

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, May 13, 2021 via**

ON-LINE OR TELECONFERENCE:

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

Find your local number: <https://zoom.us/j/91702357683?pwd=eC9ZV055VDNQZHd1RWNMYS9OZnhVUT09>

JOIN BY COMPUTER, TABLET OR SMARTPHONE:

<https://zoom.us/j/91702357683?pwd=eC9ZV055VDNQZHd1RWNMYS9OZnhVUT09>

Meeting ID: 917 0235 7683

Passcode: 561751

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

May 13, 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 April 8, 2021 Regular Board Meeting**
- b. Approve Minutes from April 22, 2021 Special Board Meeting**
- c. Approve Minutes from April 29, 2021 Special Board Meeting (GSP Workshop No. 3)**
- d. Approve Financial Report for April 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

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 Level and Storage Sustainable Management Criteria (Grant Category (d); Task 11: GSP Development and Preparation)**

The Board will consider approving sustainable management criteria for the groundwater level and storage sustainability indicators for inclusion in the draft GSP.

- c. Depletion of Interconnected Surface Water Sustainable Management Criteria (Grant Category (d); Task 11: GSP Development and Preparation)**

The Board will consider approving sustainable management criteria for the depletion of interconnected surface water sustainability indicator for inclusion in the draft GSP.

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

A Special Board meeting is scheduled for May 27, 2021.

The next scheduled Regular Board meeting is June 10, 2021.

**DRAFT UPPER VENTURA RIVER GROUNDWATER AGENCY
MINUTES OF REGULAR MEETING APRIL 8, 2021**

The Board meeting was held via teleconference, in accordance with California Executive Order N-25-20. Directors present were Bruce Kuebler, Larry Rose, Susan Rungren, Richard Hajas, Glenn Shephard, and Chair Diana Engle. 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

JOIN BY COMPUTER, TABLET OR SMARTPHONE:

<https://zoom.us/j/98162556615?pwd=N0RIQzlVczFYbk9xZ2dLQ0RteENDUT09>

Meeting ID: 981 6255 6615

Passcode: 876820

New to Zoom, go to: <https://support.zoom.us/hc/en-us/articles/206175806>

1) CALL TO ORDER

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

2) PLEDGE OF ALLEGIANCE

Executive Director Bondy led the Pledge of Allegiance.

3) ROLL CALL

Executive Director Bondy called roll.

Directors present: Bruce Kuebler, Larry Rose, Susan Rungren, Richard Hajas, Glenn Shephard, and Diana Engle.

Directors absent: E. Ayala

4) APPROVAL OF AGENDA

Chair Engle asked if there are any proposed changes to the agenda. No changes were suggested.

Director Kuebler moved approval of the agenda. Director Rungren seconded the motion.

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	D. Engle - Y
	S. Rungren – Y	G. Shephard – Y	R. Hajas– Y

Director Absent: E. Ayala

Noes: None.

5) 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.

6) CONSENT CALENDAR

- a. Approve Minutes from March 11, 2021 Regular Board Meeting**
- b. Approve Minutes from March 25, 2021 Special Board Meeting**
- c. Approve Financial Report for March 2021**

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

Roll Call Vote:	B. Kuebler – Y	L. Rose – Y	D. Engle - Y
	S. Rungren – Y	G. Shephard – Y	R. Hajas– Y

Director Absent: E. Ayala.

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: No report and no time.

Director Rungren: No report and no time.

Director Rose: Worked on access for monitoring wells. One hour.

Director Shephard: No report and no time.

Director Rajas: Introduced himself as the Casitas Municipal Water District appointee to the UVRGA Board. Pete Kaiser is his alternate.

Director Engle: No report and no time.

8) EXECUTIVE DIRECTOR'S REPORT

Executive Director Bondy briefly reviewed the written staff report with the Board.

Director Kuebler complimented the City of Ventura on its comments on the California Department of Fish and Wildlife flow recommendations.

Item 6a

Director Engle asked about Staff's recommendation to defer Camino Cielo stream gaging until spring of 2022. Executive Director Bondy explained that the modelers are primarily interested in the baseflow recession. There will not be a baseflow recession to monitor this year because there has been so little rainfall.

9) ADMINISTRATIVE ITEMS

a. Secretary Appointment

The Board discussed appointing a Member Director to fill the Board Secretary vacancy resulting from Director Angelo Spandrio's departure. Director Hajas volunteered.

Director Kuebler moved to appoint Richard Hajas as secretary for the period April 8, 2021 through June 30, 2021. The motion was seconded by Director Rungren.

No public comment.

Roll Call Vote:	B. Kuebler – Y	D. Engle – Y	L. Rose – Y
	S. Rungren – Y	G. Shephard – Y	R. Hajas - Y

Noes: None.

Director Absent: E. Ayala

b. Ad Hoc Committees

Executive Director Bondy explained that Ad Hoc Budget committee recently lost two of its members. He recommended reviewing the ad hoc committees and updating them, as desired.

Alternate Director Bert Rapp said he is on the Ad Hoc Budget Committee but feels that someone more involved should be on the committee.

The board discussed the various ad hoc committees.

Agency Counsel Lemieux asked for background about the ad hoc committees. Executive Director Bondy summarized the history of the committees.

The Directors agreed the Ad Hoc Budget Committee is no longer needed. Agency Counsel Lemieux said no action is required to terminate the ad hoc committee.

The Board discussed extending the Ad Hoc Funding Committee to June 30, 2022.

Item 6a

Director Kuebler moved to extend the Ad Hoc Funding Committee through June 30, 2022. The motion was seconded by Director Shephard.

No public comment.

Roll Call Vote: B. Kuebler – Y	D. Engle – Y	L. Rose – Y
S. Rungren – Y	G. Shephard – Y	R. Hajas - Y

Noes: None.

Director Absent: E. Ayala

c. **Bank of Sierra Authorized Check Signer and Invoice Review Procedure.**

Executive Director Bondy explained that the Agency Bylaws require the signatures of any two Officers on Agency checks. Former Secretary Spandrio and Vice Chair Kuebler have been signing checks and Chair Engle is not willing. Therefore, unless the new Secretary, Director Hajas, is willing to sign checks, the Board would need to amend the Agency Bylaws. Director Hajas said he would be willing to sign checks.

Executive Director Bondy thanked Director Hajas for volunteering. He requested a motion to memorialize the discussion to provide documentation for the bank. Agency Counsel said the Board could direct the Chair and Agency Counsel execute a Board resolution to this effect.

Director Kuebler moved to authorize the Chair and Agency Counsel to execute a Board Resolution to clarify that Bruce Kuebler, Vice-Chair and Richard Hajas, Secretary are authorized to sign checks on behalf of the Upper Ventura River Groundwater Agency. The motion was seconded by Director Shephard.

No public comment.

Roll Call Vote: B. Kuebler – Y	D. Engle – Y	L. Rose – Y
S. Rungren – Y	G. Shephard – Y	R. Hajas - Y

Noes: None.

Director Absent: E. Ayala

Director Kuebler added that there are checks awaiting signature. Executive Director Bondy said he would work with the Agency's Treasurer and Directors Kuebler and Hajas setup Director Hajas with the Agency's bank.

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.

No Director comments or questions.

No public comment.

b. Sustainable Management Criteria (Grant Category (d); Task 11: GSP Development and Preparation)

Executive Director Bondy and Rincon Consultants staff members Steve Howard and Kiernan Brtalik provided a presentation concerning sustainable management criteria (SMC) for the chronic lowering of groundwater levels and reduction of groundwater storage sustainability indicators. Executive Director Bondy began the presentation with a SMC development status and schedule update. He then provided an overview of groundwater dependent ecosystems (GDEs) as they pertain to SMC for the GSP. Rincon then described the results of their work to identify and characterize riparian GDEs in the Basin. Two riparian GDE units were identified for consideration in SMC development. Rincon concluded that historical satellite and aerial photo data suggest that the riparian GDEs have not had permanent or prolonged impacts historically. To the extent pumping and hydrologic conditions are similar going forward, they do not expect there to be significant effects to the riparian GDEs caused by groundwater pumping. Executive Director Bondy presented modeling results and analysis of Ventura River flows and the frequency that the Basin fills completely. He suggested that the measurable objectives for the sustainability indicators should be a full basin condition in years when Ventura River flows are greater than 50% of average. He explained that riparian GDEs are the controlling factor on the minimum threshold. Based on the Rincon analysis, Executive Director Bondy suggested using historical low groundwater levels for the minimum thresholds. He reviewed graphs showing the proposed measurable objectives and minimum thresholds. He explained that there are eight groundwater level monitoring sites in the Basin with sufficient historical data to establish the SMC. He explained several options for determining when undesirable results would be considered to occur including, all eight wells, seven of the eight wells outside of the Mira Monte area, or the Foster Park well plus four out of the seven remaining wells. He recommended that the GSP include provisions for additional monitoring and modeling, a domestic well survey, and to revisit the SMC in the first 5-year GSP update. The presentation slides are posted on the UVRGA website: https://uvrgroundwater.org/wp-content/uploads/2021/04/04-08-21-Item-10b-SMC-Presentation_LOW_RES.pdf

Item 6a

Executive Director Bondy and Rincon Consultants staff answered miscellaneous questions during and following the presentation:

Director Rungren asked when the next workshop will be held. Executive Director Bondy said it is scheduled for Thursday, April 29th at 6:30 p.m.

Director Kuebler asked if there is any literature that provides information about effects on the GDEs with a lower water table or if the water table stays low longer than observed historically. How much deeper or longer before the GDEs die off? Kiernan Brtalik replied that Rincon staff reviewed available literature for the Ventura River as part of their analysis. The recommendations are based on the available information. Executive Director Bondy said that the GDEs were affected during the drought, but recovered, suggesting that lower levels or prolonged low levels could lead to potentially significant effects. He said the proposed minimum thresholds are designed to prevent potentially significant effects.

Director Kuebler asked if there is a specific NDVI value that indicates impacts. Steve Howard replied that the NDVI values are a relative indicator and that the value can be impacted by a variety of factors, including species composition changes, season, etc. He said the NDVI data are good for detecting trends, such as the rebound following droughts or flood scour events.

Director Rose asked if the NDVI data are sensitive enough to differentiate plants. Kiernan Brtalik replied that the data cannot be used to differentiate species and that they relied on aerial photos and field data to understand species.

Chair Engle asked about the NDVI resolution. Executive Director Bondy said he processed the data and provided it to Rincon. The data were obtained from The Nature Conservancy's (TNC) website. The raw satellite data are collected on an approximate 30-meter grid, however, TNC aggregates the data into an average value for each of the potential GDE polygons in the Natural Communities Commonly Associated with Groundwater (NCCAG) geographic information systems layer that is shown in the presentation. Each of the GDE units include multiple NCCAG polygons.

Chair Engle asked if the screening exercise to identify the GDE units used single examples of wet, dry, and average years. Kiernan Brtalik explained that they looked at six conditions consisting of the high and low water tables simulated by the GSP numerical model for the years 2005 (wet), 2010 (average), and 2015 (dry).

Public comments:

Burt Rapp, Ventura River Water District, said Coast Live Oaks are an upland species and are probably not a groundwater dependent ecosystem. He said if they are groundwater dependent then they should probably be co-existing with sycamores and other riparian species.

Item 6a

Steve Slack, California Department of Fish and Wildlife, thanked Rincon for its efforts on evaluating the GDEs. He said he wants more information about why only two GDE units were identified. Executive Director Bondy said that a memorandum will be posted on the Agency website soon.

Burt Handy said the second and third options for defining undesirable results should be presented at the next workshop.

Board Discussion:

Directors Rose, Engle and Shephard liked the second option for defining undesirable results. Director Kuebler liked the third option. Director Rungren did not express a preference.

The Board direction to staff was to proceed with presenting the information at the upcoming GSP workshop using the second option for undesirable results.

11. COMMITTEE REPORTS

a. Ad Hoc Stakeholder Engagement Committee

Director Rose said the committee has no report.

12. FUTURE AGENDA ITEMS

Executive Director Bondy said the Board should expect a special meeting on April 22, 2021.

13. ADJOURNMENT – The meeting was adjourned at 3:37 p.m.

Action: _____

Motion: _____ Second: _____

B.Kuebler____ D.Engle____ R. Hajas ____ S.Rungren____ G.Shephard____ E.Ayala____ L.Rose____

**DRAFT UPPER VENTURA RIVER GROUNDWATER AGENCY
MINUTES OF SPECIAL MEETING APRIL 22, 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, Glenn Shephard, Richard Hajas, and Chair Diana Engle. 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/j/91289916195?pwd=bU1rZGh0M05jWVY5YmZRNU1kWEpmQT09>

JOIN BY COMPUTER, TABLET OR SMARTPHONE:

<https://zoom.us/j/91289916195?pwd=bU1rZGh0M05jWVY5YmZRNU1kWEpmQT09>

Meeting ID: 912 8991 6195

Passcode: 899258

1) CALL TO ORDER

Chair Engle called the meeting to order at 1:01p.m.

2) PLEDGE OF ALLEGIANCE

Bryan Bondy led the Pledge of Allegiance.

3) ROLL CALL

Executive Director Bondy called roll.

Directors present: Bruce Kuebler, Larry Rose, Susan Rungren, Richard Hajas, Emily Ayala, Glenn Shephard, and Chair Diana Engle.

Directors absent: None

4) APPROVAL OF AGENDA

Chair Engle asked if there are any proposed changes to the agenda. No changes were proposed.

Director Kuebler moved agenda approval. Director Rungren seconded the motion.

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

Absent: None.

Noes: None.

5) 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.

6) ADMINISTRATIVE ITEMS

None

7) GSP ITEMS

a. Depletion of Interconnected Surface Water Sustainable Management Criteria (Grant Category (d); Task 11: GSP Development and Preparation)

Executive Director Bondy and Rincon Consultants staff members Steve Howard and Kiernan Brtalik provided a presentation concerning sustainable management criteria (SMC) for the depletions of interconnected surface water (ISW) sustainability indicator. Executive Director Bondy began the presentation with a SMC development and schedule update. He then provided an overview of ISW in Basin and groundwater dependent ecosystems (GDEs) as they pertain to SMC for the GSP. Rincon described the results of their work to identify and characterize aquatic GDEs in the Basin. Five aquatic GDE areas were identified for consideration in ISW SMC development, including two critical riffles and three habitat areas. Executive Director Bondy presented estimates of ISW depletion calculated from the GSP numerical model. Rincon described potential effects of ISW depletion on the five aquatic GDE areas. Two of the three areas have potential effects that are recommended for further consideration including the “Confluence Habitat Area” and the “Foster Park Habitat Area.” The remaining three aquatic GDE areas have very small amounts of predicted depletion and were screened out. Executive Director Bondy presented proposed approaches for developing the ISW depletion SMC. A study is recommended for the “Confluence Habitat Area” because data are not available to determine what the depletion effects are and whether those effects are significant and unreasonable. If the study suggests that significant and unreasonable effects are caused by ISW depletion, the GSP would be updated to include SMC for the “Confluence Area” as part of the first or second 5-year GSP update. SMC for the “Foster Park Habitat Area” would be developed based on the City of Ventura’s 2013 study that indicated significant habitat degradation occurs when Ventura River flows decline below 2 cubic feet per second (cfs) at the USGS gage. The presentation slides are posted on the UVRGA website: https://uvrgroundwater.org/wp-content/uploads/2021/04/04-22-21-Item7a-SMC-Presentation_low_res.pdf

Item 6b

Executive Director Bondy and Rincon Consultants staff answered miscellaneous questions during and following the presentation:

Director Kuebler asked about aquifer connectivity during dry periods. Executive Director Bondy explained that, when the water table is very low, the aquifer has limited hydraulic connectivity with the Casitas Springs area. Pumping in upstream areas would not have much effect on downstream areas during these periods, but upstream pumping that occurred prior to the low water table condition removed water from storage that would have otherwise become surface water flow in Casitas Springs. Executive Director Bondy said the impact of upstream pumping on downstream areas is delayed.

Director Ayala asked about plant GDEs. Rincon staff explained that riparian GDEs were discussed during the prior Board meeting.

Chair Engle asked if the no pumping model simulation has pumping turned off everywhere in the Basin. Executive Director Bondy confirmed that is correct.

Director Kuebler asked what happens when the water table becomes disconnected from the river. How can there be depletion in those times if groundwater and surface water are no longer interconnected. Executive Director Bondy explained that there are times that prior pumping has removed water from groundwater storage that cause the water table to disconnect from the river. Disconnecting the water table from the river is considered depletion.

Kelly Dyer, Casitas MWD, asked what the 50-year modeling period was. Executive Director Bondy explained that the model simulated a 50-year future period using actual hydrologic inputs from the 1970-2019 period.

Kevin DeLano, State Water Resources Control Board, asked how groundwater pumping volumes were determined for the model. Executive Director Bondy provided a brief summary and cited a December 2020 Board meeting staff report for further details.

Director Hajas asked how the San Antonio Creek Watershed was simulated. Executive Director Bondy explained that inflows to the Basin were estimated using the stream gage located at the bottom of the San Antonio drainage, which is located near the Basin boundary. Director Hajas asked how the effects of water use in the San Antonio Creek Watershed were addressed in the model. Executive Director Bondy explained that the model assumes no change because the San Antonio Creek area is not part of a groundwater basin that is managed.

Chair Engle asked if “significant” is primarily a technical term and if “unreasonable” is a policy term. Executive Director Bondy said that both terms are policy. The term “significant” involves judgment because there is no scientific definition of significance for the sustainability indicators. Chair Engle expressed concerns about using those terms in the slides. Executive Director Bondy said the Board will ultimately adopt definitions of significance and unreasonableness when it adopts the GSP. He said the presentations are proposals, not conclusions. He said that a disclaimer could be added to future slides to address Chair Engle’s concern.

Item 6b

Chair Engle asked what the next steps look like. Executive Director Bondy explained that staff proposes to present the information at the April 29 workshop and then work with the Board to finalize SMC for the draft GSP in May.

Director Kuebler asked why the ISW SMC would be specific to certain areas, but the water quality SMC applied across the entire basin. Executive Director Bondy explained the undesirable results are defined as either occurring throughout the Basin or that are caused by conditions throughout the Basin. The water quality SMC are based on avoiding degradation of water quality throughout the Basin. The IWS SMC would apply in limited areas but are related to pumping throughout the Basin.

Director Kuebler said the approach is reasonable and he would like to proceed with presenting at the workshop.

Director Rungren said she appreciates the work and needs some time to review it. She asked what the next steps are. Executive Director Bondy said the next step is to present at the workshop.

Director Hajas said he has no problem with what was presented.

Director Shephard supported going forward with what was presented recognizing that there is the right to comment with more detail as we proceed and are further informed by stakeholder input.

Director Engle said the Board needs to provide staff direction, and she is unsure if Director Rungren is comfortable. Director Rungren said the information is factual in nature and it should be fine to move forward with workshop, but the City may have comments later.

Executive Director Bondy asked if the Board is comfortable with narrowing the discussion of potential SMCs to the two aquatic GDE habit areas, as recommended. The Board concurred.

Director Kuebler clarified that the workshop will present the Agency's experts' ideas, which are not yet approved by the Board. Board approval should not happen until after receiving stakeholder input from the workshop.

Executive Director Bondy agreed and said that it will be made clear during the workshop that the SMC proposals are from the technical team, not the Board.

No public comments.

Note, Director Ayala departed the meeting at 2:55 p.m.

Item 6b

8) **FUTURE AGENDA ITEMS**

None were identified.

9) **ADJOURNMENT** – The meeting was adjourned at 3:11 p.m.

DRAFT

Action: _____

Motion: _____ Second: _____

B.Kuebler____ D.Engle____ R. Hajas ____ S.Rungren____ G.Shephard____ E.Ayala____ L.Rose____

**DRAFT UPPER VENTURA RIVER GROUNDWATER AGENCY
MINUTES OF SPECIAL MEETING APRIL 29, 2021
(GROUNDWATER SUSTAINABILITY PLAN STAKEHOLDER WORKSHOP NO. 3)**

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, Richard Hajas, Susan Rungren, and Larry Rose. Executive Director and GSP Project Manager Bryan Bondy was also present.

- 1) CALL TO ORDER AND ROLL CALL** – Chair Engle called the meeting to order at 6:31 pm.

Executive Director Bondy called the roll call.

Directors present: Diana Engle, Bruce Kuebler, Larry Rose, Richard Hajas, and Emily Ayala. Larry Rose arrived shortly after roll call.

Directors absent: Glenn Shephard

- 2) PLEDGE OF ALLEGIANCE** – Bryan Bondy 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 Rincon Consultants staff members Steve Howard and Kiernan Brtalik presented an interactive webinar consisting of an overview of sustainable management criteria (SMC) requirements, groundwater dependent ecosystems identification, and proposed SMC for the groundwater levels, groundwater storage, and depletions of interconnected surface water sustainability indicators. Clarifying questions asked by the stakeholders and Directors were answered during the presentation. The full presentation is posted on the Agency website at https://uvrgroundwater.org/wp-content/uploads/2021/04/20210302-UVRGA-Workshop-No-3_low_res.pdf.

Information item only. The Board took no action.

- 5) ADJOURNMENT** – The meeting was adjourned at 8:35 pm.

Action: _____

Motion: _____ Second: _____

B.Kuebler____ D.Engle____ R. Hajas____ S.Rungren____ G.Shephard____ E.Ayala____ L.Rose____

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

DATE: May 6, 2021
TO: Board of Directors
FROM: Carrie Troup C.P.A., Treasurer
SUBJECT: Approve Financial Report for April 2021

March 2021 UVRGA Balance \$ 281,918.51

April 2021 Activity:

Revenues:

CA Dept. of Water Resources DWR	\$ 77,410.36
Groundwater Extraction Fees	<u>\$ 910.34</u>

April Expenditures Paid:

\$ -

Checks Pending Signature:

2218 Rincon Consultants, Inc.	April services	\$ 28,098.75
2219 Bondy Groundwater Consulting, Inc.	April services	\$ 20,036.25
2220 Olivarez, Madrugá, Lemieux, O'Neill, LLP	March services	\$ 1,935.00
2221 Carrie Troup, C.P.A.	April services	\$ 1,422.10
2222 Intera Incorporated	April services	<u>\$ 30,724.50</u>

Total Expenditures Paid & To Be Paid \$ 82,216.60

April 2021 UVRGA Ending Balance: \$ **278,022.61**

Action: _____

Motion: _____ Second: _____

B. Kuebler___ G. Shephard___ D. Engle___ R. Hajas___ 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: May 13, 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 April 1, three entities have not paid, totaling \$2,303.56.*
 - 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. Secretary Hajas was added to the Bank of Sierra account.
 - c. GSP Grant:
 - i. 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 was received April 14, 2021.*
 - ii. *Grant Progress Report and Invoice No. 8 were submitted to DWR on April 12, 2021 and were approved on April 30, 2021. Payment in the amount of \$69,427.44 is expected before June 30, 2021.*
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 changed ownership in early 2021. Staff sent a request for

continued access to the new property owner on February 24, 2021. *The request is still pending.*

- c. Camino Cielo Crossing Surface Water Flow Gauge: *Due to the lack of rainfall, gauge activation was deferred until Spring 2022.*
- d. DWR Surface Water Flow Gauge: *DWR was scheduled to install the gauge in April.*
5. Wildlife Conservation Board (WCB) Grant: *Staff recently learned that UVRGA's grant proposal was not awarded. This round of grant of funding was considerably more competitive than past rounds. WCB received 70 proposals totaling \$102M in requested funds. Only \$40M in funds were available for award. The funds were granted to less than half of the applicants. UVRGA's application was in the planning category for which \$28M was requested by 34 applications. Only 15 planning grants were awarded totaling \$9M, which is less than 1/3 of the total funds requested by the planning grant applicants. Although the UVRGA's grant application was not funded, the work that went into the application remains of great value to the Agency because it identified monitoring site for addressing data gaps in the GSP. The Agency is well positioned for future grant applications.*
6. SWRCB / CDFW Instream Flow Enhancement Coordination: *The Executive Director and several Board Members attended the SWRCB's May 5 webinar titled "Ventura River Watershed Modeling Webinar 1: GW-SW and Nitrogen Models: Overview and Status, Updates to Geologic Analysis." The webinar provided an overview of the flow enhancement program, modeling objectives, status, schedule, and updated information concerning the geologic framework for the numerical model. There were no significant technical updates. SWRCB indicated that their timeframe for adopting flow objectives is approximately two years from now. This webinar was the first of three. The remaining webinars are scheduled for May 19 and June 9.*
7. Ventura River Watershed Instream Flow & Water Resilience Framework (VRIF): *No reportable activity.*
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___ R. Hajas___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

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

DATE: May 13, 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. The Executive Director reviewed information relevant to sustainable management criteria (SMC) and developed SMC concepts for the groundwater level, groundwater storage, and depletions of interconnected surface water sustainability indicators. The Executive Director prepared presentations for the April 22 Board meeting and GSP Workshop No. 3 and reviewed draft presentations by Rincon Consultants for the same meetings. The Executive Director prepared outlines for the groundwater dependent ecosystems (GDEs) memoranda and reviewed draft memoranda prepared by Rincon Consultants. The Executive Director reviewed model results and provided technical feedback to the modeling team.
 - b. Intra finished the remaining model simulations needed for GSP development, worked on GSP Section 3.3 (water budgets), and worked on model documentation for the GSP.
 - c. Rincon Consultants, Inc. prepared draft technical memoranda concerning riparian GDEs and aquatic GDEs to support sustainable management criteria development. The memoranda will be included in the GSP as appendices.
 - d. The Board and stakeholders received presentations on April 8, 22, and 29 concerning numerical model results, GDE characterization, and proposed sustainable management criteria for the chronic lowering of groundwater levels, groundwater storage, and depletion of interconnected surface water sustainability indicators.
2. **Outreach:** The Executive Director sent numerous e-mail reminders to the interested parties e-mail list concerning GSP Workshop No. 3.

3. **GSP Development Schedule**: The updated GSP Development Schedule is provided in Attachment A. The schedule was updated based on progress to date. The schedule for issuing the draft GSP was extended one month at the expense of one month of contingency. The Executive Director will provide further information concerning the schedule during the Board meeting.
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

Action: _____

Motion: _____ Second: _____

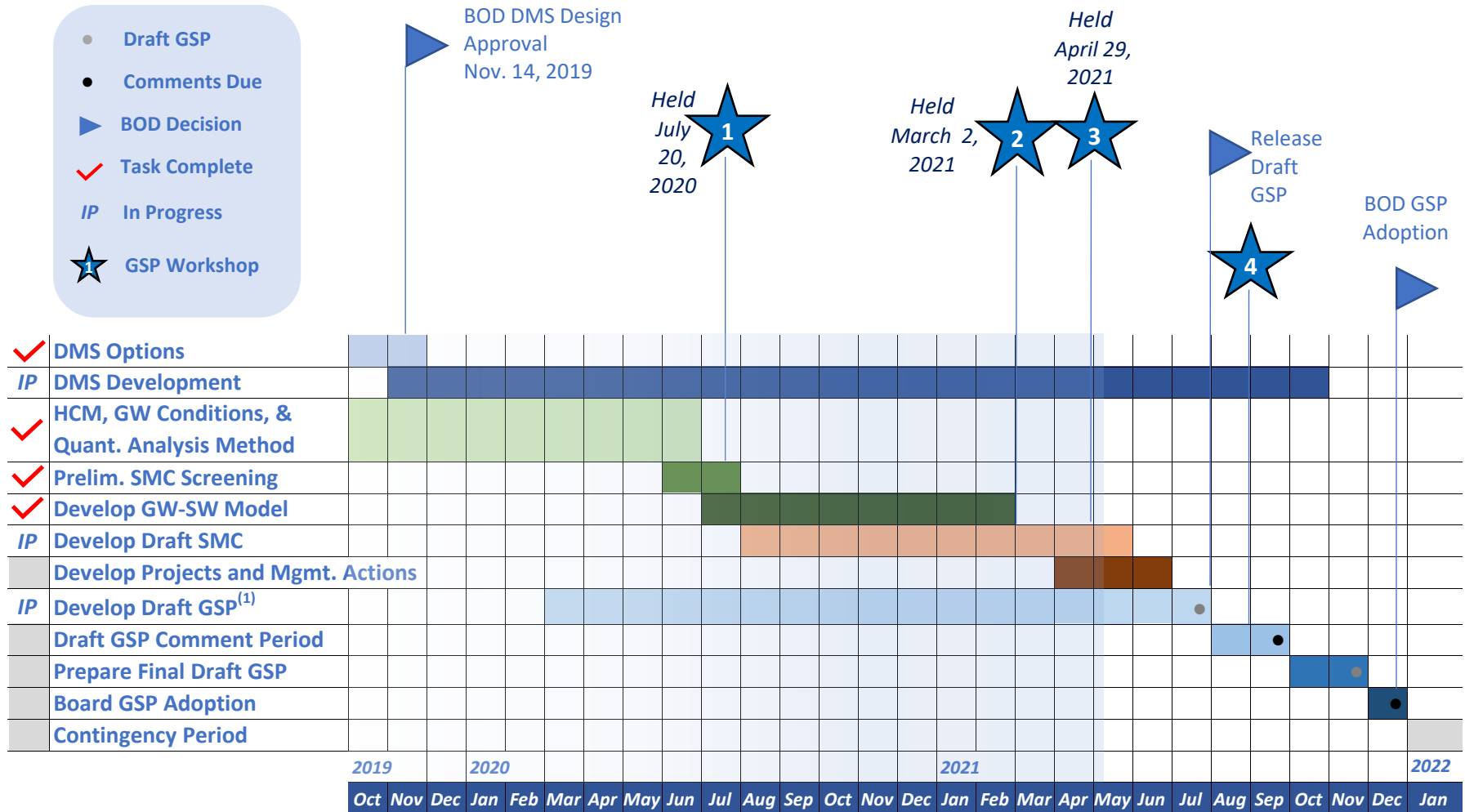
B. Kuebler___ D. Engle___ R. Hajas___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___

Item 10a

Attachment A

GSP Development Schedule

Upper Ventura River Groundwater Agency GSP Development Schedule Updated May 8, 2021



Notes:

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

BOD = Board of Directors; DMS = Data Management System; HCM = Hydrogeologic Conceptual Model; GSA = Groundwater Sustainability Agency;

GSP = Groundwater Sustainability Plan; GW = Groundwater; SW = Surface Water

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

DATE: May 13, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Groundwater Level and Storage Sustainable Management Criteria (Grant Category (d); Task 11: GSP Development and Preparation)

SUMMARY

This staff report presents a proposed approach for addressing sustainable management criteria (SMC) for the chronic lowering of groundwater levels and groundwater storage reduction sustainability indicators for the Upper Ventura River Basin (Basin) groundwater sustainability plan (GSP).

Background

The Sustainable Groundwater Management Act (SGMA) requires that Groundwater Sustainability Agencies (GSAs) manage groundwater levels and storage to avoid significant and unreasonable impacts on beneficial uses resulting from a depletion of supply over the 50-year SGMA planning and implementation horizon¹. Because groundwater levels and storage are highly correlated in the Upper Ventura River Basin, it is proposed that groundwater storage SMC be identical to the chronic lowering of groundwater levels SMC.

Long-term, chronic declines in groundwater levels and storage have not been observed in the Basin. Instead, the Basin cyclically fills and drains over a relatively the short period of time, on the order of a few years. Other entities have attempted to argue that the chronic lowering of groundwater levels and groundwater storage reduction sustainability indicators do not apply in basins where groundwater levels recover after declining. The Department of Water Resources has rejected this argument and clarified that GSAs must demonstrate that undesirable results are avoided during times when groundwater levels and storage decline, even if recovery occurs.

Two factors must be considered when developing SMC for the chronic lowering of groundwater levels and groundwater storage sustainability indicators:

1. Depletion of supply effects on beneficial users
2. Effects on other sustainability indicators

These factors are discussed below.

¹ Water Code Section 10721

Depletion of Supply Effects

When considering depletion of supply effects, it is important to note that the GSA is only responsible for addressing effects caused by pumping or GSP projects/management. As discussed during the water budget presentation to the Board on March 25, 2021, the water balance of the Basin in most years is dominated by surface water percolation into the Basin and rising groundwater to stream flow leaving the Basin (see dark red and dark blue bars on Figure 1). However, groundwater pumping becomes a significant part of the water balance during dry periods (see, for example, the mid-2060s on Figure 1). It is during periods like that when continued lowering of groundwater levels and storage groundwater by pumping could have potential impacts on beneficial users, which include:

- Agricultural irrigation supply
- Municipal water supply
- Domestic water supply
- Riparian Groundwater Dependent Ecosystems (GDEs)²

Effects on Agricultural, Municipal, and Domestic Beneficial Uses

Potential framing of significant and unreasonable depletion of supply for agricultural, municipal, or domestic water supplies could be the inability to produce water supplies absent an alternative water supply. Pumping exacerbates groundwater level declines during droughts (see for example, Figure 2). However, UVRGA is unaware of any reported instances where a beneficial user was unable to meet their basic water supply needs with either groundwater or alternative water supplies. Therefore, it is possible to conclude that significant and unreasonable effects have not occurred historically with respect to the groundwater levels and storage sustainability indicators for agricultural, municipal, or domestic beneficial uses. Due to the limited participation from domestic well stakeholders in the GSP development process, it may be prudent to survey domestic well owners and revisit the proposed SMC during the first 5-year GSP assessment.

Effects on Riparian GDEs

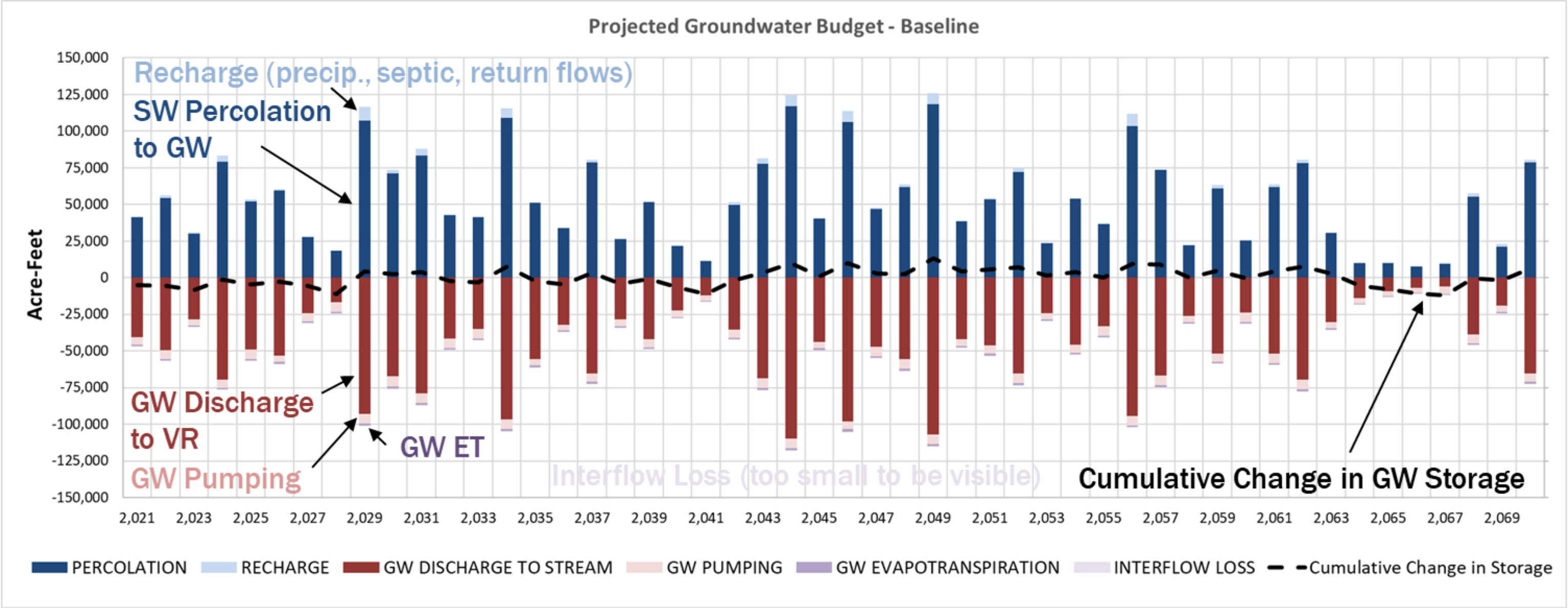
As discussed during the April 8 Board meeting and GSP Workshop No. 3 and as summarized in the Draft Riparian GDE Assessment Memo³, two riparian GDE units were identified in the Basin: (1) South Santa Ana GDE Unit and (2) Foster Park GDE Unit (Figure 3).

The South Santa Ana Riparian GDE Unit consists primarily of riparian mixed hardwood along the river channel and adjacent slopes and areas of wetland habitat within and adjacent to the Ventura River (Figure 3). The unit contains federally designated critical habitat for the southwestern willow flycatcher, California red-legged frog, and southern California DPS steelhead.

² Note: Aquatic species are addressed under the depletions of interconnected surface water sustainability indicator.

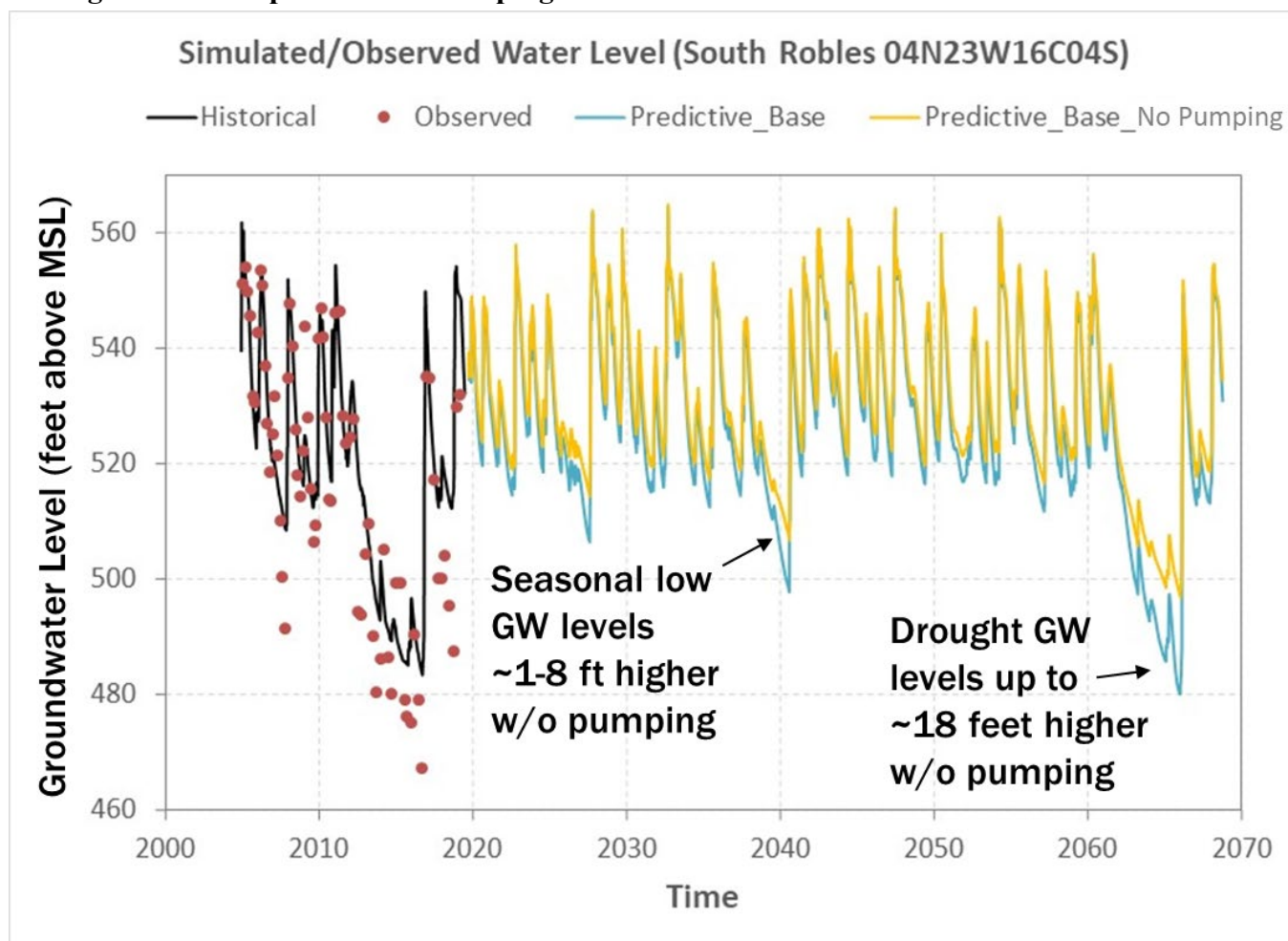
³ https://uvrgroundwater.org/wp-content/uploads/2021/04/Riparian-GDE-Assessment_DRAFT.pdf

Figure 1. Projected Groundwater Budget



Note: Water percolates into and discharges from the basin multiple times along the Ventura River channel during a given year. The surface water (SW) percolation and groundwater discharge to stream values presented in the bar chart are the sum of all instances of percolation and discharge along the Ventura River during a given year. Average annual net percolation and net groundwater discharge to the Ventura River are 18,000 and 6,900 AFY, respectively, for the baseline simulation. Charts showing net river percolation and net groundwater discharge to the Ventura River will be presented in the GSP.

Figure 2. Example Effect of Pumping on Groundwater Levels

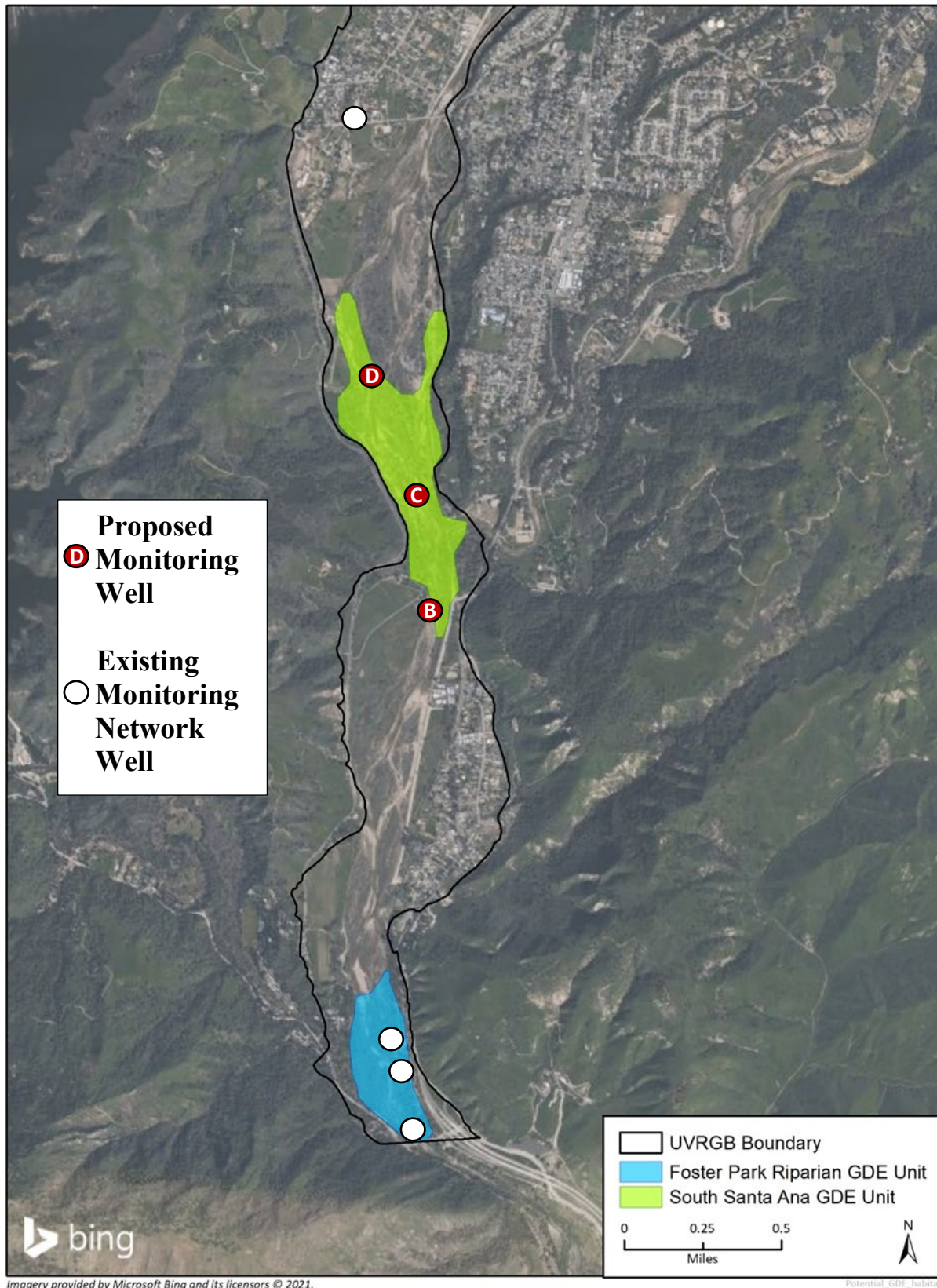


Nine special-status fish and wildlife species are known or have potential to occur within the South Santa Ana Riparian GDE Unit. The Draft Riparian GDE Assessment Memo lists each of these species and communities, as well as their status, potential to occur, and riparian GDE association.

The South Santa Ana GDE Unit was determined to have high ecological value based on the following characteristics:

- Contains federally designated critical habitat for the California red-legged frog, the southwestern willow flycatcher, and southern California DPS steelhead;
- Provides habitat for a relatively large number of special status species;
- Contains mixed riparian hardwood, coast live oak, and wetland vegetation communities, which support many native terrestrial and aquatic wildlife species; and
- Located along a reach of the Ventura River with generally perennial flows discharged from groundwater.

Figure 3. Riparian GDE Units



The Foster Park Riparian GDE Unit consists primarily of riparian mixed hardwood in the east and south and coast live oak in the north and west, with several small wetland areas scattered throughout (Figure 3). The unit contains federally designated critical habitat for the southwestern willow flycatcher and southern California DPS steelhead. Nine special-status terrestrial and aquatic wildlife species are known or have potential to occur within the Foster Park Riparian GDE Unit. There are no special-status plant species with potential to occur within the Foster Park GDE Unit. The Draft Riparian GDE Assessment Memo lists each of these species, as well as their status, potential to occur within the GDE unit, and GDE association were identified and characterized for consideration.

The Foster Park GDE Unit was determined to have high ecological value based on the following characteristics:

- Contains federally designated critical habitat for the southwestern willow flycatcher and southern California DPS steelhead;
- Provides habitat for a relatively large number of special status species;
- Contains mixed riparian hardwood, coast live oak, and wetland vegetation communities, which support many native terrestrial and aquatic wildlife species; and
- Located along a gaining reach of the Ventura River with perennial flows discharged from groundwater.

Potential effects on the riparian GDE units were assessed by reviewing available historical groundwater level data and remote sensing data (i.e., Normalized Difference Vegetation Index (NDVI) and Normalized Difference Moisture Index (NDMI)). Details concerning the analysis are provided in the Draft Riparian GDE Assessment Memo. In summary, it was concluded that riparian plant communities have experienced stress during periods of low groundwater levels historically, such as the drought of the 2010s. However, the available data show that the riparian GDEs rebound following drought periods without a noticeable change in the predominant plant species. It was concluded that if groundwater levels were to remain chronically low for an extended period (beyond that seen in the historic dataset), pumping within the basin could exacerbate the stress on these communities and could potentially cause permanent or prolonged impacts to the GDEs, which may be significant and unreasonable. Monitoring of groundwater levels and vegetative health within the two GDE Units should be performed to validate SMC included in the initial GSP.

Effects on Other Sustainability Indicators

The chronic lowering of groundwater levels and groundwater storage sustainability indicators are related to the other sustainability indicators in the following ways:

- Seawater Intrusion: Not applicable – this indicator was screened out.
- Land Subsidence: Not applicable – this indicator was screened out.

- Degraded Water Quality: It has been observed that concentrations of common ions and nitrate tend to increase when groundwater levels are low. It was concluded that undesirable results for the degraded water quality sustainability indicator could potentially occur if the basin is allowed to be pumped such that groundwater levels are maintained at a consistently low level. Therefore, SMC for the chronic lowering of groundwater levels and groundwater storage sustainability indicators will not impact the degraded water quality sustainability indicator if the SMC promote maintenance of groundwater levels within the historically observed range.
- Depletions of Interconnected Surface Water: The depletions of interconnected surface water sustainability indicator SMC have not been finalized by the Board and are the subject of Item 10(c) of this Board meeting. Direct depletion⁴ can occur regardless of groundwater level or storage conditions and, therefore, is not closely related to the groundwater levels and storage sustainability indicators. Indirect depletion⁵ is related to groundwater levels and storage because indirect depletion occurs when pumping removes of groundwater from storage that would otherwise become streamflow downstream at a subsequent point in time. As discussed in the Item 10(c) staff report, groundwater level and stream flow data gaps between Foster Park and Highway 150 need to be addressed to better estimate indirect depletion and the relationship with groundwater levels and storage. Additionally, there is a data gap concerning effects on aquatic GDEs in the Confluence Habitat Area, making it impossible to fully assess the relationship between the sustainability indicators at this time. For now, it is acknowledged that the chronic lowering of groundwater levels and groundwater storage sustainability indicators are related to the depletions of interconnected surface water sustainability indicator, but data gaps need to be address so that UVRGA can quantitatively evaluate how SMCs for groundwater levels and storage may impact attainment of the measurable objective for depletions of interconnected surface water. This will have to be revisited during a future GSP update once data gaps have been addressed and the numerical model calibration can be updated.

Proposed SMC for the Groundwater Levels and Storage Sustainability Indicators

Based on review of the effects on beneficial users and other sustainability indicators, the following SMC for the chronic lowering of groundwater levels and reduction of groundwater storage sustainability indicators are recommended.

Measurable Objectives

The proposed measurable objectives are the typical spring high groundwater levels based on historical measured data. The proposed measurable objectives represent a full basin condition that is generally expected to occur when Ventura River annual flows are greater than 50% of the mean annual flow (Figure 4). Ensuring the Basin continues to refill as it has in the past will provide a reasonable margin of flexibility above the minimum threshold.

⁴ Caused by wells located very close to the river that capture flow directly from the river.

⁵ Caused by wells not located close to the river that capture groundwater that would have otherwise become streamflow at a downstream location at a later time.

Minimum Thresholds

The proposed minimum thresholds are the historical low groundwater levels, which will be selected based on historical measured data. Based on the analysis described earlier in the staff report, setting the minimum thresholds at historical low groundwater levels will protect against potential significant and unreasonable effects on beneficial users, including riparian GDEs, that could occur if pumping is allowed to reduce groundwater levels below historical low levels.

Figure 5 shows an example of the proposed measurable objectives and minimum thresholds. The figure shows measured groundwater levels (blue dots) and model-predicted groundwater levels (various colored lines representing model calibration to historical data (black line) and future projections with various climate change conditions (red, green, and purple lines) at a monitoring well near Highway 150 and the Ventura River. The figure shows the proposed measurable objective (black dashed line) and minimum threshold (red dashed line) that would be applied to this monitoring well. Additional examples were included in the presentations provided during the April 8 Board meeting and GSP Workshop #3. A full set of charts for all applicable wells will be included in the draft GSP. Today's goal is to find out if there is agreement on the concepts; fine-tuning of the measurable objectives and minimum thresholds can be handled as part of the draft GSP review and finalization process.

Undesirable Results:

The GSP Emergency Regulations require a quantitative formulation of undesirable results for each applicable sustainability indicator consisting of “*the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.*”

Fifteen wells are currently monitored in the Basin (Figure 6). Some of the wells are closely spaced and some do not have sufficient historical data for selection of measurable objectives and/or minimum thresholds. Eight wells have sufficient data for this purpose and will have measurable objectives and minimum thresholds established in the GSP (wells with red circles on Figure 6). The Board previously discussed defining undesirable results as minimum threshold exceedances in the seven wells located along the river. The eighth well that is not used for defining undesirable results (04N23W15A02) is located two miles east of the Ventura River. This well and other nearby wells are believed to be screened in bedrock of the Ojai Conglomerate formation and are, therefore, not representative of the principal aquifer in the Basin.

Figure 4. Comparison of Groundwater Levels and Ventura River Flow

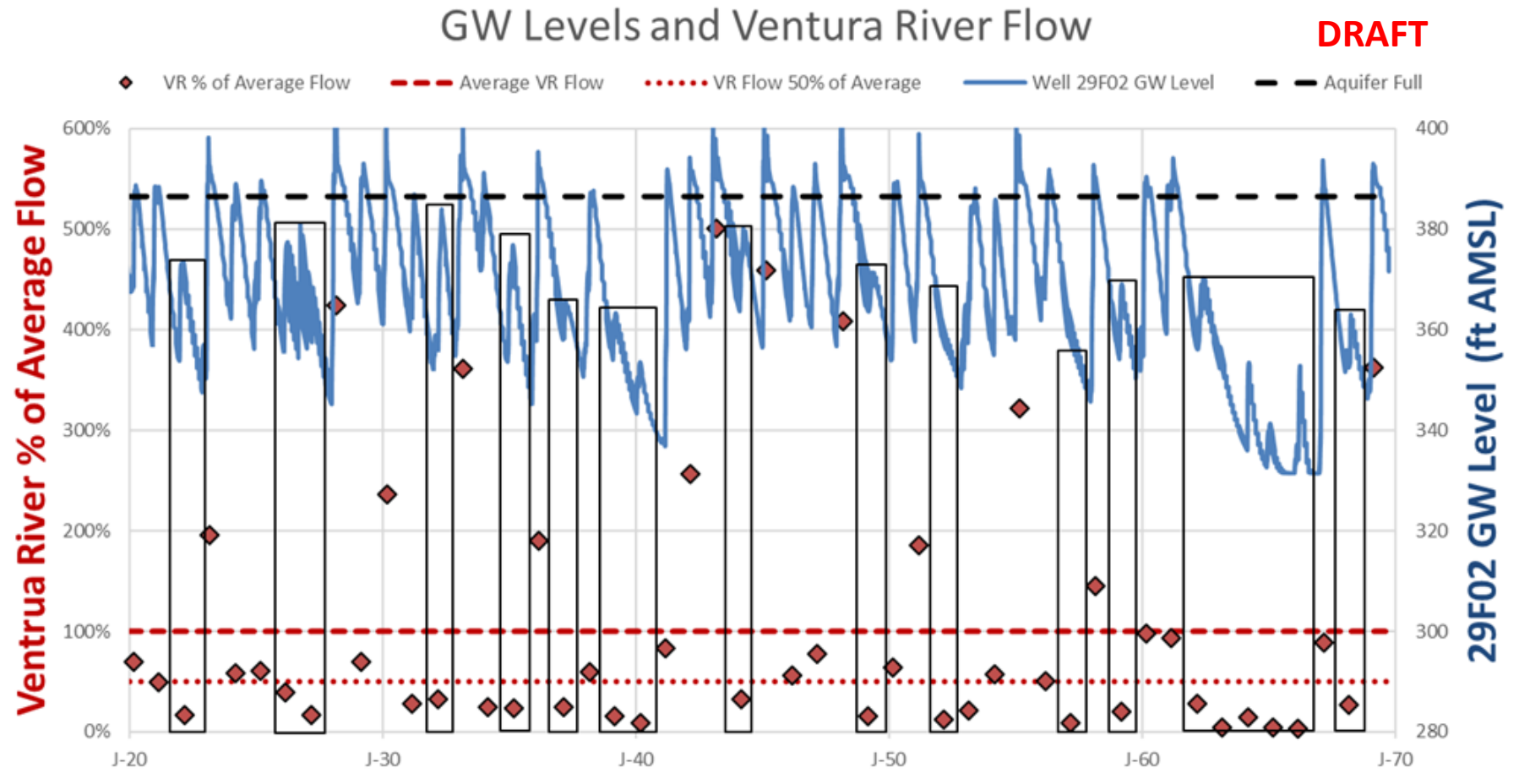


Figure 5. Example Measurable Objective and Minimum

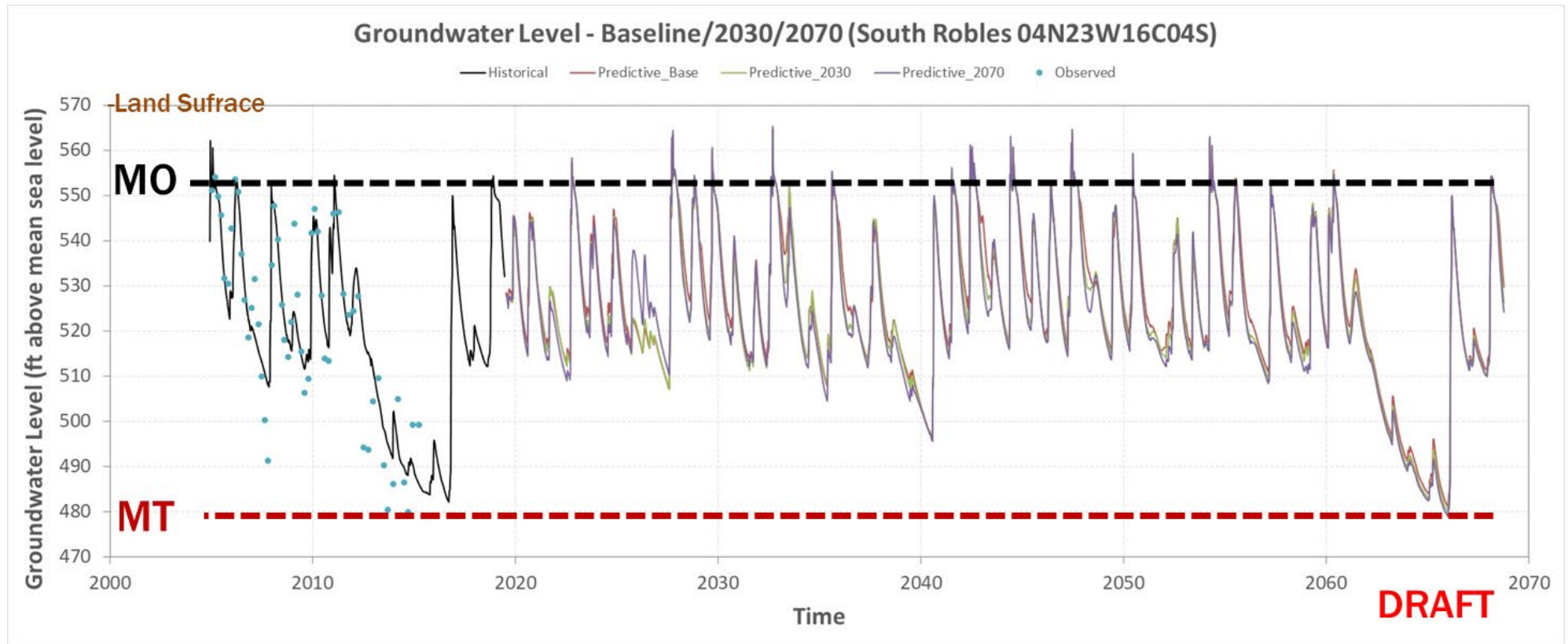
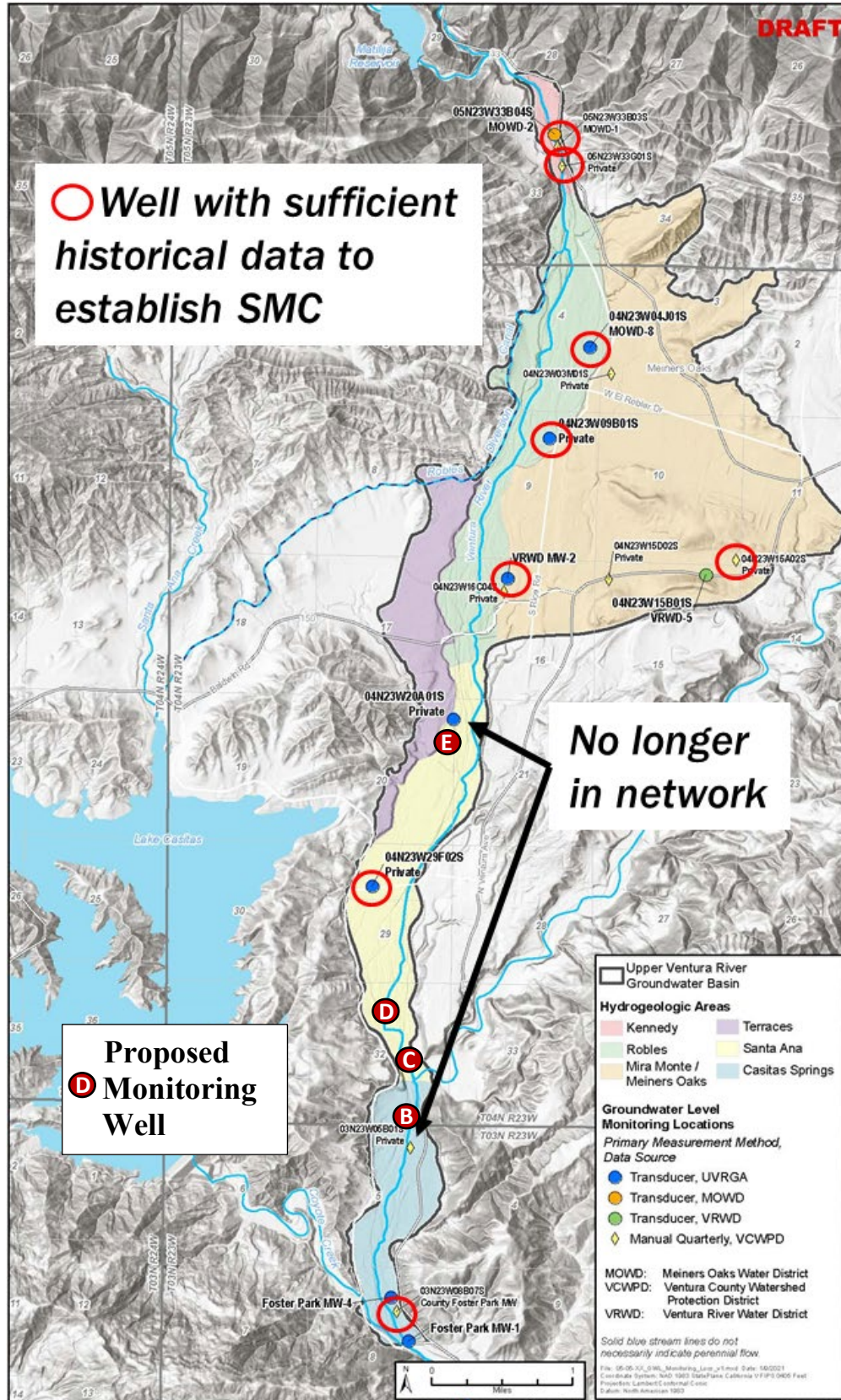


Figure 6. Groundwater Level Monitoring Network



Consistency with Sustainability Goal

Staff has attempted to develop the proposed SMC in accordance with the applicable elements of the adopted Sustainability Goal.

Implementation - Addressing Projects, Management Actions, and Data Gaps

Modeling projections for the GSP suggest that the proposed minimum thresholds may be occasionally exceeded at some monitoring locations. However, the criterion for undesirable results is not predicted to be triggered during the 50-year GSP implementation period. Therefore, no projects or management actions are proposed at this time for the groundwater levels and storage sustainability indicators.

The proposed SMC are a starting point for addressing potential significant and unreasonable effects associated with groundwater levels and storage. GSP Emergency Regulations require GSAs to assess their GSPs at least once every 5-years, including reviewing the effectiveness of SMC. As discussed earlier, several issues will require further evaluation before the first 5-year GSP assessment:

1. Domestic well owners should be surveyed to better assess potential significant and unreasonable effects on domestic beneficial uses, particularly in any cases where a domestic user does not have an alternative water supply, if any.
2. Determine whether or how the groundwater levels and storage SMC impact attainment of the measurable objective for the depletions of interconnected surface water sustainability indicator. This will require addressing data gaps in the groundwater level monitoring network. No additional monitoring sites are required for the Foster Park Riparian GDE Unit. A minimum of four groundwater level monitoring sites are recommended to address data gaps for the South Santa Ana Riparian GDE Unit (see sites B, C, D, and E on Figures 3 and 6). The proposed monitoring sites also address data gaps for the depletions of interconnected surface water sustainability indicator, as described in the staff report for Item 10(c). The rationale for the proposed monitoring sites is:
 - Sites B and C would be located within the South Santa Ana Riparian GDE Unit straddling the San Antonio Creek confluence. These wells will be used to monitor groundwater levels upstream and downstream of where San Antonio enters the Ventura River.
 - Site D would be located near the north edge of the South Santa Ana Riparian GDE Unit to monitor groundwater levels and flow entering the GDE unit.
 - Site E would be located upstream of the South Santa Ana Riparian GDE Unit to monitor groundwater levels and flow feeding the GDE unit.
3. Monitoring of groundwater levels and vegetative health within the two riparian GDE Units should be performed to validate the SMC.

RECOMMENDED ACTIONS

Consider approving sustainable management criteria for the chronic lowering of groundwater levels and groundwater storage sustainability indicators for inclusion in the draft GSP.

BACKGROUND

Foundational information related to this staff report and recommendations was provided during prior Board meetings, GSP Workshops, and draft memos posted to the UVRGA website:

- Groundwater Levels and Storage:
 - March 25, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/03/03-25-21-Item-7a-Presentation_Final.pdf
 - April 8, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/04/04-08-21-Item-10b-SMC-Presentation_LOW_RES.pdf
 - GSP Workshop No. 3: https://uvrgroundwater.org/wp-content/uploads/2021/04/20210302-UVRGA-Workshop-No-3_low_res.pdf
- Numerical Model:
 - February 11, 2021 Board Meeting: <https://uvrgroundwater.org/wp-content/uploads/2021/02/02-11-21-Item-10d-Presentations.pdf>
 - GSP Workshop No. 2: https://uvrgroundwater.org/wp-content/uploads/2021/03/20210302-UVRGA-Workshop-No-2_Final.pdf
 - March 25, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/03/03-25-21-Item-7a-Presentation_Final.pdf
- GDE Assessments:
 - April 8, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/04/04-08-21-Item-10b-SMC-Presentation_LOW_RES.pdf
 - April 22, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/04/04-22-21-Item7a-SMC-Presentation_low_res.pdf
 - GSP Workshop No. 3: https://uvrgroundwater.org/wp-content/uploads/2021/04/20210302-UVRGA-Workshop-No-3_low_res.pdf
 - Draft Riparian GDE Assessment Memo: https://uvrgroundwater.org/wp-content/uploads/2021/04/Riparian-GDE-Assessment_DRAFT.pdf
 - Draft Aquatic GDE Assessment Memo: https://uvrgroundwater.org/wp-content/uploads/2021/04/Aquatic-GDE-Assessment_Draft.pdf

FISCAL SUMMARY

Cost estimates for the recommendations included in this staff report will be presented as part of the GSP implementation budget during a future Board meeting.

ATTACHMENTS

None.

Action: _____

Motion: _____ Second: _____

B. Kuebler___ D. Engle___ R. Hajas___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose

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

DATE: May 13, 2021

TO: Board of Directors

FROM: Executive Director

SUBJECT: Depletion of Interconnected Surface Water Sustainable Management Criteria (Grant Category (d); Task 11: GSP Development and Preparation)

SUMMARY

This staff report presents a proposed approach for addressing sustainable management criteria (SMC) for the depletions of interconnected surface water (ISW) sustainability indicator for the Upper Ventura River Basin (Basin) groundwater sustainability plan (GSP).

Background

The Sustainable Groundwater Management Act (SGMA) requires that Groundwater Sustainability Agencies (GSAs) address significant and unreasonable impacts on beneficial uses resulting from ISW depletion caused by groundwater use. It is very important to note that the GSA is only responsible for addressing depletion of ISW. The GSA is not responsible for the total amount of surface water flowing at any given time. In contrast, other water management programs, such as the State Water Resources Control Board (SWRCB) Instream Flow Enhancement Program, may address other factors that affect total stream flow.

As discussed during the April 22 Special Board meeting and GSP Workshop No. 3., the GSP Development Team has reviewed and categorized beneficial uses of surface water within and downstream of the Basin as follows:

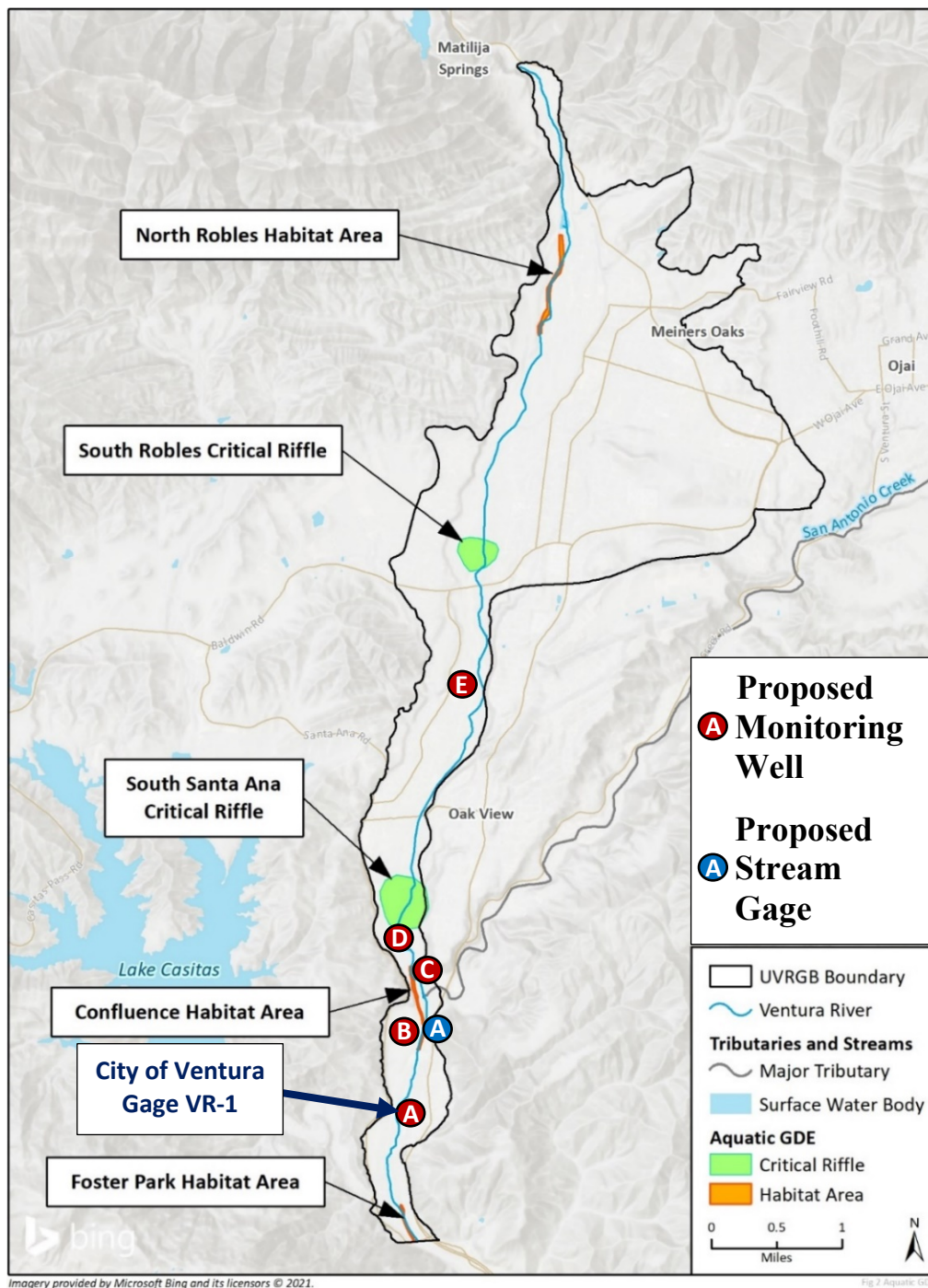
- Diversions (Casitas MWD's Robles Diversion and one private agricultural diversion)
- Aquatic Groundwater Dependent Ecosystems (GDEs) (Figure 1)
- Recreation

ISW depletion was estimated using the UVRGA numerical model to evaluate potential effects on surface water beneficial uses. The 50-year future baseline model was run with and without pumping. The difference between the simulated stream flow from the two simulations is considered ISW depletion caused by groundwater pumping. The baseline simulation was performed a third time with no City of Ventura pumping. This simulation was necessary to separate direct ISW depletion¹ by the City of Ventura's Foster Park facilities from indirect ISW depletion² caused by wells located upstream of the Foster Park Habitat Area.

¹ Caused by wells located very close to the river that capture flow directly from the river.

² Caused by wells not located close to the river that capture groundwater that would have otherwise become streamflow at a downstream location at a later time.

Figure 1. Aquatic GDE Areas



As discussed during prior meetings, it was proposed that diversions be eliminated from further consideration in SMC development due to the small estimated depletion rates (Figure 2). Three of the five Aquatic GDE areas (Figure 1) were also proposed to be eliminated for similar reasons (Table 1). The eliminated GDEs areas include the North Robles Habitat Area, South Robles Critical Riffle, and the South Santa Ana Critical Riffle.

Figure 2. Simulated Ventura River Flows and Depletion Near Diversion Locations

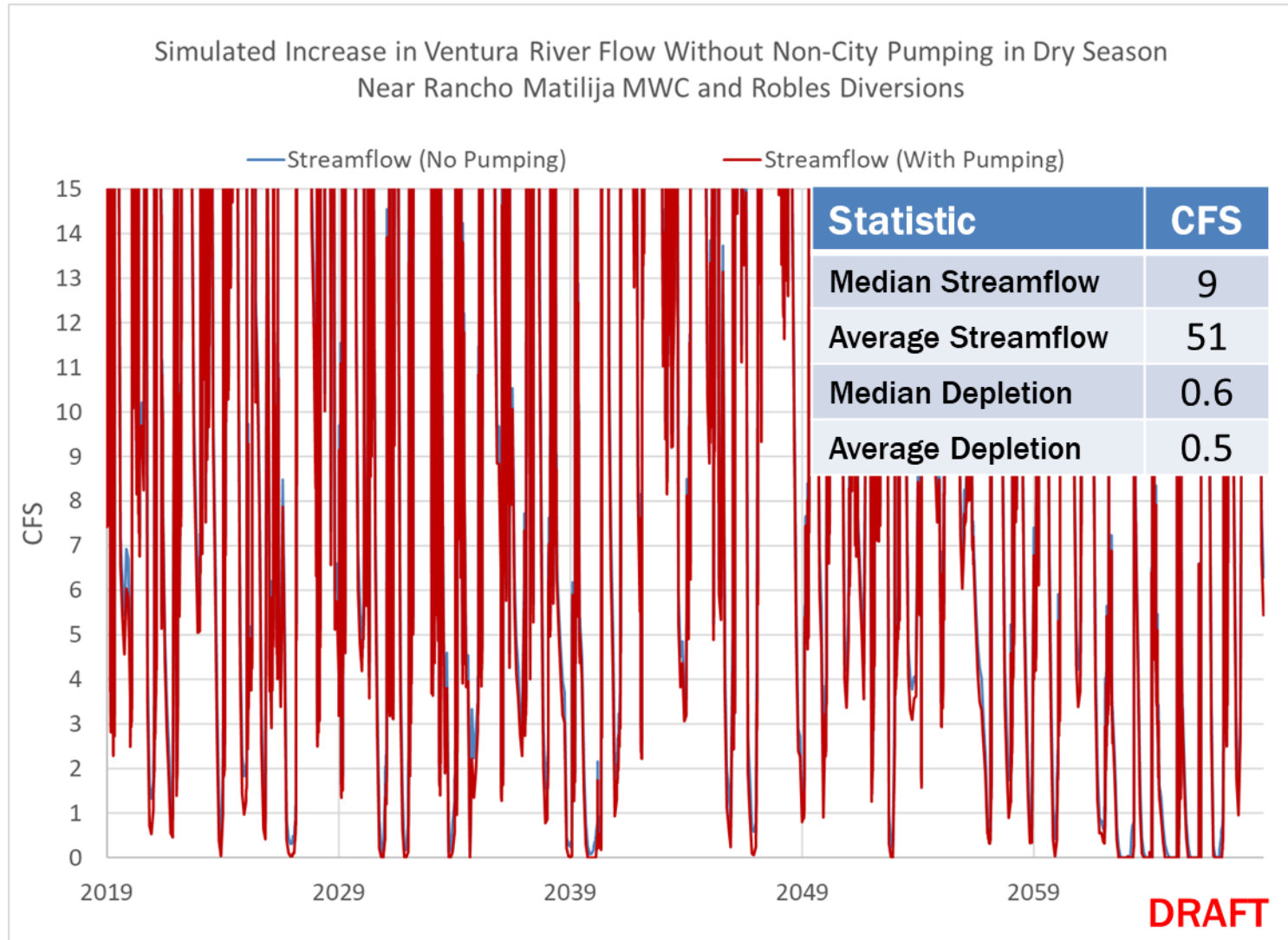


Table 1. Stream flow Depletion Summary Tables for Aquatic GDE Areas (CR = Critical Riffle; HA = Habitat Area)

<i>Robles CR</i>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median Flow	4.4	26	22	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	0.6
Median Depletion	<0.1	0.2	0.4	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	<0.1
<i>Santa Ana CR</i>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median Flow	2.3	12	14	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	0.1
Median Depletion	<0.1	<0.1	1.2	DRY	DRY	DRY	DRY	DRY	DRY	DRY	DRY	<0.1
<i>Robles HA</i>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median Flow	14	32	32	12	6.3	0.9	DRY	DRY	DRY	DRY	0.5	5.2
Median Depletion	0.3	0.4	0.4	0.5	0.5	0.5	DRY	DRY	DRY	DRY	0.1	0.2
<i>Confluence HA</i>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median Flow	16	44	50	22	17	13	8.8	5.4	2.1	1.0	2.0	7.5
Median Depletion	2.2	2.0	1.9	1.3	0.9	0.8	0.9	1.2	1.4	1.1	1.5	1.8
<i>Foster Park HA</i>	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Median Flow	23	51	61	28	23	19	16	14	13	13	13	15
Median Depletion	4.0	7.0	7.4	7.3	7.4	7.5	7.3	7.5	7.5	7.1	6.6	5.1

All values are cubic feet per second (cfs)

DRAFT

Staff proposed that recreation beneficiaries would be addressed in the SMC if the Aquatic GDEs are addressed. The rationale for this assumption is recognition that the presence of habitat is a primary reason for the recreational use of trails, preserves, etc. in the Basin.

The remaining beneficial uses for consideration are the Aquatic GDE areas near the San Antonio Creek confluence (“Confluence Habitat Area”) and the Foster Park Habitat Area (Figure 1). SMC considerations for these areas are described in the following sections.

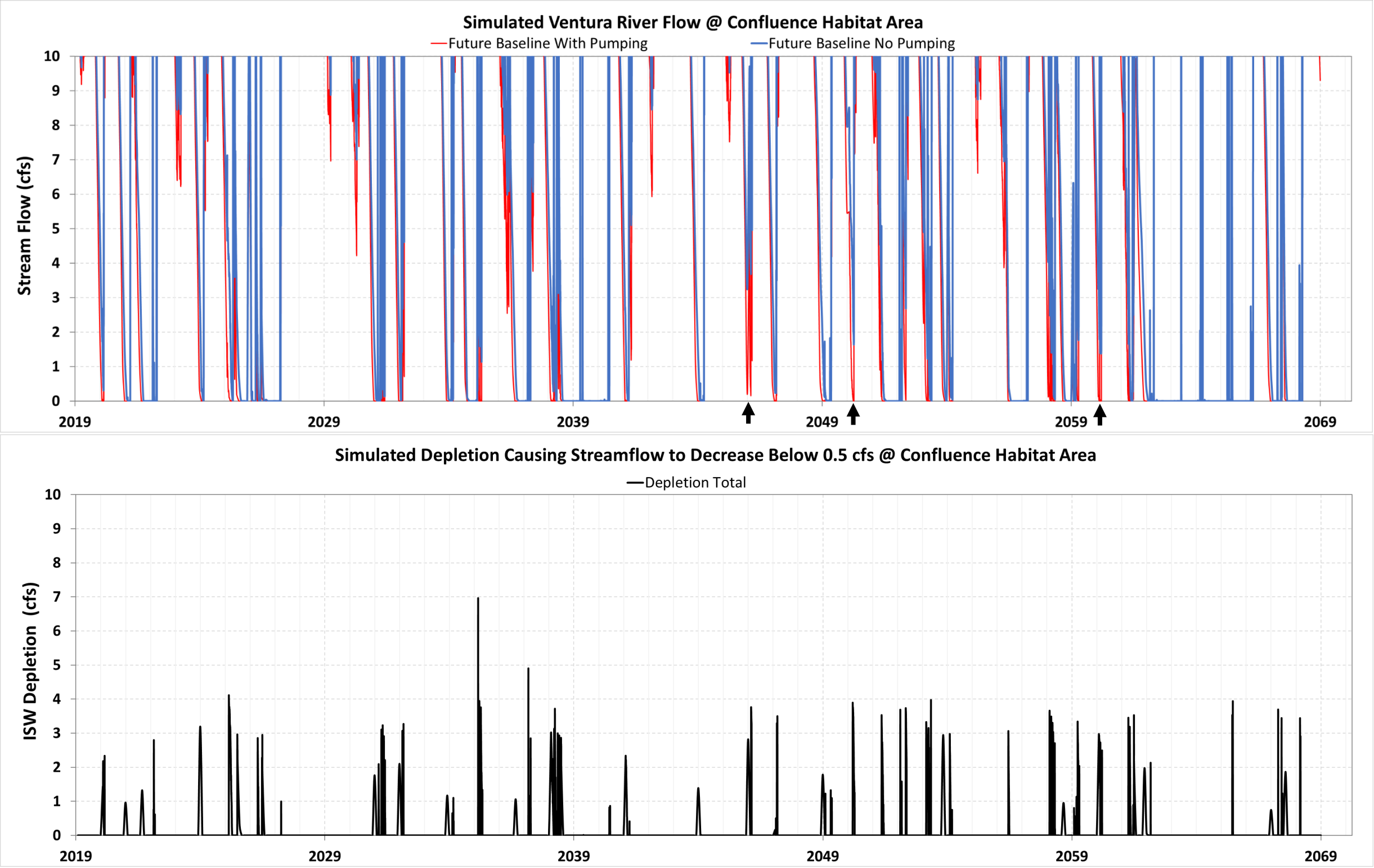
Confluence Habitat Area

The Confluence Habitat Area occurs in the southern portion of the Basin near the confluence of the Ventura River with San Antonio Creek (Figure 1). This habitat area is characterized by cool upwelling groundwater and inflow from San Antonio Creek. The Confluence Habitat Area also includes federally designated critical habitat for steelhead and California red-legged frog. The Confluence Habitat Area also provides important habitat for two striped gartersnake, southwestern pond turtle, and Pacific lamprey. San Antonio Creek provides important spawning and rearing habitat for steelhead and fish must pass through the confluence area to reach this tributary of the Ventura River. One notable pool within the confluence area contains water even during periods of drought when many other portions of the river go dry.

ISW depletion estimates for the Confluence Habitat Area are summarized in Table 1. As shown in Table 1 and discussed during the April 22 Special Board meeting and GSP Workshop No. 3., estimated depletions are potentially significant during summer and fall of some years.

Figure 3 was prepared to show ISW depletion in the Confluence Habitat Area over the entire 50-year simulation period. The top chart in Figure 3 shows undepleted flows (blue) and depleted flows (red). The difference between the blue and red lines at any point in time is depletion. The bottom chart shows the ISW depletion events that cause stream flow to be depleted below 0.5 cubic feet per second (cfs). The value of 0.5 cfs was selected for presentation purposes only (it is not currently known what stream flow rate, if any, could cause potential significant and unreasonable effects in the Confluence Habitat Area). As can be seen in the bottom chart, depletions causing stream flow to drop below 0.5 cfs range from approximately 0.5 to 4 cfs and occur in many years. Simulated undepleted stream flow declines below 0.5 cfs approximately 29.6% of the time during the 50-year simulation period. Depletion causes this to increase to 37.1% of the time, a 25.2% increase. The total volume of depletion under these circumstances over the 50-year simulation period is 4,682 acre-feet (AF) or 94 acre-feet per year (AFY) on average. It is noted that undepleted stream flows decline to zero (no flow) in the dry seasons of many years and the effect of the depletion is typically to cause stream to go dry sooner than it would have otherwise. There are only a few years in which depletion causes the stream to go dry (or nearly dry) when it would not have otherwise. These years are indicated with arrows on Figure 3.

Figure 3. Confluence Habitat Area Simulated Stream Flow and Depletion



As discussed during the April 22 Special Board meeting and GSP Workshop No. 3., there is limited available information to assess whether depletion effects in the Confluence Area are significant and unreasonable. While aquatic species that live in intermittent or ephemeral environments have adapted to periodic dry or low flow conditions to survive, it is not known whether depletion causes stranding in isolated habitat areas or mortality that would not otherwise occur and, if so, whether such effects are significant and unreasonable. The bottom line is that effects of depletion in the Confluence Habitat Areas are considered a data gap. In addition, there are no groundwater level or stream flow monitoring sites located within the Confluence Habitat Area. SMC for this area cannot not be evaluated until these data gaps have been addressed.

It is recommended that a biological monitoring program be developed and implemented to address the biological data gaps that exist in the Confluence Habitat Area. The goal of the monitoring program would be to determine if depletion is causing significant and unreasonable effects on the aquatic GDEs in the Confluence Habitat Area. Potential elements of the monitoring would include physical monitoring and mapping during dry conditions, which could provide valuable information on the potential impacts on sensitive aquatic species.

In addition to the biological data gaps, there are currently no groundwater level or surface water flow monitoring sites in the Confluence Habitat Area. At least one groundwater level monitoring site and one stream gage (or periodic stream flow measurements) are needed in this area to monitor hydrologic conditions for correlation with the biological monitoring, to calibrate the numerical model so that it can provide increased confidence in the depletion estimates, and to provide a basis for developing SMC in a future GSP update, if needed. UVRGA would first seek access to existing wells in the areas to address the groundwater levels data gap. If access to an existing well cannot be obtained, a monitoring well would be constructed by UVRGA.

Data collected via the biological monitoring program and groundwater level and stream flow monitoring sites would be used to evaluate whether SMCs are needed for the Confluence Habitat Area during future 5-year GSP assessments. Recall that UVRGA has 20 years to achieve sustainable management of the Basin; therefore, ample time is available to implement the proposed approach.

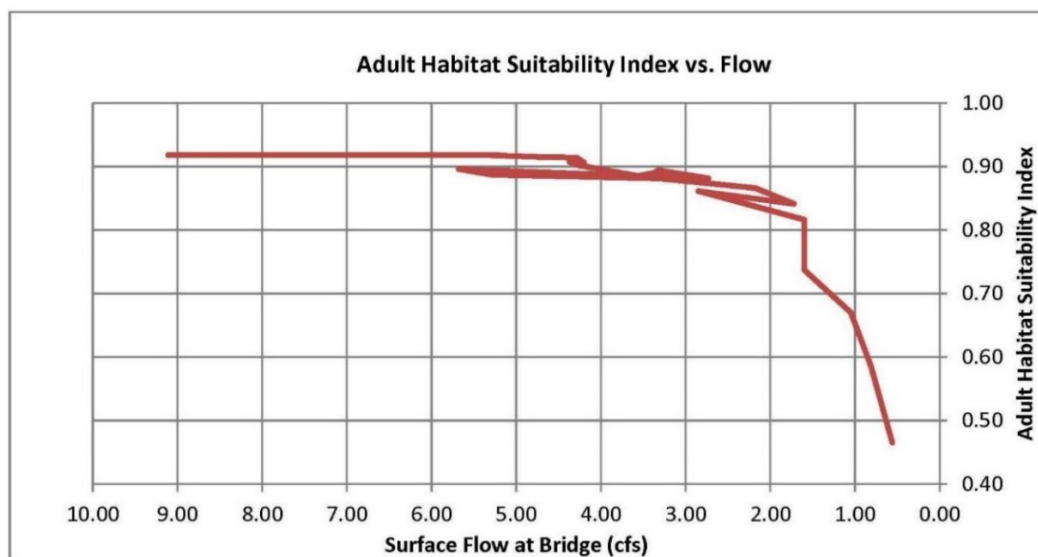
Foster Park Habitat Area

The Foster Park Habitat Area occurs in the southernmost portion of the Basin (Figure 1). Stream flow in the Foster Park Habitat Area is generally considered perennial. During dry seasons, much of the flow is the result of groundwater discharge to the Ventura River. The Foster Park Habitat Area has been studied by various investigators including consultants, federal and state resource agencies, and local public agencies. The Foster Park Habitat Area provides suitable habitat for special status aquatic species including:

- Spawning and rearing habitat for steelhead;
- Breeding, rearing, and dispersal/migratory habitat for California red-legged frog;
- Foraging and dispersal habitat for two striped gartersnake;
- Feeding, nesting, and basking habitat for southwestern pond turtle; and
- Pacific lamprey spawning corridor and potentially spawning and rearing.

As discussed during the April 22 Special Board meeting and GSP Workshop No. 3., the best available science for understanding ISW depletion effects is considered to be the study conducted by Hopkins Groundwater Consultants, Inc. (Hopkins) and Padre Associates Inc. (Padre) in 2012 (Hopkins 2013) (“Hopkins and Padre Study”)³. The Hopkins and Padre Study included concurrent Rainbow Trout Habitat Suitability Indices (HSI) and surface flow monitoring. According to the Hopkins and Padre Study, HSI scores for all or most of the Rainbow Trout HSI variables declined as flows receded. However, the HSI score associated with average thalweg depth started to decline at around 4 cfs and then dropped precipitously at approximately 2 cfs (measured at the Casitas Vista Road bridge) (Figure 4).

Figure 4. Adult Steelhead Thalweg Depth HSI Scores Related to Stream Flow



The results of the Hopkins and Padre Study were apparently relied upon to develop certain proposed operational protocols for the City’s Foster Park extraction facilities referred to as the “Foster Park Flow Protocols” presented in the Proposed Stipulated Physical Solution and Judgment, dated September 15, 2020. The “Foster Park Flow Protocols” include reduction of City Foster Park pumping when river flow is below 4 cfs and the cessation of City pumping when the river flow is below 3 cfs (as measured at an upstream location). The Foster Park Flow Protocols are intended to address juvenile steelhead rearing in the Foster Park Habitat Area (one of three high priority areas identified in the Proposed Physical Solution).

³ https://uvrgroundwater.org/wp-content/uploads/2021/03/Hopkins-2013-Hydrogeology-Study-FP-Surface-GW-Interaction-Report-Only_.pdf

Proposed SMC for the Depletions of Interconnected Surface Water Sustainability Indicator

The results of the Hopkins and Padre Study indicate that potential significant and unreasonable effects may occur if depletion causes stream flow to decline below 2 cfs at the Casitas Vista Road bridge. Therefore, the GSP Development Team proposes that SMC for the depletions of interconnected surface water sustainability indicator be based on the Hopkins and Padre Study.

The proposed qualitative statement of significant and unreasonable effects is “*depletions of ISW that causes a degradation in habitat conditions that may be reasonably expected to lead to steelhead mortality.*” Based on the best available science, preventing SGMA significant and unreasonable effects means preventing ISW depletion that causes stream flow to decline to 2 or less cfs at Casitas Vistas Road bridge (USGS Stream Site 11118500). The proposed minimum threshold varies according undepleted flow, as shown in Table 2.

Table 2. Proposed Minimum Thresholds for ISW Depletion, Foster Park Habitat Area

<u>Undepleted Flow</u>	<u>Depletion Minimum Threshold</u>
< = 2 cfs	0 cfs
>2 cfs	Undepleted flow minus 2 cfs

As provided for in SGMA, undepleted flows will be determined through a combination monitoring and modeling. Modeling will be particularly helpful in estimating indirect depletions caused by pumping wells located upstream of Foster Park.

It is important to understand that the proposed minimum threshold does not mean UVRGA is responsible for maintaining 2 cfs of stream flow at Casitas Vistas Road bridge. Undepleted stream flow can and will decline below 2 cfs (see, for example, the simulated undepleted stream flow (blue line) in 2064 and 2065 on Figure 5). UVRGA would only be responsible addressing depletion from groundwater pumping that causes stream flow to fall below 2 cfs and any depletion when undepleted flows are less than 2 cfs.

The GSP must also include a measurable objective for ISW depletions. The measurable objective is quantitative a metric that is intended to provide a reasonable margin of operational flexibility under adverse conditions (i.e., periods of drought) to prevent minimum threshold exceedances. However, setting a measurable objective differently than the minimum threshold would mean less water would be available for other beneficial uses. Therefore, it is proposed that the measurable objective be identical to the minimum threshold. It is noted that the Sustainable Management Criteria Best Management Practice (BMP) document⁴ indicates that the measurable objective can be the same as the minimum threshold.

It is recognized that the Hopkins and Padre Study upon which the minimum thresholds and measurable objectives are based represents a limited period and is based on only one HSI score evaluated (average thalweg depth). Future data collection conducted by the City, UVRGA, local stakeholders, and resource agencies should be considered going forward to inform potential

⁴ 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

adjustments of the proposed SMC for consideration during the required 5-year GSP assessments. Further discussion of data gaps and proposed actions to address them are provide later in this staff report.

Lastly, the GSP must include interim milestones in 5-year increments to show the anticipated progress toward achieving the measurable objectives within 20 years. Staff proposes to show progress as indicated in Table 3 below. The proposed steps toward achieving the measurable objective are described later in the staff report.

Table 3. Proposed Measurable Objective & Interim Milestones, Foster Park Habitat Area

IM	Year	Measurable Objective	Depletion in Excess of Measurable Objective	Comment
1	2027	No depletion that causes flow to decline below 2 cfs at USGS Gage 11118500	10.7 cfs	Maximum depletion rate from model simulation
2	2032		10.7 cfs	
3	2037		10.7 cfs	
4	2042		0 cfs (attain MO)	Implement project(s) or management action(s) to achieve MO

Analysis of Proposed SMC

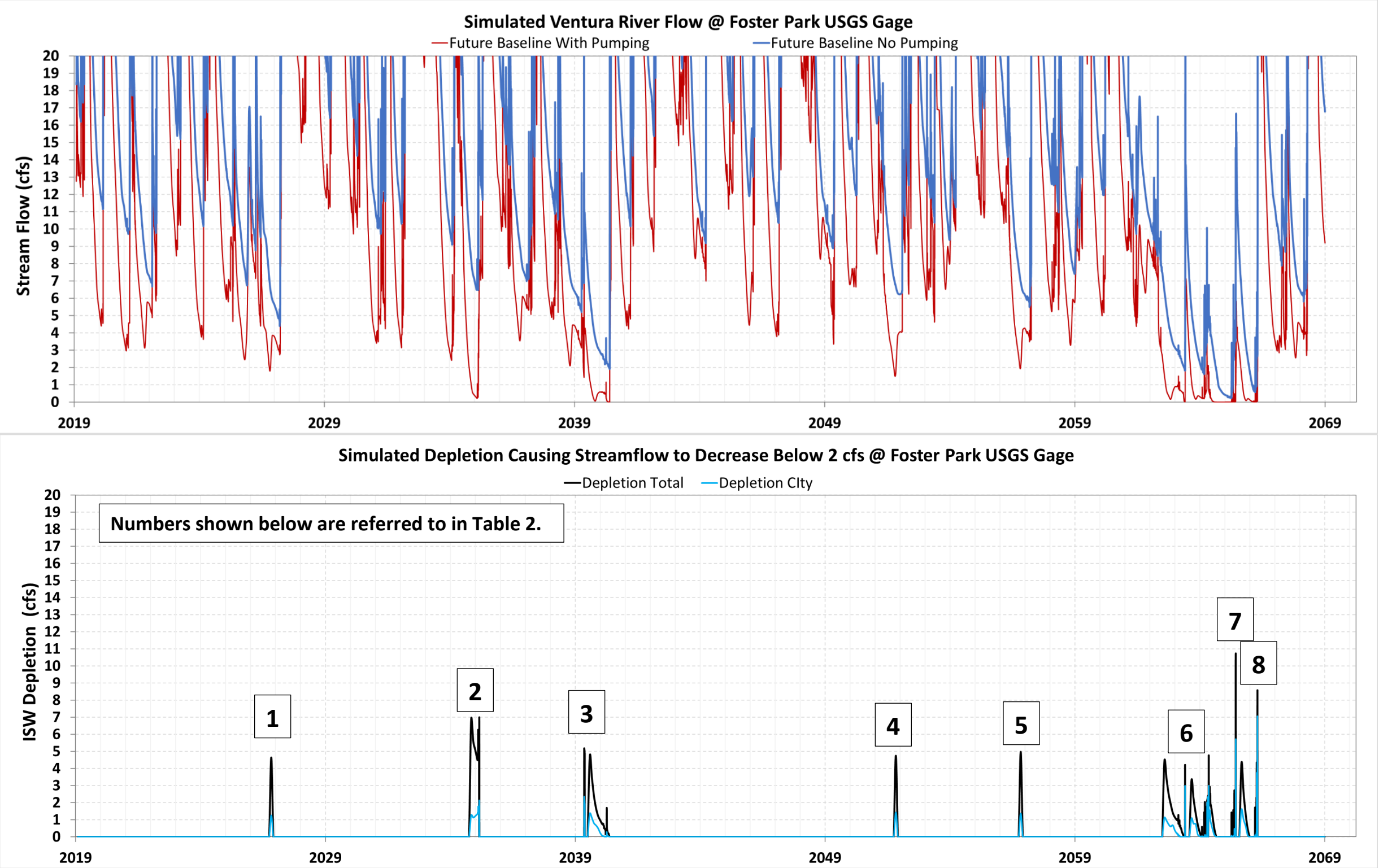
Numerical modeling output was analyzed to assess the frequency, duration, and volume of depletions that are simulated to exceed the proposed minimum threshold during the 50-year baseline future projection for the GSP. Simulated undepleted stream flow declines below 2 cfs approximately 2.7% of the time during the 50-year simulation period. Depletion causes this to increase to 10.1% of the time, a 270% increase. Simulated depletion that causes stream flow to decline below 2 cfs occurs during 8 distinct periods, which are detailed in Table 4 below. The eight periods are indicated on the depletion graph in Figure 5. The total volume of depletion that causes stream flow to decline below 2 cfs during the 50-year simulation periods is 6,261 AF or 125 AFY on average (Table 4).

Table 4. Summary of Depletion Below 2 cfs at Foster Park, 50-Year Baseline Simulation

Period No.	Period Depleted Below 2 cfs	Days Depleted Below 2 cfs	Ave Depletion (cfs)	Total Depletion (Acre-ft)	Upstream Pumping Depletion (Acre-ft)	City of Ventura Depletion (Acre-ft)
1	July 2027	31	4.6	285	208	77
2	July-Nov. 2035	149	5.4	1,589	1,209	380
3	Feb. 2040 – Feb. 2041	331	1.7	1,093	762	331
4	July 2052	31	4.7	292	204	88
5	July 2057	31	5.0	305	221	84
6	Apr. 2063 – Apr. 2065	611	1.6	1,969	1,356	613
7	Jan. 2066 – Aug. 2066	160	2.1	654	419	235
8	Dec. 2066 – Jan. 2067	18	2.1	74	40	34
Totals:		1,362	N/A	6,261	4,419	1,842

Note: Period Nos. 1 - 8 are indicated on Figure 5.

Figure 5. Foster Park Habitat Area Simulated Stream Flow and Depletion



The top chart in Figure 5 shows undepleted flows (blue) and depleted flows (red). The difference between the blue and red lines at any point in time is depletion. The bottom chart shows the eight depletion events that cause stream flow to be depleted below 2 cfs. Inspection of Figure 5 reveals that most of these depletion events occur after one or more years of dry conditions. In other words, depletion events that causes stream flow to decline below 2 cfs are not expected to occur during a single dry year or the first dry year of a multi-year drought.

The bottom chart of Figure 5 shows both total depletions (black line) and depletions associated with the City of Ventura's Foster Park extraction facilities (cyan line) that are simulated to cause stream flow to be depleted below 2 cfs. The difference between black and cyan lines is the indirect depletion associated with pumping wells located upstream of Foster Park. When interpreting the results in Table 4 and Figure 5, it is important to recall that the model simulations assume decreased annual pumping from City of Ventura's Foster Park extraction facilities during dry years, with no pumping during August – January (Table 5). The City of Ventura Foster Park pumping schedule employed in the model simulation is intended to approximate the Foster Park Flow Protocols⁵. Simulated City of Ventura depletions would have likely been larger if historical Foster Park extraction patterns had been used in the simulation.

Table 5. City of Ventura Foster Park Pumping Schedule for 50-Year Future Model Simulations (agreed upon for modeling by City of Ventura staff, February 24, 2021)

Year Type	Total Pumping	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Wet & Normal	4,200	161	278	385	398	429	416	410	414	389	379	313	228
1st & 2nd Dry Year	1,573	0	262	262	262	262	262	262	0	0	0	0	0
3rd Dry Year	1,298	0	216	216	216	216	216	216	0	0	0	0	0

Note: All values are acre-feet. Sum of values may not match totals due to rounding.

Implementation - Addressing Data Gaps, Projects, and Management Actions

The proposed SMC are intended to serve as a starting point for addressing potential significant and unreasonable effects associated with ISW depletion in the Foster Park Habitat Area. Further information should be developed over time to address data gaps and confirm the SMC are appropriate or revise the SMC, if necessary, as part of the required 5-year GSP assessments.

⁵ Replicating the Foster Park Protocols in the modeling simulations would require many iterative model simulations that would exceed the scope and budget for GSP development.

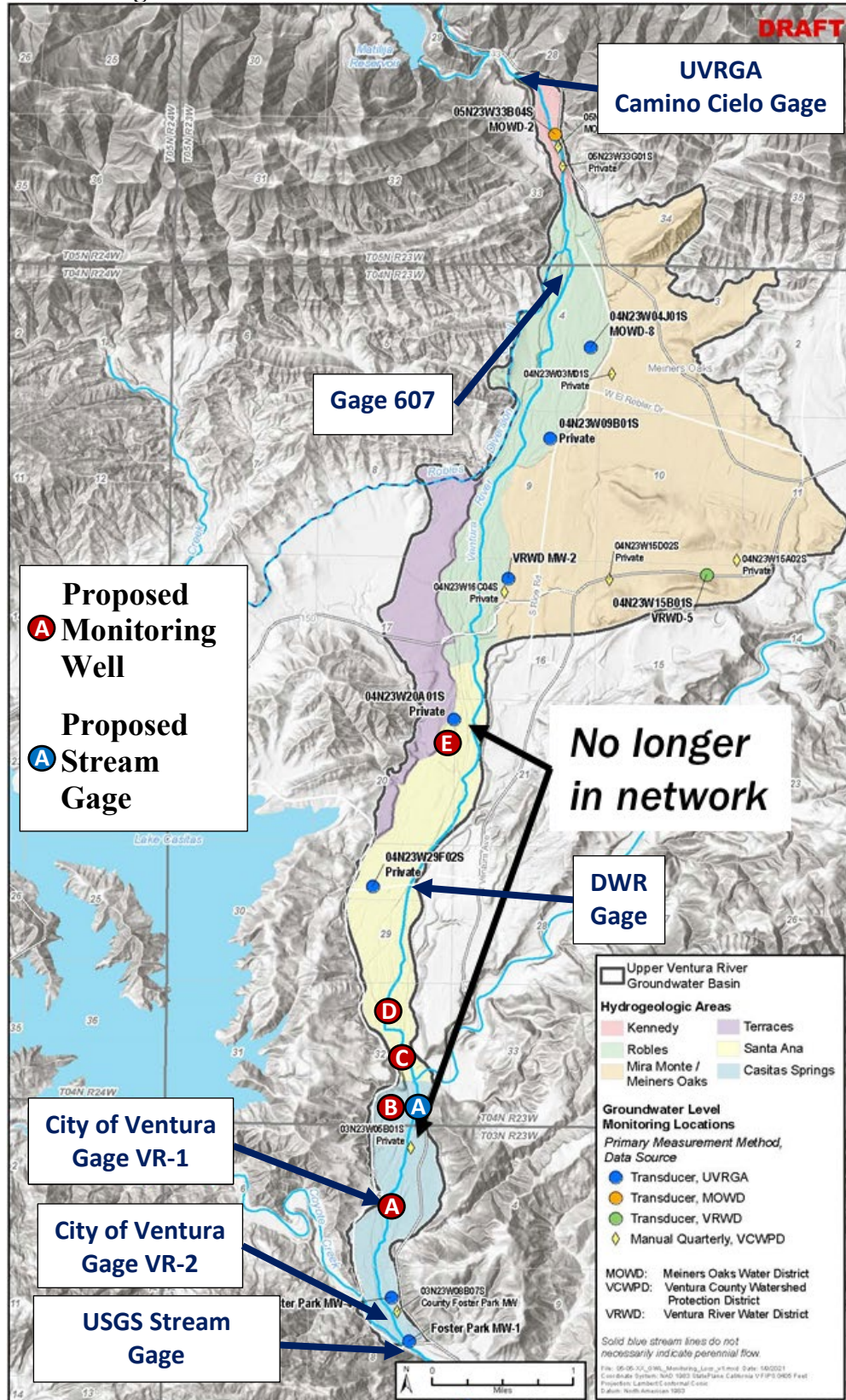
Three key data gaps have been identified by the GSP Development Team:

1. Groundwater Level Data between Highway 150 and Foster Park: Currently there is only one groundwater level monitoring site between Highway 150 and Foster Park (Figure 6). Additional monitoring sites are needed in this area to calibrate the model so that it can provide more confidence in the estimates of indirect depletion from pumping wells located upstream of Foster Park. A minimum of five groundwater level monitoring sites are recommended, as detailed below (Figures 1 and 6):
 - Site A located near surface water gage VR-1 to provide correlation of groundwater levels with surface water flow measurements and to provide groundwater level data between the Confluence and Foster Park Habitat Areas.
 - Sites B and C located within the Confluence Habitat Area straddling the San Antonio Creek confluence. These wells will be used to monitor groundwater levels upstream and downstream of where San Antonio Creek enters the Ventura River. One of the monitoring sites will be collocated with a new stream gage to provide correlation of groundwater levels and surface water flow.
 - Site D located between Santa Ana Blvd. and the Confluence Habitat Area to monitor groundwater levels and storage that feeds the Confluence Habitat Area and to refine the estimates of indirect depletion of surface water. This site will also provide data for the South Santa Ana Riparian GDE unit discussed in the staff report for Item 10(b).
 - Site E located between Santa Ana Blvd. and Highway 150 to monitor groundwater levels and storage that feeds the Confluence Habitat Area and refine the estimates of indirect depletion of surface water.

UVRGA would first seek access to existing wells to address the data gaps. If access to existing wells cannot be obtained, monitoring wells would be constructed by UVRGA. The proposed monitoring sites also address data gaps for the groundwater levels and storage sustainability indicators, as described in the staff report for Item 10(b).

2. Stream flow Monitoring in the Confluence Area: A stream gage is needed to measure stream flow entering the Casitas Springs area and, ultimately, the Foster Park Habitat Area (Figure 6). It is anticipated that the stream gage will be located so that it also addresses the stream flow data gap in the Confluence Habitat Area.
3. Biological Monitoring in the Foster Park Habitat Area: Monitoring effects on aquatic species during low flow conditions is needed. This monitoring would be coupled with ongoing flow monitoring by USGS at Casitas Vistas Bridge and by the City of Ventura at a gage located within Foster Park (gage “VR-2”) and another gage located upstream of Foster Park (gage “VR-1”) (Figure 6).

Figure 6. Existing Groundwater Level and Stream Flow Monitoring Networks and Proposed Monitoring Sites



Addressing the above-described data gaps should be coordinated with other entities in the Basin, including the Ventura River Watershed adjudication and the California Water Action Plan Instream Flow Enhancement Program. Coordination will reduce costs and build greater confidence in the data and future management decisions made based on the data. As such, a coordinated monitoring plan for the Foster Park Habitat Area is recommended. While addressing data gaps and coordinating with other entities will take time, it is expected that doing so will lead to the most robust outcomes and a significant cost savings. It is important to remember that UVRGA has 20 years to achieve sustainable management of the Basin; therefore, ample time is available to implement the proposed approach.

It is currently anticipated that the Foster Park Flow Protocols or some future variant will address direct depletion by the City of Ventura pumping in the Foster Park Habitat Area. However, the Foster Park Flow Protocols will not address indirect depletion caused by pumping wells located upstream of Foster Park. The modeling results suggest that project(s) and/or management action(s) will be needed to address this indirect depletion to achieve the measurable objective (Table 4 and Figure 5). Proposed actions to achieve the measurable objective are outlined in Table 6.

Consistency with Sustainability Goal

Staff has developed the proposed SMC for the ISW depletions sustainability indicator in accordance with the applicable elements of the adopted Sustainability Goal.

Table 6. Outline of Proposed Implementation Actions for Foster Park Habitat Area SMC

Action No.	Action Description	Milestone	Target Date
IM #1 Period: 0-5 years (2022 – 2027)			
1-1	Develop Foster Park Habitat Area Monitoring Plan - work with other entities to develop a coordinated monitoring program for the Foster Park Habitat Area	Foster Park Habitat Area Monitoring Plan and cost sharing agreements adopted by coordinating entities	1/31/2024
1-2	Initiate Foster Park Habitat Area Monitoring Program	Initiate monitoring activities; annual monitoring data published in GSP annual reports	6/30/2024
1-3	Add monitoring wells and stream gauge to monitoring networks	Access agreements or constructed monitoring wells and stream gage installation	6/30/2025
1-4	Add new monitoring wells to groundwater level and quality monitoring networks	Initiate monitoring of new wells	6/30/2025
1-5	Update numerical model calibration and ISW depletion estimates	Model update tech memo and updated depletion simulation results	6/30/2026
1-6	Begin planning for project(s) and/or management action(s) to achieve measurable objective.	Memo: preliminary feasibility analysis of project(s) and/or management action(s) to achieve measurable objective	6/30/2026
1-7	5-year GSP assessment. Update SMC, if appropriate.	GSP assessment document and GSP update	1/31/2027
IM #2 Period: 5-10 years (2027 – 2032)			
2-1	Continued monitoring	Annual monitoring data published in GSP annual reports	Annually by April 1
2-2	Update numerical model calibration, update depletion simulations, simulate potential project(s) and/or management action(s)	Model update and simulations tech memo	6/30/2029
2-3	Feasibility study of project(s) and/or management action(s) to achieve measurable objective	Feasibility study report	12/31/2030
2-4	Select project(s) and/or management action(s) to achieve measurable objective	UVRGA Board-approved project(s) and/or management actions for inclusion in GSP update.	6/30/2031
2-5	5-year GSP assessment and update. Include updated SMC, if appropriate. Add projects and/or management actions selected to achieve measurable objective.	GSP assessment document and GSP update	1/31/2032
IM #3 Period: 10-15 years (2032 – 2037)			
3-1	Continued monitoring	Annual monitoring data published in GSP annual reports	Annually by April 1
3-2	Develop project(s) and/or management action(s)	Progress toward ordinance(s), agreement(s), or design, as appropriate, based on selected project(s) and/or management action(s).	1/31/2037
3-3	5-year GSP assessment. Update GSP, as needed	GSP assessment document and GSP update	1/31/2037
IM #4 Period: 15-20 years (2037 – 2042)			
4-1	Continued monitoring	Annual monitoring data published in GSP annual reports	Annually by April 1
4-2	Implement project(s) and/or management action(s)	Completed ordinance(s), agreement(s), or construction, as appropriate, based on selected project(s) and/or management action(s).	1/31/2040
4-3	5-year GSP assessment. Update GSP, as needed	GSP assessment document and GSP update	1/31/2042

RECOMMENDED ACTIONS

Consider approving sustainable management criteria for the depletions of interconnected surface water sustainability indicator for inclusion in the draft GSP.

BACKGROUND

Foundational information related to this staff report and recommendations was provided during prior Board meetings, GSP Workshops, and draft memos posted to the UVRGA website:

- Depletions of Interconnected Surface Water:
 - April 22, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/04/04-22-21-Item7a-SMC-Presentation_low_res.pdf
 - GSP Workshop No. 3: https://uvrgroundwater.org/wp-content/uploads/2021/04/20210302-UVRGA-Workshop-No-3_low_res.pdf
- Numerical Model:
 - February 11, 2021 Board Meeting: <https://uvrgroundwater.org/wp-content/uploads/2021/02/02-11-21-Item-10d-Presentations.pdf>
 - GSP Workshop No. 2: https://uvrgroundwater.org/wp-content/uploads/2021/03/20210302-UVRGA-Workshop-No-2_Final.pdf
 - March 25, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/03/03-25-21-Item-7a-Presentation_Final.pdf
- GDE Assessments:
 - April 8, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/04/04-08-21-Item-10b-SMC-Presentation_LOW_RES.pdf
 - April 22, 2021 Board Meeting: https://uvrgroundwater.org/wp-content/uploads/2021/04/04-22-21-Item7a-SMC-Presentation_low_res.pdf
 - GSP Workshop No. 3: https://uvrgroundwater.org/wp-content/uploads/2021/04/20210302-UVRGA-Workshop-No-3_low_res.pdf
 - Draft Riparian GDE Assessment Memo: https://uvrgroundwater.org/wp-content/uploads/2021/04/Riparian-GDE-Assessment_DRAFT.pdf
 - Draft Aquatic GDE Assessment Memo: https://uvrgroundwater.org/wp-content/uploads/2021/04/Aquatic-GDE-Assessment_Draft.pdf

FISCAL SUMMARY

Cost estimates for the recommendations included in this staff report will be presented as part of the GSP implementation budget during a future Board meeting.

ATTACHMENTS

None.

Action: _____

Motion: _____ Second: _____

B. Kuebler___ D. Engle___ R. Hajas___ S. Rungren___ G. Shephard___ E. Ayala___ L. Rose___