects for the UVRB.

2. *Caused by Groundwater Conditions*: The significant and unreasonable effects must be caused by managed groundwater conditions. Many interpret this to mean that the significant and unreasonable effects must be directly caused by pumping or that pumping is a significant contributing factor. For example, localized elevated boron concentrations caused by natural inflows in the Kennedy Area and elevated nitrate concentrations in the Mira Monte Area caused by land use practices are not cause by pumping and would not be considered undesirable results under SGMA. However, if boron or nitrate concentrations increase in other areas as a result of high rates of pumping that cause consistently low groundwater levels, that might be considered an undesirable result.

3. *Throughout the Basin*: The significant and unreasonable effects must occur throughout a large portion of the basin to be considered an undesirable result.

It is the GSA's responsibility to determine what conditions would constitute undesirable results using the factors provided above. We know that current groundwater quality supports beneficial uses throughout most of the UVRB. The localized exceptions for boron and nitrate noted earlier are arguably significant and unreasonable effects, but they are not occurring "*throughout the basin*" and are not the direct result of groundwater pumping (i.e. not "*caused by groundwater conditions*"). Therefore, it is concluded that there are no undesirable results for the degraded water quality sustainability indicator in the UVRB at present.

It is important to note that a GSA's failure to prevent undesirable results by the 20th year of GSP implementation is grounds for probation. Probation status can trigger State Water Resources Control Board (SWRCB) intervention into basin management. SWRCB could take over management of the Basin (at a cost to the groundwater users) until the deficiency is corrected.

Causes of Groundwater Conditions that Could Lead to Undesirable Results

SGMA requires GSAs to identify the causes of groundwater conditions that could lead to undesirable results. As explained earlier, concentrations of constituents of potential concern are known to generally increase with decreasing groundwater levels. Therefore, significant and unreasonable effects on beneficial uses related to pumping could potentially occur if the basin was to be managed such that groundwater levels are kept at consistently low levels by high rates of pumping over extended periods of time (many years). However, given historical pumping patterns, this outcome seems unlikely for the foreseeable future.

Potential Effects on Beneficial Uses and Users

SGMA requires GSAs to identify potential effects on beneficial uses and users. Potential effects on municipal beneficial uses associated with water quality degradation could include increased costs for treatment or blending to meet drinking water standards. Potential effects on domestic beneficial uses associated with water quality degradation could include health effects (nitrate)

and increased costs for alternative water supplies, treatment, or blending to meet drinking water standards. Potential effects on agricultural beneficial uses could include lower quality crops, increased water use to meet leaching requirements, implementation of treatment or blending, or use of more expensive alternative sources of water for irrigation. All of the potential effects on agricultural beneficial uses would result in increased costs and potential impacts on lease rates and land values.

Criteria Used to Define Undesirable Results

SGMA requires GSAs to develop a quantitative description of the combination of minimum threshold exceedances that indicate undesirable results. At present, there are only nine wells or closely spaced groups of wells that are regularly sampled for water quality analysis (please see attached map in Attachment A). In areas where closely spaced wells exist, a primary (representative) well is identified to prevent overemphasis of data from a particular area of the Basin. The nine primary monitoring locations will be used to quantitatively evaluate whether undesirable results are occurring. It is noted that some areas of the Basin lack water quality monitoring. These data gap areas will be filled as part of GSP implementation and the criteria used to indicate undesirable results will be updated.

For total dissolved solids (TDS), sulfate, chloride, and boron, SGMA undesirable results are considered to be occurring when two-thirds (2/3) of the nine primary water quality monitoring wells exceed a minimum threshold concentration continuously for two years and UVRGA determines that the exceedances are caused by groundwater pumping. The 2/3 criterion is intended to indicate that significant and unreasonable effects are widespread enough to be considered present "*throughout the Basin.*" The nitrate MTs will be evaluated in two distinct areas of the Basin representing predominantly percolating groundwater conditions versus predominantly rising groundwater conditions. The 2/3 criterion applies separately within each of the two areas for nitrate.

<u>Minimum Thresholds</u>

The minimum threshold (MT) refers to numeric values used to define the onset of significant and unreasonable effects in various areas of a basin. When developing SMC for the degraded water quality sustainability indicator, GSAs must consider local, state, and federal water quality standards. It is noted that GSAs are required to consider, but not necessarily adopt, such standards. Justification must be provided in cases where the SMC do not align with other regulatory standards. The applicable standards for consideration in the UVRB include Primary MCLs, Secondary MCLs, and Regional Water Quality Control Board (RWQCB) water quality objectives (WQOs). WQOs have been established for nitrate, total dissolved solids (TDS), chloride, sulfate, and boron. This list of constituents will be used in the UVRB GSP. The WQOs are set at levels determined by RWQCB to protect beneficial uses and/or preserve water quality in the Basin (RWQCB, 2019).

Criteria Used to Define Minimum Thresholds

- Primary MCLs: Applicable to nitrate only. It is desirable to maintain existing water quality at levels suitable potable water for human consumption for current and future beneficial uses. Consumption of water containing nitrate in excess of the MCL poses serious health risks to pregnant women and infants. Because there is currently no requirement for domestic well owners to test for nitrate, health effects could occur if nitrate exceeds the MCL at domestic well locations. Additionally some domestic well owners may not have the resources to respond to nitrate MCL exceedances even if they know about it. For these reasons, widespread occurrence of nitrate in excess of the MCL would be considered a significant and unreasonable effect.

- Secondary MCLs: Applicable to TDS, sulfate, and chloride. Division of Drinking water considers concentrations of these constituents in excess of their respective Upper Consumer Acceptance Levels to be acceptable only on a temporary basis for community and municipal water suppliers pending construction of treatment facilities. Because treatment costs are significant, a widespread increase in concentrations to levels exceeding the Upper Consumer Acceptance Level would be considered a significant and unreasonable degradation of water quality.

- RWQCB WQOs: These standards are designed to protect beneficial uses and preserve existing water quality at the time of RWQCB Basin Plan development from degradation, consistent with the Porter-Cologne Act and State Water Resources Control Board Antidegradation Policy (Resolution No. 68-16). RWQCB established WQOs for nitrate, total dissolved solids (TDS), chloride, sulfate, and boron (Table 1).

  A special consideration for the UVRB is groundwater that discharges to the Ventura River, predominantly in the Santa Ana and Casitas Springs Hydrogeologic Areas. The RWQCB Basin Plan has established a 5 milligram per liter (mg/L) WQO for nitrate (as N) in surface water to protect beneficial uses of surface water. This surface water WQO should be considered when establishing SMC for the Santa Ana and Casitas Springs Hydrogeologic Areas.

- Agricultural Thresholds: Certain crops grown in the Basin are sensitive to boron and chloride in irrigation water. Widespread boron and chloride concentrations in excess of toxicity thresholds would be considered a significant and unreasonable effect. The upper toxicity threshold for boron for commonly grown crops in the Basin is 0.75 mg/L (see footnote no. 5 on Table 1). A toxicity threshold of 100 mg/L for chloride is recommended based on literature review (see footnote no. 4 on Table 1).

- Existing Water Quality: With the exceptions noted earlier, existing groundwater quality is known to support beneficial uses in the Basin. Therefore, minimum thresholds should be set equal to or greater than existing water quality to recognize the absence of significant an unreasonable effects in much of the basin at present.

The analysis of the above-listed criteria is presented on pages 8-11 on a constituent-by-constituent basis.

Measurable Objectives

Measurable objectives (MOs) are quantitative metrics designed to reflect desired conditions. GSAs are required to meet the MOs within 20 years of GSP implementation. Therefore, the MOs should be set at concentrations that are attainable. MOs must be established using the same metrics and monitoring sites as are used to define the MTs. Those metrics were described above.

Proposed Sustainable Management Criteria

The proposed MTs and MOs are listed in Table 1 and are depicted on the water quality plots attached to this staff report (Attachment B). The groundwater quality monitoring locations are shown on the map attached to this staff report (Attachment A).

The proposed MOs (i.e. desirable condition for the UVRB) have been set equal to or lower than the RWQCB WQOs to reflect a preference to preserve existing water quality to the extent practicable. It is proposed that the sustainability goal for degraded water quality for a given constituent be considered to be met when measured concentrations in at least one-third (1/3) of the primary monitoring wells are less that the MO. Nitrate would be evaluated in two distinct areas of the basin representing predominantly percolating vs predominantly rising groundwater (please Table 1 for further explanation). The 1/3 criterion would apply separately within each of the two areas for nitrate. Application of the 1/3 criterion to the historical data reveals that the sustainability goal for degraded water quality has been met historically.

The proposed MTs have been set at concentrations considered to indicate likely significant and unreasonable effects to one or more beneficial uses of groundwater in the UVRB, if occurring throughout the Basin and caused by pumping. For total dissolved solids, sulfate, chloride, and boron, undesirable results are considered to occur when two-thirds (2/3) of all nine primary water quality monitoring wells exceed the minimum threshold concentration continuously for two years and UVRGA determines the exceedances are the result of groundwater pumping. The 2/3 criterion is selected intended to indicate that significant and unreasonable effects are widespread enough to be considered present “throughout the Basin.” The nitrate MTs will be evaluated in two distinct areas of the basin representing predominantly percolating vs predominantly rising groundwater (please Table 1 for further explanation). The 2/3 criterion applies separately within the two areas for nitrate.

Upper Ventura River GROUNDWATER AGENCY SUSTAINABLE MANAGEMENT

Table 1. Proposed Minimum Thresholds and Measurable Objectives

Constituent	MCL (mg/L)	Sec. MCL (R/U/ST)[1] (mg/L)	RWQCB WQO (mg/L)	Range of Average Historical Concentrations for Primary Wells (mg/l)	Proposed MT[2] (mg/L)	MT Rationale	Proposed MO[3] (mg/L)	MO Rationale
TDS	N/A	500/1,000/1,500	800	407 - 760	1,000	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with Upper Consumer Acceptance Level.	800	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses consistent with RWQCB WQO.
Sulfate	N/A	250/500/600	300	35 - 300	500	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with Upper Consumer Acceptance Level.	300	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses consistent with RWQCB WQO.
Chloride	N/A	250/500/600	100	29 - 61	100	Prevent significant and unreasonable impact to agricultural beneficial use of groundwater for chloride sensitive crops[4].	75	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses.
Boron	N/A	N/A	0.5	0.09 - 0.77	0.75	Prevent significant and unreasonable impact to agricultural beneficial use of groundwater for boron sensitive crops.[5]	0.5	Preserve existing groundwater quality for agricultural beneficial use consistent with RWQCB WQO.
Nitrate (as N)								
Percolating Groundwater Areas (Kennedy, Robles, Mira Monte/Meiners Oaks, and Terraces Hydrogeologic Areas)								
Nitrate (as N)	10	N/A	10	0.6 – 12.6	10	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with the MCL.	7.5	Preserve existing groundwater quality for municipal and domestic beneficial uses.
Areas with Rising Groundwater (Santa Ana and Casitas Springs Hydrogeologic Areas)								
Nitrate (as N)	10	N/A	5 (Surface Water)WQO)	1.0 – 1.5	10	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with the MCL.	3	Preserve existing groundwater quality for municipal and domestic beneficial uses. Protect surface water beneficial uses consistent with the RWQCB surface water WQO (MO is lower than surface water WQO).

[1] Consumer Acceptance Levels, where R = Recommended, U = Upper, and ST = Short Term

[2] Undesirable results for TDS, sulfate, chloride, and boron are considered to occur when two-thirds (2/3) of the primary monitoring wells exceed the minimum threshold concentration for a constituent continuously for two years and are determined by UVRGA to be the result of groundwater pumping. Undesirable results for nitrate are evaluated in the two distinct areas noted in the table. The 2/3 criterion applies separately within the two areas for nitrate.

[3] Sustainability Goal for TDS, sulfate, chloride, or boron is considered to be met when at least one-third (1/3) of the primary monitoring wells are below the measurable objective for the constituent being considered.

[4] Avocados are a chloride sensitive crop grown in the Basin and is used as a proxy. The Avocado Production Handbook states that "When chloride and sodium exceed 100 ppm in the water there should be an alerted concern for ensuring adequate leaching of the root zone." Accordingly it is concluded that significant and unreasonable effects may occur at concentrations in excess of 100 mg/L https://ucanr.edu/sites/alternativefruits/Avocados/Literature/

[5] Upper limit of boron tolerance for citrus and avocado is 0.75. US Department of Agriculture: https://www.ars.usda.gov/pacific-west-area/riverside-ca/agricultural-water-efficiency-and-salinity-research-unit/docs/databases/boron-tolerance-of-crops/

Total Dissolved Solids

As can be seen in the TDS plot included in Attachment B, TDS concentrations at the nine primary monitoring locations have generally ranged from approximately 400 to approximately 900 milligrams per liter (mg/L). TDS concentrations have been somewhat higher during the recent drought as compared to the 1990s and 2000s, but are expected to decline during the next wet period.

The RWQCB WQO for TDS of 800 mg/L is met most of the time by most wells and is proposed as the MO for consistency with RWQCB's Basin Plan and to express a preference to preserve existing water quality to the extent practicable.

The proposed MT (indicator of potential significant and unreasonable effects) is set equal to the Upper Consumer Acceptance Level value of 1,000 mg/L. The proposed MT is considered indicative of potential significant and unreasonable effects because Division of Drinking water considers concentrations of Upper Consumer Acceptance Level to be acceptable only on a temporary basis for community and municipal water suppliers pending construction of treatment facilities. Treatment would likely be financially prohibitive due to the lack of a brine disposal pipeline to the ocean. For this reason, widespread occurrence of TDS in excess of the Upper Consumer Acceptance Level is considered a significant and unreasonable effect.

Sulfate

As can be seen in the sulfate plot included in Attachment B, sulfate concentrations at the nine primary monitoring locations have generally ranged from approximately 40 to approximately 300 mg/L. Sulfate concentrations have been somewhat higher during the recent drought as compared to the 1990s and 2000s, but are expected to decline during the next wet period.

The RWQCB WQO for sulfate of 300 mg/L is met most of the time by most wells and is proposed as the MO for consistency with RWQCB's Basin Plan and to express a preference to preserve existing water quality to the extent practicable.

The proposed MT (indicator of potential significant and unreasonable effects) is set equal to the Upper Consumer Acceptance Level value of 500 mg/L. The proposed MT is considered indicative of potential significant and unreasonable effects because Division of Drinking water considers concentrations of Upper Consumer Acceptance Level to be acceptable only on a temporary basis for community and municipal water suppliers pending construction of treatment facilities. Treatment would likely be financially prohibitive due to the lack of a brine disposal pipeline to the ocean. For this reason, widespread occurrence of sulfate in excess of the Upper Consumer Acceptance Level is considered a significant and unreasonable effect.

Chloride

As can be seen in the chloride plot included in Attachment B, chloride concentrations at the nine primary monitoring locations have generally ranged from approximately 20 to approximately 75 mg/L. Chloride concentrations have been highest during the recent drought as compared to the 1990s and 2000s, but have declined toward historical levels in recent years.

The RWQCB WQO for chloride of 100 mg/L has been met all of the time by all nine wells. A lower concentration (75 mg/L) is proposed as the MO to reflect a preference to preserve existing water quality to the extent practicable.

The proposed MT (indicator of potential significant and unreasonable effects) is 100 mg/L. This value is based on sensitivity of avocados to chloride as a proxy for agricultural beneficial uses. The Avocado Production Handbook[6] states: "when chloride and sodium exceed 100 ppm in the water there should be an alerted concern for ensuring adequate leaching of the root zone." It is also noted that treatment to remove chloride would be financially prohibitive due to the lack of a brine disposal pipeline to the ocean. Thus, it is concluded that significant an unreasonable effects on agricultural beneficial uses may occur at concentrations in excess of 100 mg/L because widespread chloride treatment is likely financially infeasible for agriculture in the basin.

Boron

As can be seen in the boron plot included in Attachment B, boron concentrations at the nine primary monitoring locations have generally ranged from approximately non-detect to approximately 1.3 mg/L. Boron concentrations have generally been higher during the recent drought as compared to the 1990s and 2000s, but are expected to decline somewhat during the next wet period.

The RWQCB WQO for boron of 0.5 mg/L is met by at least 1/3 of the primary monitoring wells at all times. Accordingly, the proposed MO is 0.5 mg/L for consistency with RWQCB's Basin Plan and to express a preference to preserve existing water quality to the extent practicable.

The proposed MT (indicator of potential significant and unreasonable effects) is 0.75 mg/L for the following reasons. Available data show that boron concentrations are notably higher in the northernmost part of the UVRB (Kennedy and upper Robles Areas shown on the map in Attachment A). Concentrations in this area commonly range from 0.8 to 1.3 mg/L (see light blue squares on the boron plot in Attachment B). It has been reported that groundwater is unsuitable for agricultural use in this area. Therefore, it is concluded that significant and unreasonable effects on agricultural beneficial uses occur with concentrations in the 0.8 to 1.3 mg/l range. According to the United States Department of Agriculture (USDA), the upper limit of boron

[6] https://ucanr.edu/sites/alternativefruits/Avocados/Literature

tolerance for citrus and avocado is 0.75 mg/L[7]. Based on the basin-specific observation and USDA information, the proposed MT for boron is 0.75 mg/L. In other words, it is concluded that significant an unreasonable effects on agricultural beneficial uses may occur at boron concentrations in excess of 0.75 mg/L and, if widespread and caused by pumping, would constitute a SGMA undesirable result because widespread boron treatment is likely financially infeasible for agriculture in the basin.

Nitrate in Percolating Groundwater Areas (Kennedy, Robles, Mira Monte/Meiners Oaks, and Terraces Hydrogeologic Areas)

As can be seen in the nitrate plot for percolating groundwater areas included in Attachment B, nitrate concentrations (as nitrogen) at the six primary monitoring locations have generally ranged from approximately non-detect to over 17 mg/L. The Primary MCL and RWQCB WQO for nitrate of 10 mg/L (as nitrogen) is met with few exceptions in 2/3 of the wells (4 out of 6). The other two wells regularly exceed the MCL and are located in the Mira Monte area, a localized area that has routinely exhibited elevated nitrate concentrations. Elevated nitrate in the Mira Monte area impacts several public and private potable water system wells. The well operators currently manage nitrate by blending with surface water from Lake Casitas.

The RWQCB WQO and Primary MCL for nitrate of 10 mg/L (as nitrogen) is generally met by the primary monitoring wells located outside of the Mira Monte area. A lower concentration (7.5 mg/L (as nitrogen)) is proposed as the MO for the percolating groundwater areas to reflect a preference to preserve existing water quality to the extent practicable throughout the remainder of the percolating groundwater areas. The MO represents the approximate typical upper bound of nitrate concentrations outside of the Mira Monte area.

Consumption of water containing nitrate in excess of the MCL poses serious health risks to pregnant women and infants. Because there is currently no requirement for domestic well owners to test for nitrate, health effects could occur if nitrate exceeds the MCL at domestic well locations. Additionally some domestic well owners may not have the resources to respond to nitrate MCL exceedances even if they know about it. For these reasons, widespread occurrence of nitrate in excess of the MCL would be considered a significant and unreasonable effect. Thus, the proposed MT for nitrate in the percolating groundwater areas is equal to the Primary MCL of 10 mg/L (as nitrogen).

Nitrate in Rising Groundwater Areas (Santa Ana and Casitas Springs Hydrogeologic Areas)

As can be seen in the nitrate plot for rising groundwater areas included in Attachment B, nitrate concentrations (as nitrogen) at the three primary monitoring locations have generally ranged from approximately non-detect to approximately 8 mg/L (as nitrogen).

[7] https://www.ars.usda.gov/pacific-west-area/riverside-ca/agricultural-water-efficiency-and-salinity-research-unit/docs/databases/boron-tolerance-of-crops/

The RWQCB WQO and Primary MCL for nitrate is 10 mg/L (as nitrogen). In addition, a special consideration for the rising groundwater areas is the surface water RWQCB WQO for nitrate. The surface water WQO is considered because groundwater rises and discharges to the Ventura River in this area. The RWQCB WQO for surface water is 5 mg/L and is designed to protect beneficial uses of surface water. A lower concentration (3 mg/L (as nitrogen)) is proposed as the MO for the rising groundwater areas to reflect a preference to preserve existing water quality to the extent practicable. The MO represents the approximate upper bound of nitrate concentrations typically observed in the rising groundwater area (see plot in Attachment B).

Consumption of water containing nitrate in excess of the MCL poses serious health risks to pregnant women and infants. Because there is currently no requirement for domestic well owners to test for nitrate, health effects could occur if nitrate exceeds the MCL at domestic well locations. Additionally some domestic well owners may not have the resources to respond to nitrate MCL exceedances even if they know about it. For these reasons, widespread occurrence of nitrate in excess of the MCL would be considered a significant and unreasonable effect. Thus, the proposed MT for nitrate in the rising groundwater areas is equal to the Primary MCL of 10 mg/L (as nitrogen).

Interim Milestones

Interim milestones are used to show the anticipated progress or path to achieving the measurable objectives within 20 years. The GSA must define the interim milestones using the same metric as the measurable objective in increments of five years. Because the measurable objectives for all water quality constituents are already met, there is no need to show interim milestones.

Projects and Management Actions

Because the measurable objectives for all water quality constituents are already met, no projects or management actions are proposed for the degraded water quality sustainability indicator. However, consistent with Item 3h of the adopted Sustainability Goal, it is recommended that the GSP include a non-binding action to coordinate with and support efforts by RWQCB and others to address nitrate contamination sources in the Basin.

Consistency with Sustainability Goal

The proposed SMC for the degraded water quality sustainability indicator are consistent with applicable elements of the adopted Sustainability Goal.

OTHER RESOURCES

More information about water quality is available in the draft GSP Basin Setting section: https://uvrgroundwater.org/sgma-overview/

GSP Emergency Regulations can be viewed at: https://govt.westlaw.com/calregs/Browse/Home/California/CaliforniaCodeofRegulations?guid=I39F024FCA7874BCE8FB056C895CDCFD5&transitionType=Default&contextData=%28sc.Default%29#I55673D782DE74CD5BA1E9A6CBC881A98

Additional information concerning SMC can be found in DWR's draft Sustainable Management Criteria Best Management Practice document (SMC BMP): https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-6-Sustainable-Management-Criteria-DRAFT_ay_19.pdf

ATTACHMENTS

A. Map Showing Groundwater Quality Monitoring Locations
B. Plots of Historical Groundwater Quality with Proposed MTs and MOs

Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

Attachment A

Map Showing Groundwater Quality Monitoring Locations

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Matilija Reservoir

05N23W33B04S
MOWD-2

05N23W33B03S
MOWD-1

T05N R24W
T05N R23W
T04N R24W
T04N R23W

Meiners Oaks

W El Roblar Dr

04N23W09B03S
MOWD-4

04N23W09B04S
MOWD-7

04N23W09G03S
Private

Robles Diversion Canal

Ventura River

Santa Ana Creek

04N23W16C08S
VRWD-1

04N23W16A01S
CMWD Mira Monte

04N23W15B02S
VRWD-6

04N23W16C11S
VRWD-7

04N23W16C10S
VRWD-4

04N23W16F04S
VRWD-3

04N23W16C07S
VRWD-2

S Rice Rd

04N23W16B07S
Private

Baldwin Rd

150

T04N R24W
T04N R23W

San Antonio Creek

Lake Casitas

N Ventura Ave

T04N R24W
T03N R24W
T04N R23W
T03N R23W

03N23W05H01S
Private

Coyote Creek

03N23W08B01S
Ventura NYE-7

03N23W08C02S
Ventura NYE-8

03N23W08B11S
Ventura NYE-11

Foster Park
Subsurface Intake

N

0 1
Miles

119

Upper Ventura River Groundwater Basin

Hydrogeologic Areas

- Kennedy
- Robles
- Mira Monte / Meiners Oaks
- Terraces
- Santa Ana
- Casitas Springs

Groundwater Quality Monitoring Locations

Location Type, Data Source

- Primary, DDW
- Secondary, DDW
- Secondary, VCWPD

CMWD: Casitas Municipal Water District
DDW: State of CA Division of Drinking Water
MOWD: Meiners Oaks Water District
VCWPD: Ventura County Watershed Protection District
VRWD: Ventura River Water District

Solid blue stream lines do not necessarily indicate perennial flow.

File: 05-05-XX_GWQ_Monitoring_Locs_v1.mxd Date: 1/9/2021
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983

Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT

Attachment B

Plots of Historical Groundwater Quality with Proposed Minimum Thresholds and Measurable Objectives

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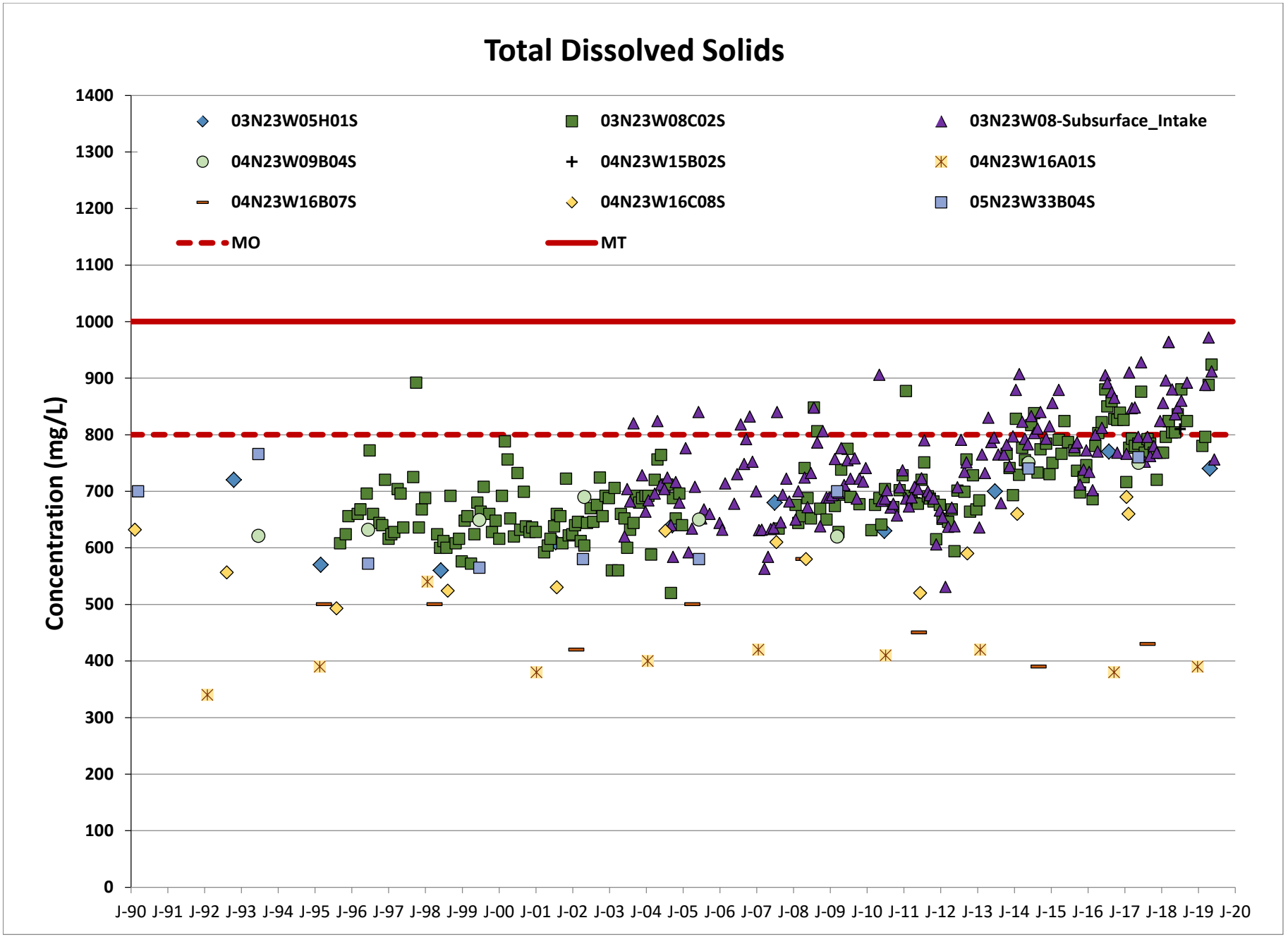
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03N23W08-Subsurface_Intake
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04N23W15B02S
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04N23W16B07S
04N23W16C08S
05N23W33B04S
MO
MT
Concentration (mg/L)
1400
1300
1200
1100
1000
900
800
700
600
500
400
300
200
100
0
J-90 J-91 J-92 J-93 J-94 J-95 J-96 J-97 J-98 J-99 J-00 J-01 J-02 J-03 J-04 J-05 J-06 J-07 J-08 J-09 J-10 J-11 J-12 J-13 J-14 J-15 J-16 J-17 J-18 J-19 J-20

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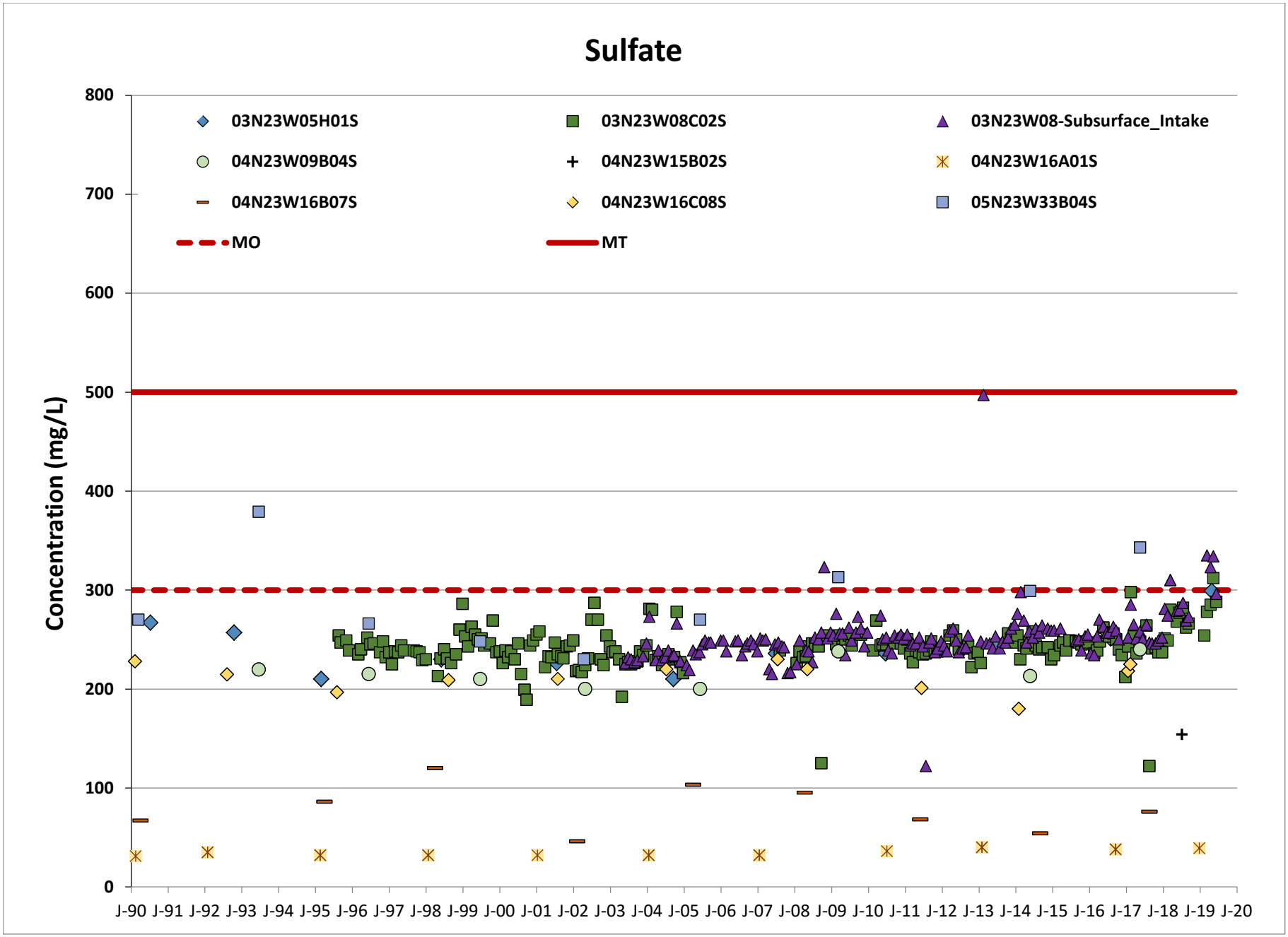
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04N23W16B07S
04N23W16C08S
05N23W33B04S
MO
MT
Concentration (mg/L)
800
700
600
500
400
300
200
100
0
J-90 J-91 J-92 J-93 J-94 J-95 J-96 J-97 J-98 J-99 J-00 J-01 J-02 J-03 J-04 J-05 J-06 J-07 J-08 J-09 J-10 J-11 J-12 J-13 J-14 J-15 J-16 J-17 J-18 J-19 J-20

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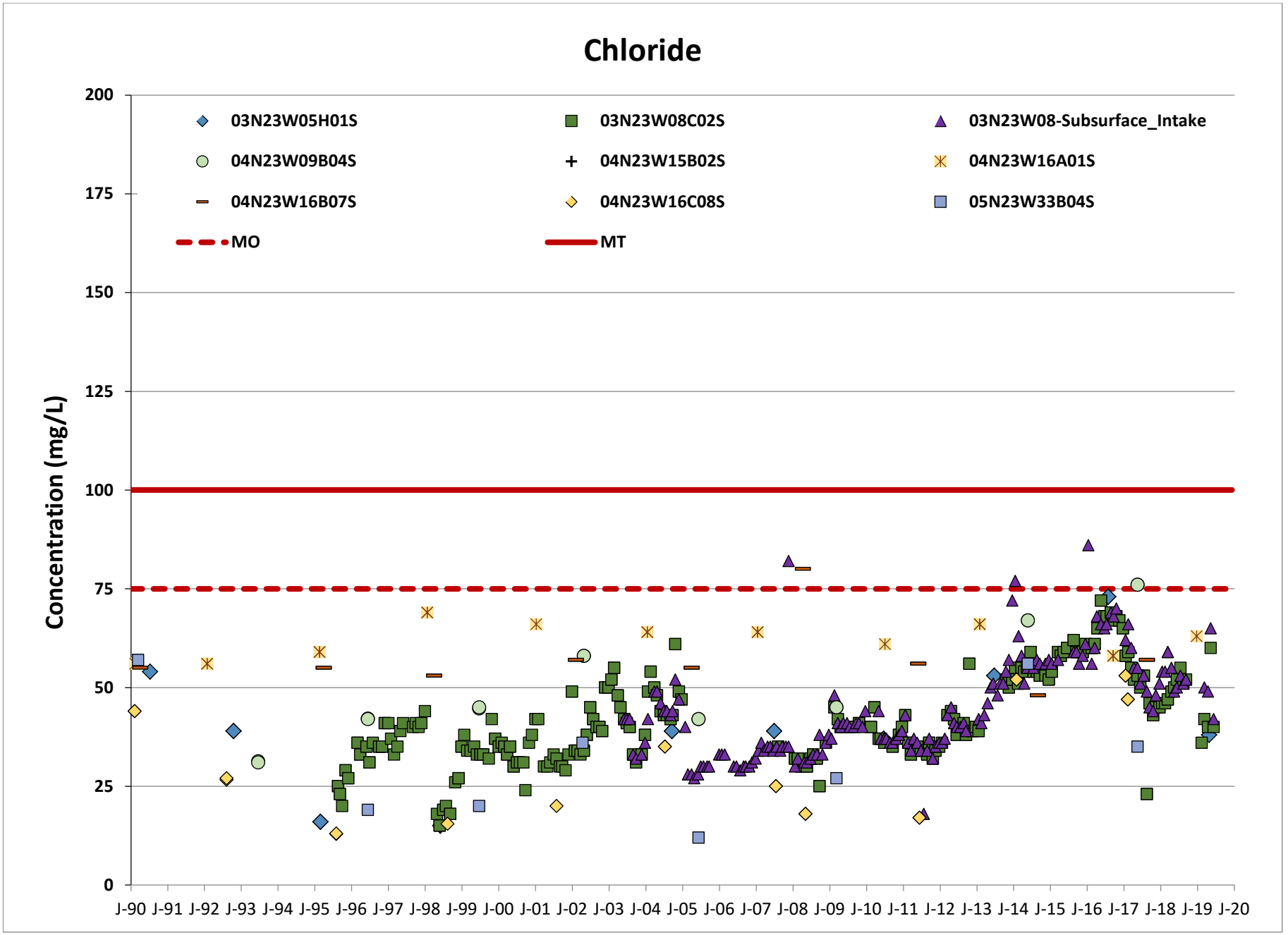
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04N23W16C08S
05N23W33B04S
MO
MT
Concentration (mg/L)
200
175
150
125
100
75
50
25
0
J-90 J-91 J-92 J-93 J-94 J-95 J-96 J-97 J-98 J-99 J-00 J-01 J-02 J-03 J-04 J-05 J-06 J-07 J-08 J-09 J-10 J-11 J-12 J-13 J-14 J-15 J-16 J-17 J-18 J-19 J-20

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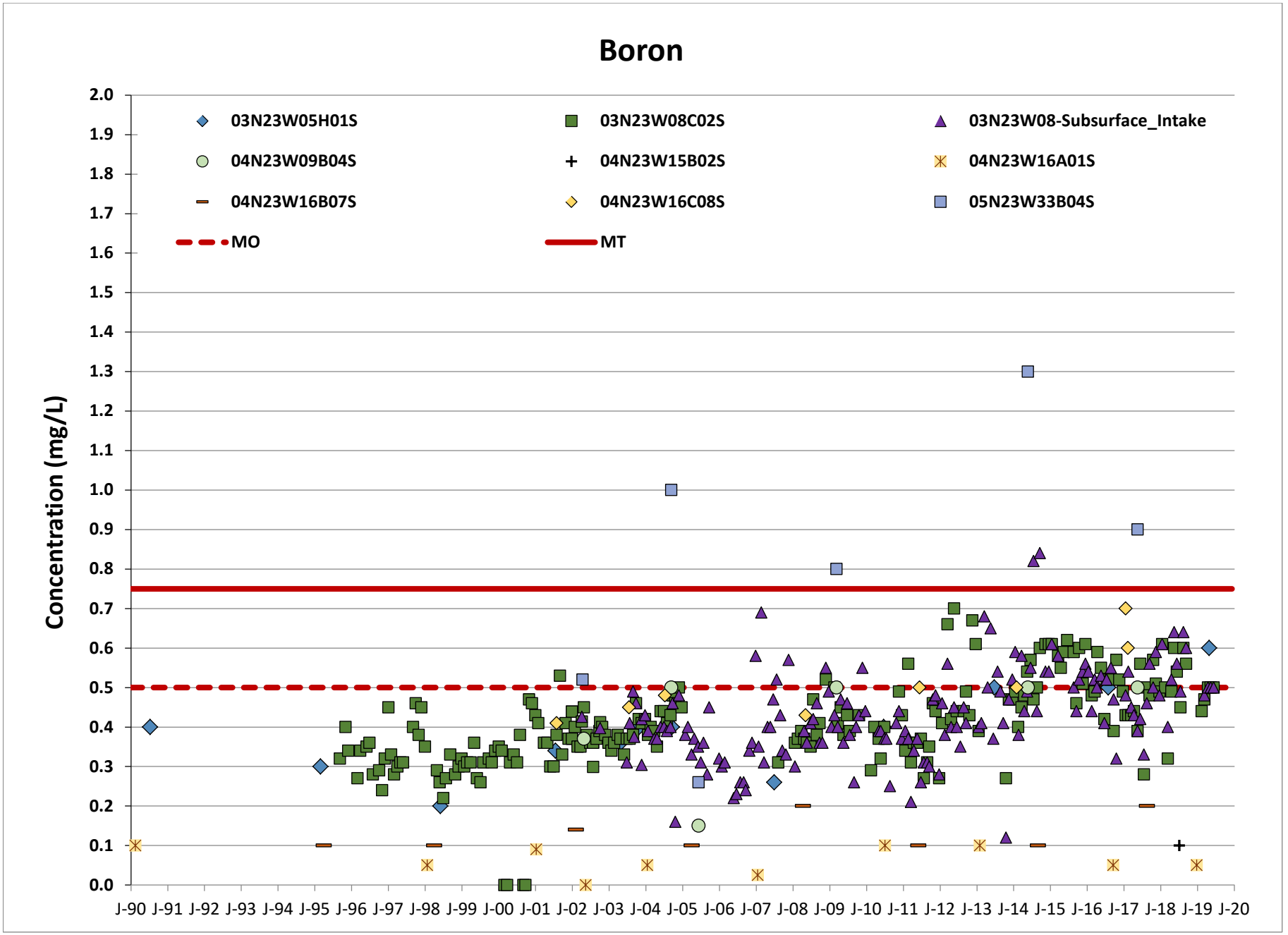
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04N23W16C08S
05N23W33B04S
MO
MT
Concentration (mg/L)
2.0
1.9
1.8
1.7
1.6
1.5
1.4
1.3
1.2
1.1
1.0
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0.0
J-90 J-91 J-92 J-93 J-94 J-95 J-96 J-97 J-98 J-99 J-00 J-01 J-02 J-03 J-04 J-05 J-06 J-07 J-08 J-09 J-10 J-11 J-12 J-13 J-14 J-15 J-16 J-17 J-18 J-19 J-20

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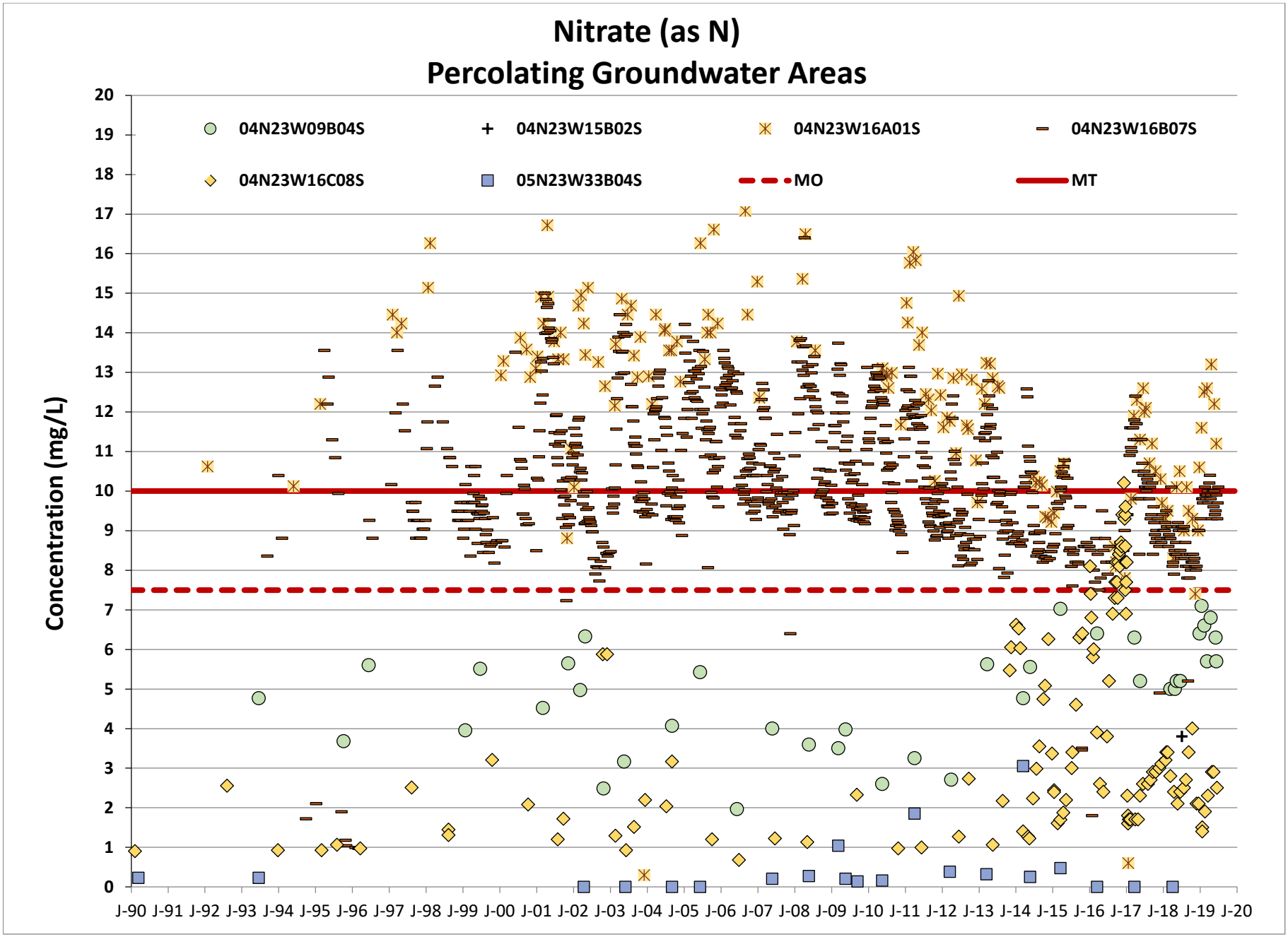
Nitrate (as N)
Percolating Groundwater Areas
Concentration (mg/L)
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04N23W15B02S
04N23W16A01S
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04N23W16C08S
05N23W33B04S
MO
MT
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
J-90 J-91 J-92 J-93 J-94 J-95 J-96 J-97 J-98 J-99 J-00 J-01 J-02 J-03 J-04 J-05 J-06 J-07 J-08 J-09 J-10 J-11 J-12 J-13 J-14 J-15 J-16 J-17 J-18 J-19 J-20

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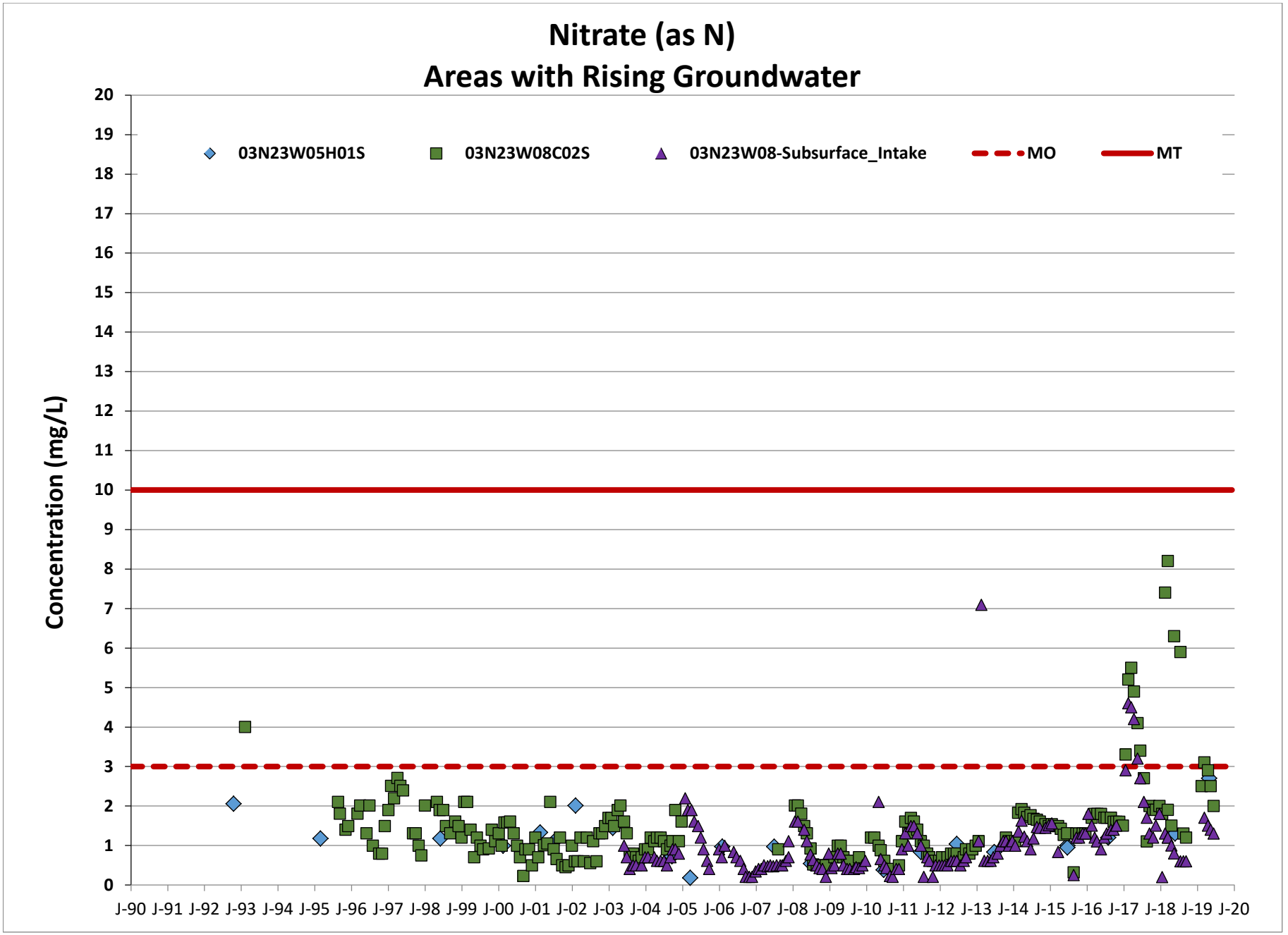
Nitrate (as N)
Areas with Rising Groundwater
Concentration (mg/L)
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03N23W08C02S
03N23W08-Subsurface_Intake
MO
MT
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
J-90 J-91 J-92 J-93 J-94 J-95 J-96 J-97 J-98 J-99 J-00 J-01 J-02 J-03 J-04 J-05 J-06 J-07 J-08 J-09 J-10 J-11 J-12 J-13 J-14 J-15 J-16 J-17 J-18 J-19 J-20

Item 10c

Attachment B

GSP Workshop No. 2 Degraded Water Quality SMC Slides


Upper Ventura River
GROUNDWATER AGENCY
SUSTAINABLE MANAGEMENT
SUSTAINABLE MANAGEMENT CRITERIA
CASITAS Municipal Water District
We Serve Water
MEINERS OAKS WATER DISTRICT
VENTURA WATER

4

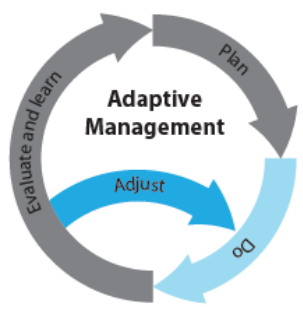
SUSTAINABLE GROUNDWATER MANAGEMENT ACT (SGMA) REQUIREMENTS

1. Form a Groundwater Sustainability Agency (GSA)
2. Adopt a Groundwater Sustainability Plan (GSP)
   - Due January 31, 2022
3. Achieve Sustainable Groundwater Management
   - 20 years following GSP adoption

5

WHAT IS A GSP?

The GSP is a flexible road map for how a groundwater basin will achieve long term sustainability by avoiding undesirable results through data-driven, adaptive management



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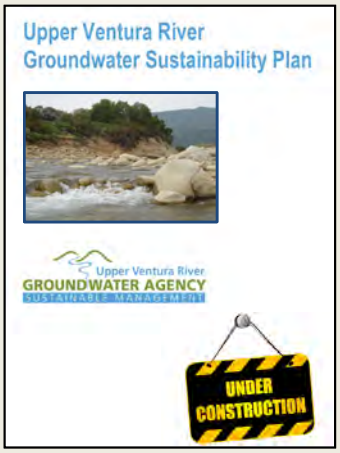
WHAT MUST A GSP INCLUDE?

- GSP Contents
  - Administrative Information
  - Basin Setting
  - Sustainable Management Criteria
  - Monitoring Networks
  - Projects and Management Actions
  - Implementation



*** *Draft Basin Setting Available On MBGSA Website****

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SUSTAINABLE MANAGEMENT CRITERIA

- Overarching goal of SGMA is to avoid undesirable results for each of the six SGMA sustainability indicators:

- Undesirable results and actions to prevent them are defined at the local level by the GSA

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SUSTAINABLE MANAGEMENT CRITERIA

- Sustainability Goal
- Undesirable Results
  - Significant and unreasonable effects for sustainability indicators caused by groundwater conditions occurring throughout the basin
- Minimum Thresholds
  - Quantitative metrics indicating significant and unreasonable effects likely exist
- Measureable Objectives
  - Quantitative metrics that reflect basin desired conditions

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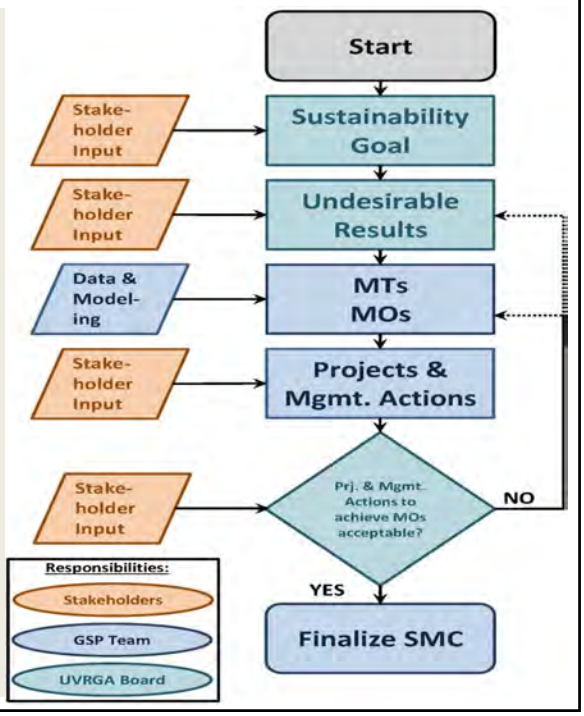
SUSTAINABLE MANAGEMENT CRITERIA DEVELOPMENT PROCESS

SMC will be the central focus of the GSP



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SUSTAINABILITY GOAL

- High-level policy framework to guide development of Sustainable Management Criteria & Plan Actions
- Adopted August 13, 2020
- Available on-line

Sustainability Goal
Adopted August 13, 2020

The goal of this GSP is to sustainably manage the groundwater resources of the Upper Ventura River Basin for the benefit of current and anticipated future beneficial users of groundwater, including the environment, and the welfare of the general public who rely directly or indirectly on groundwater. Sustainable groundwater management will ensure the long-term reliability of the Upper Ventura River Basin groundwater resources by avoiding SGMA undesirable results no later than 20 years from Plan adoption through implementation of a data-driven and performance-based adaptive management framework. It is the express goal of this GSP to develop sustainable management criteria and plan implementation measures to avoid undesirable results for the applicable SGMA sustainability indicators by:

1. *Using best available science and information, including consideration of uncertainty in the basin setting and groundwater conditions and future opportunities to address data gaps;*
2. *Conducting active and meaningful stakeholder engagement;*
3. *Developing a pragmatic and financially realistic approach to sustainable groundwater management that seeks the triple bottom line of vibrant and well-functioning ecological, social, and economic systems by:*
   a. *Considering the economic, social, and environmental impacts and benefits associated with the all current and anticipated future beneficial users of groundwater;*
   b. *Considering water supply reliability for agriculture, domestic, and municipal users;*
   c. *Considering the availability of alternative water sources for domestic groundwater beneficial users;*
   d. *Considering potential impacts to groundwater dependent ecosystems;*
   e. *Considering State, federal, or local standards relevant to applicable sustainability indicators;*
   f. *Considering the feasibility of projects and management actions necessary to achieve proposed measurable objectives; and*
   g. *Considering the economic impact of projects and management actions necessary to achieve proposed measurable objectives on all beneficial users, with special consideration of disadvantaged communities and agricultural enterprises lacking alternative land use options.*
   h. *Coordinating planning and implementation actions with local and State agencies, non-governmental organizations, and, as necessary, the California Judicial Branch.*

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UNDESIRABLE RESULTS

"Significant and unreasonable effects for sustainability indicators caused by groundwater conditions occurring throughout the basin.

1. Significant and Unreasonable Effects: Undesirable results are significant and unreasonable effects related to a sustainability indicator. For example, seawater intrusion that impacts beneficial uses of groundwater.
2. Caused by Groundwater Conditions: The significant and unreasonable effects must be caused by managed groundwater conditions (i.e., pumping or GSP projects).
3. Throughout the Basin: The significant and unreasonable effects must occur or be caused by conditions throughout a large portion of the basin.

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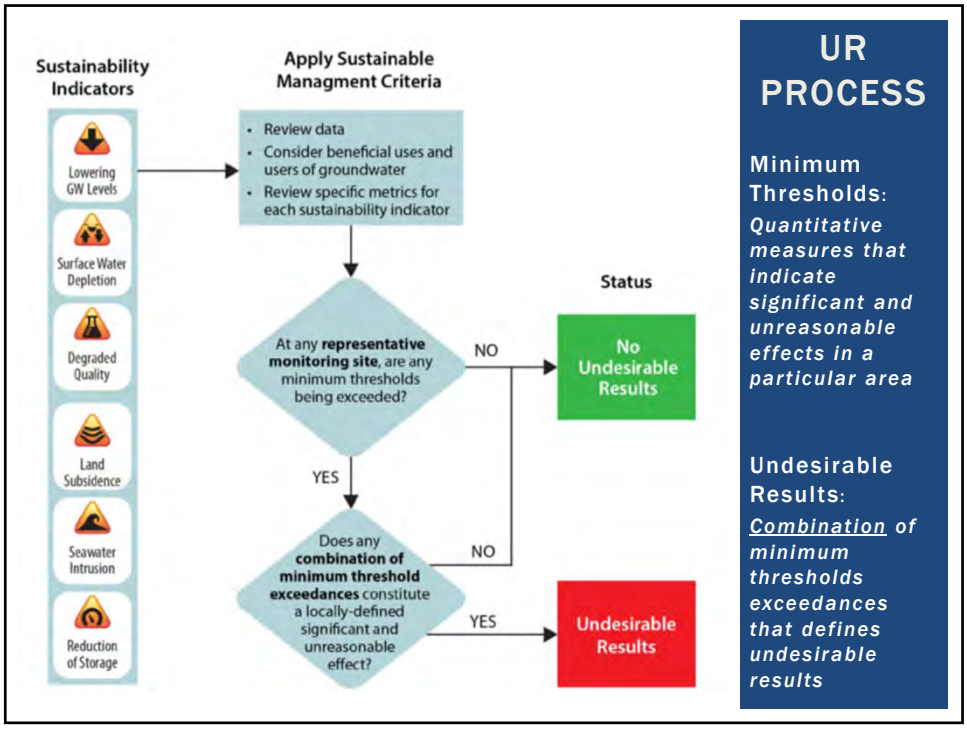

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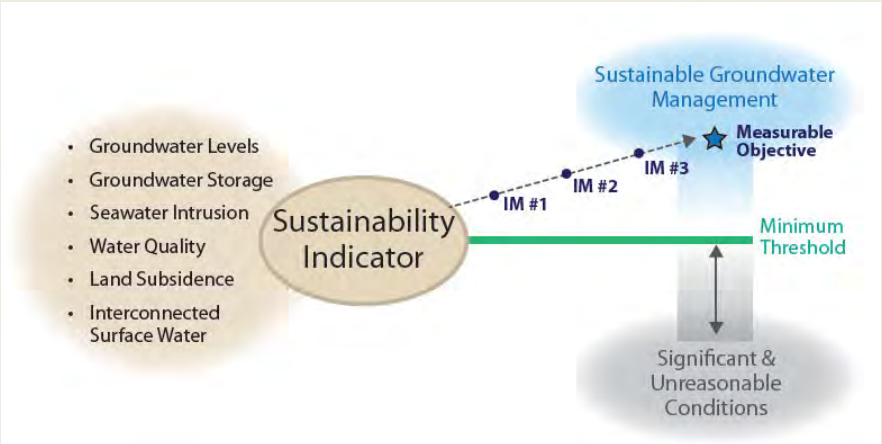
SUSTAINABLE MANAGEMENT CRITERIA

The overarching goal of SGMA is to avoid undesirable results



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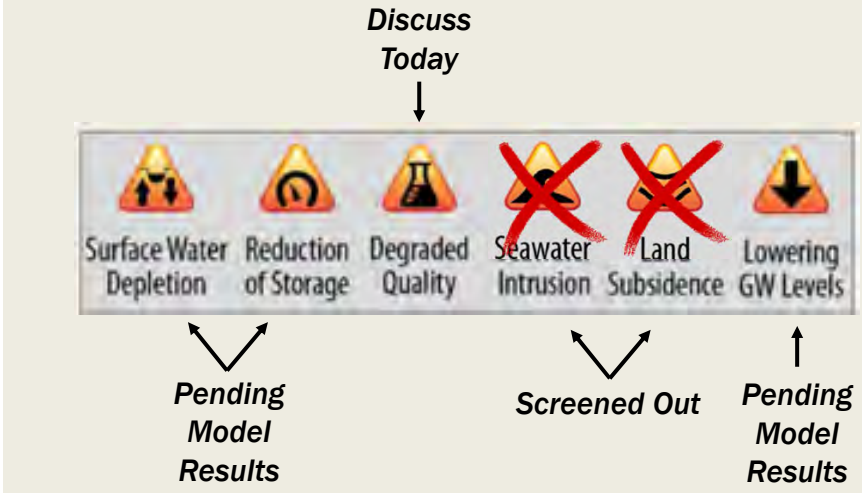
SMC DEVELOPMENT STATUS



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SUSTAINABILITY INDICATOR SCREENING RESULTS

Seawater intrusion is not physically possible (aquifer is ~200 ft above sea level and ~6 miles from the ocean)

Significant and unreasonable land subsidence is highly unlikely due aquifer properties and groundwater conditions

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DRAFT WATER QUALITY SMC

- Current water quality supports beneficial uses (currently no undesirable results)
- Nexus between URs and groundwater conditions
  - Water quality degrades with declining water table.
  - SMCs only apply if basin management (pumping) causes degradation
    - i.e. - drought-induced quality degradation is not a SGMA UR

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DRAFT WATER QUALITY MINIMUM THRESHOLDS

- Criteria for Minimum Threshold Development
  - Maximum Contaminant Levels (MCLs)
  - RWQCB Water Quality Objectives
  - Agricultural Toxicity Thresholds
  - Existing Water Quality
- MTs based on significant and unreasonable effects consistent with sustainability goal
  - Health effects of nitrate in the ~100 domestic wells (testing not required – may have unknown exposure)
  - Treatment costs for financially prohibitive (brine disposal for reverse osmosis)

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DRAFT WATER QUALITY MINIMUM THRESHOLDS

- Nitrate: Maximum Contaminant Level[1]
- TDS: Upper Consumer Acceptance Level[1]
- Sulfate: Upper Consumer Acceptance Level[1]
- Chloride: Toxicity threshold for chloride-sensitive crops[2]
- Boron: Toxicity threshold for boron-sensitive crops[2]

[1]Treatment required when these levels are exceeded. Reverse osmosis would require brine discharge. Brine disposal pipeline is not likely feasible from a cost perspective.

[2]Treatment for irrigation beneficial use is likely cost prohibitive.

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DRAFT WATER QUALITY UNDESIRABLE RESULTS

- Criteria for Undesirable Results:
  - SGMA undesirable results are considered to be occurring when two-thirds (2/3) of the primary water quality monitoring wells exceed a minimum threshold concentration continuously for two years and UVRGA determines that the exceedances are caused by groundwater pumping.

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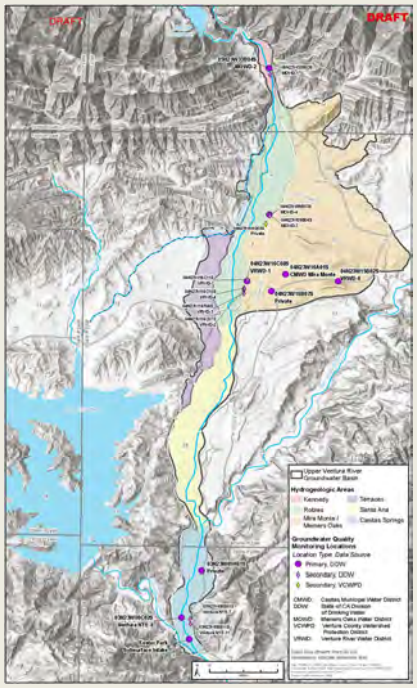
GROUNDWATER QUALITY MONITORING LOCATIONS

Degraded Quality

- *Nine Areas*
- *Primary locations identified in areas with multiple closely spaced wells*
- *Monitoring performed by well owner or Ventura County*
- *Gaps to be addressed during GSP implementation*



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DRAFT WATER QUALITY MEASURABLE OBJECTIVES

Degraded Quality

- Nitrate
  - Percolating Groundwater Areas
    - Lower than RWQCB WQO for groundwater to preserve existing water quality (7.5 vs. 10 mg/L)
  - Rising Groundwater Areas
    - Lower than RWQCB WQO for surface water to preserve existing water quality (3 vs. 5 mg/L)
- TDS – RWQCB WQO
- Sulfate – RWQCB WQO
- Chloride – Lower than RWQCB WQO to preserve existing water quality (75 vs. 100 mg/L)
- Boron – RWQCB WQO

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DRAFT WATER QUALITY SMC

Degraded Quality

Table 1. Proposed Minimum Thresholds and Measurable Objectives

Constituent	MCL (mg/L)	Sec. MCL (R/U/ST)[1] (mg/L)	RWQCB WQO (mg/L)	Range of Average Historical Concentrations for Primary Wells (mg/l)	Proposed MT[2] (mg/L)	MT Rationale	Proposed MO[3] (mg/L)	MO Rationale
TDS	N/A	500/1,000/1,500	800	407 - 760	1,000	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with Upper Consumer Acceptance Level.	800	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses consistent with RWQCB WQO.
Sulfate	N/A	250/500/600	300	35 - 300	500	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with Upper Consumer Acceptance Level.	300	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses consistent with RWQCB WQO.
Chloride	N/A	250/500/600	100	29 - 61	100	Prevent significant and unreasonable impact to agricultural beneficial use of groundwater for chloride sensitive crops[4].	75	Preserve existing groundwater quality for agricultural, municipal, and domestic beneficial uses.
Boron	N/A	N/A	0.5	0.09 - 0.77	0.75	Prevent significant and unreasonable impact to agricultural beneficial use of groundwater for boron sensitive crops.[5]	0.5	Preserve existing groundwater quality for agricultural beneficial use consistent with RWQCB WQO.
Nitrate (as N)								
Percolating Groundwater Areas (Kennedy, Robles, Mira Monte/Meiners Oaks, and Terraces Hydrogeologic Areas)								
Nitrate (as N)	10	N/A	10	0.6 – 12.6	10	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with the MCL.	7.5	Preserve existing groundwater quality for municipal and domestic beneficial uses.
Areas with Rising Groundwater (Santa Ana and Casitas Springs Hydrogeologic Areas)								
Nitrate (as N)	10	N/A	5 (Surface Water WQO)	1.0 – 1.5	10	Prevent significant and unreasonable impact to municipal and domestic beneficial uses of groundwater consistent with the MCL.	3	Preserve existing groundwater quality for municipal and domestic beneficial uses. Protect surface water beneficial uses consistent with the RWQCB surface water WQO (MO is lower than surface water WQO).

[1] Consumer Acceptance Levels, where R = Recommended, U = Upper, and ST = Short Term

[2] Undesirable results for TDS, sulfate, chloride, and boron are considered to occur when two-thirds (2/3) of the primary monitoring wells exceed the minimum threshold concentration for a constituent continuously for two years and are determined by UVRGA to be the result of groundwater pumping. Undesirable results for nitrate are evaluated in the two distinct areas noted in the table. The 2/3 criterion applies separately within the two areas for nitrate.

[3] Sustainability Goal for TDS, sulfate, chloride, or boron is considered to be met when at least one-third (1/3) of the primary monitoring wells are below the measurable objective for the constituent being considered.

[4] Avocados are a chloride sensitive crop grown in the Basin and is used as a proxy. The Avocado Production Handbook states that "When chloride and sodium exceed 100 ppm in the water there should be an alerted concern for ensuring adequate leaching of the root zone." Accordingly it is concluded that significant and unreasonable effects may occur at concentrations in excess of 100 mg/L. [illegible]

[5] Upper limit of boron tolerance for citrus and avocado is 0.75. US Department of Agriculture: [illegible]

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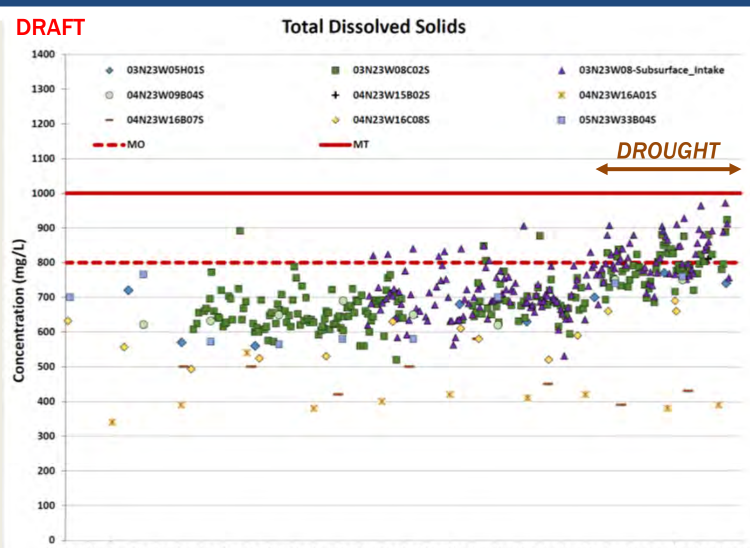
EXAMPLE WQ SMC CHART

Degraded Quality



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SCM NEXT STEPS

- For more information, please see the Degraded Water Quality White Paper available at https://uvrgroundwater.org/
- UVRGA Board will consider adopting Degraded Water Quality SMC during its March 11 meeting
- Remaining Sustainability Indicators will be developed in March and April

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SUSTAINABLE MANAGEMENT CRITERIA QUESTIONS

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

DATE: March 11, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Special Board Meetings (Grant Category (c); Task 10: Stakeholder Outreach and Engagement)

SUMMARY

Staff recommends selecting a monthly date/time for special Board meetings to be held on an as-needed basis during the remainder of the GSP development process.

The following dates are offered for consideration:

- 4th Thursdays, 1pm (or another afternoon start time) (except November due to Thanksgiving)
- 4th Tuesdays, 1pm (or another afternoon start time)
- 4th Mondays, 1pm (or another afternoon start time)

RECOMMENDED ACTIONS
Consider scheduling special Board meetings for GSP development.

BACKGROUND
Not applicable.

FISCAL SUMMARY
Special Board meetings are part of the GSP development budget.

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ A. Spandrio___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

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

DATE: March 11, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: GSP Workshop No. 3 (Grant Category (c); Task 10: Stakeholder Outreach and Engagement)

SUMMARY

Staff recommends scheduling the third GSP workshop in late April. It is anticipated that this workshop will focus on results of the 50-year future model simulations and sustainable management criteria for the following sustainability indicators: chronic lowering of groundwater levels, reduction of groundwater storage, and depletion of interconnected surface water.

The first two GSP workshops began at 4pm. The Executive Director and Intera staff are available for a workshop beginning no earlier than 4pm on the following dates:

- Monday, April 19
- Tuesday, April 20
- Wednesday, April 21
- Monday, April 26
- Tuesday, April 27
- Wednesday, April 28
- Thursday, April 29

RECOMMENDED ACTIONS

Consider scheduling the third GSP public workshop.

BACKGROUND

Not applicable.

FISCAL SUMMARY

GSP workshops are included in the Agency's approved budget.

Action: _____

Motion:_____ Second: _____

B. Kuebler___ D. Engle___ A. Spandrio___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___