

**UPPER VENTURA RIVER GROUNDWATER AGENCY
MINUTES OF REGULAR MEETING March 8, 2018**

The Board meeting was held at Casitas Municipal Water Districts meeting room at 1055 Ventura Avenue, Oak View, CA 93022. Directors present were: Bruce Kuebler, Mary Bergen, Larry Rose, Diana Engle and Kevin Brown; alternate director present was: Glenn Shephard for Jeff Pratt. Also present were: Executive Director Cece Vandermeer, Attorney Jena Acos, and GSP Project Manager Bryan Bondy. Public present were; Bert Rapp, Paul Jenkin, Jordan Kear, Ben Pitterle, and one unidentified person.

1) **CALL TO ORDER**- Chairperson Bruce Kuebler called the meeting to order at 1:00 P.M.

2) **PLEDGE OF ALLEGIANCE** – Led by Bruce Kuebler.

3) **PUBLIC COMMENTS ON ITEMS NOT APPEARING ON THE AGENDA** – Paul Jenkin, Surfrider Foundation, reported the Thomas Fire had a major adverse effect on water quality as evidenced by sampling done for bacteria, turbidity, color, and nutrients. Data are available on the ‘stream team’ website of Santa Barbara Channelkeeper. Regarding supplemental water from the SWP, he thinks it unreliable and wouldn’t bet on snowmelt.

4) **CONSENT ITEMS**

a. **Approve Minutes from January 18, 2018**

Bergen wanted deletion of a reference to her vote and the report of the Ad Hoc Committee on Financial Options and Budget Review Committee because she didn’t attend the meeting. Shephard moved to approve the meeting minutes as corrected. Seconded by Kuebler.

Ayes: Bruce Kuebler, Glenn Shephard, Diana Engle, Kevin Brown, Larry Rose. Mary Bergen abstained.

b. **Financial Reports for January and February 2018**

Vandermeer presented the Treasurer’s Report for January and February 2018. Kuebler asked if all member agencies have made their first period contributions. Vandermeer stated that MOWD had not yet contributed. Engle said she would follow up with MOWD.

The Financial Reports were received and filed.

5) **DIRECTOR ANNOUNCEMENTS**

Brown reported that the City of San Buenaventura has prepared their Notice of Preparation of a Draft Environmental Impact Report for the pipeline to connect to Calleguas system and thereby the State Water Project.

Kuebler reported he:

Attended the Association of Ground Water Agencies/American Ground Water Trust Conference, “Everything Aquifers and Groundwater Management” in Ontario, CA on February 12 and 13, 2018 and handed out his notes, which are included with these minutes;

Met with Bryan Bondy regarding his role as GSP project manager and mentioned Bryan’s expanded role from the original intent of advising the Board on the GSP to being extensively involved as project manager;

VRWD will be drilling a replacement for one of its wells to increase capacity and flexibility at a location away from the river;

Met with attorneys Jena Acos and Russ McGlothlin to review GSP progress and issues;

Met with Perry Van Houten (Ojai Valley News) regarding an article about Agency getting DWR grant of \$630,000; and completed data compilation of monthly water districts' pumping and Ventura River flow for GSP Task 2.4.

6) GSP PROJECT MANAGER COMMENTS

Bondy presented a draft of the UVRGA GSP Project Management Planning Document, which is based on the grant application and noted addition of Task 2.8 'Groundwater Dependent Ecosystem Initial Assessment'. He emphasized all task activity needs to be tied closely to the grant application regarding study durations, reports, etc. In answer to a question about how the grant funds will be dispersed, he said DWR will use the funding match drawdown approach, meaning the Agency needs to meet the cost share for each task before State payment. The first payment from State is not likely until late 2018, given the time necessary to negotiate and approve a grant agreement with DWR and payment processing time. This raises question about our cash flow and whether we need some reserve fund or ability to borrow.

The Agency should adopt a policy on Directors' labor hours charged to the GSP and there should be a time sheet signed each month by each Director. Engle volunteered to work with Vandermeer to create a time sheet system and a policy for next meeting.

Bondy contacted Lorraine Walter and she is willing to assist with writing the GSP.

7) GSP CONTENT ITEMS (This item began @ 2 pm)

a. Jordan Kear with Kear Groundwater made a presentation on "A year in the life of Upper Ventura River Groundwater Basin". A copy of his powerpoint presentation is included with these minutes. In summary, the Thomas Fire has caused runoff to reduce infiltration by 80% through a combination of physical and chemical effects of the ash and fine sediment. There could be some cementation of soil grains leading to loss of groundwater storage capacity and reduced well efficiency and output, which is already being seen in northern basin wells. Further detailed study is needed when comparing river flows in the upper and lower parts of the basin because of Ventura's pumping and diversion in the Foster Park area, and of river flow with water table changes.

b. ACTION ITEMS

i. GSP Tasks 2.2 and 2.6

The Board considered approval of a study by Kear Groundwater to monitor the river's wet-dry interface and to measure wet reach flow.

No public comments

The Board discussed changes to the study proposal by tying it more directly to the grant tasks, i.e., study duration, reporting, etc. The study should also describe how the wet/dry interface will be determined, include QA/QC, and provide more details on costs, such as labor hours, rates, etc. The proposal should be separated into two proposals because two GSP tasks are involved.

Brown moved to table Item 7(b)(i) and bring to the April 12, 2018 Board meeting with the suggested edits. Seconded by Shephard

Ayes: Bruce Kuebler, Mary Bergen, Glenn Shephard, Diana Engle, Kevin Brown, Larry Rose.

ii. GSP Task 2.5

The Board considered approval for Kear Groundwater to determine subsurface inflow from San Antonio Creek.

No public comments

The Board discussed a variety of issues with this proposal. Similar to previous item, more detail on costs was requested and study needs to be tied closely to grant application. Resolution is needed on exact well site because of change in land ownership, access whether by easement or access agreement, environmental documentation, and process for hiring drilling contractor, which is to be done by Kear and is within his contract. Acos to assist as necessary.

Kuebler moved to defer Item 7(b)(ii) to the April 12, 2018 Board meeting with the requested additions and clarifications. Seconded by Engle.

Ayes: Bruce Kuebler, Mary Bergen, Glenn Shephard, Diana Engle, Kevin Brown, Larry Rose.

iii. Standard Operating Procedures and QA/QC

The Board considered approval for Kear Groundwater and Bryan Bondy to develop guidelines to ensure the quality and consistency of data collection.

The Board discussed having procedures in place for the SOPs and QA/QC first before approving studies by Kear Groundwater for tasks 2.2, 2.5, and 2.6. Engle requested that a breakdown of rates, categories and hours would give the Board a better understanding of this project and the other GSP tasks.

No public comments

Brown moved to approve Kear Groundwater's proposal in the amount of \$4,400 and to authorize Kuebler to negotiate Bondy's review costs not to exceed \$3,600. Seconded by Bergen

Ayes: Bruce Kuebler, Mary Bergen, Glenn Shephard, Diana Engle, Kevin Brown, Larry Rose.

iv. GSP Task 2.3

Progress report on determination of private pumper water use and discussion of plan for a water extraction basis for funding the Agency.

Rose reported on his work using Eagle Aerial data. There are about 15 private pumpers likely to be using more than the de minimis amount of 2 AF/Yr. The total estimated amount of water use by those pumpers is approximately 1340 AF. The next step is to contact municipal suppliers to determine how much was supplied to each pumper. Subtracting that amount from the estimate water use will result in the estimated pumping. Rose agreed to join the Ad Hoc Committee on Financial Options and Budget Reivew to help prepare the financing plan. This action will be on agenda for next meeting. Acos to assist the Ad Hoc Committee as requested. Bondy mentioned it is important to document whether private wells are pumping from alluvium or bedrock.

Public Comment. Ben Pitterle, SBCK, mentioned that pumping amounts are reported to DWR and are available on DWR's website. Rose to check with Pitterle, if needed, to access the data.

8) OTHER ITEMS (This began at 4:30)

a. MOU for cooperation on water supply security.

The Board considered approving a non-binding agreement among water supply agencies for mutual support and cooperation to improve security of Ojai Valley water supply.

No public comments

Brown is opposed this agreement because Ventura is not involved.

No action was taken because there must be unanimous approval on the first reading.

b. Water Bond Proposal

The Board considered supporting the Water Supply and Water Quality Bond Act of 2018 by Resolution No. 2018-1.

No public comments

Brown moved to approve Resolution No. 2018-1, A Resolution of the Upper Ventura River Groundwater Agency in Support of the "Water Supply and Water Quality Act of 2018" Initiative. Seconded by Bergen.

Ayes: Bruce Kuebler, Mary Bergen, Glenn Shephard, Diana Engle, Kevin Brown, Larry Rose.

c. Liability Insurance

Deferred to the April 12, 2018 Board Meeting.

d. State Disability Insurance

The Board considered approving elective coverage of state disability insurance for employees.

No public comment

Vandermeer stated that as a public entity, the Board of Directors needs to elect coverage of state disability insurance for employees. All employees have agreed to elective coverage of state disability insurance. There is no financial impact on the Agency.

Bergen moved to approve the election of coverage of state disability insurance for employees. Seconded by Shephard.

Ayes: Bruce Kuebler, Mary Bergen, Glenn Shephard, Diana Engle, Kevin Brown, Larry Rose.

e. Report on Ventura County Water Supply Security

The Board considered urging Casitas Municipal Water District to immediately begin negotiations with Calleguas Municipal Water District and City of San Buenaventura to pursue the concepts in the report by the Ojai Valley Water Advisory Group.

No public comments

The Board discussed the report. Brown explained talks were under way with Calleguas, Ventura, and Casitas. He thought the recommended action was unnecessary and he disagreed with some of the concepts. Bergen supports State water but agrees the action is unnecessary.

Kuebler motioned to approve the concepts in the report by the Ojai Valley Water Advisory Group. There was no second.

f. Recent Legal Actions

Kuebler reported an Appellate Court decided that Ventura can cross complain against upstream water users in SBCK v. City of San Buenaventura and SWRCB. In another lawsuit, SBCK is opposing the SWRCB's de-listing of Ventura River reach 4 (covers the Upper Ventura River groundwater basin) 303(d) impairment. The State Board moved that reach to another category until more available information with which to analyze the situation. There may be additional TMDL activity at that time.

No public comments

9) COMMITTEE REPORTS

a. Funding Options and Budget Review Ad Hoc Committee

Bergen presented a spreadsheet of Revenues and Operating Expenses for the 2016/2017 Budget, the 2017/2018 Budget and fiscal year to date. Kuebler stated that invoices for the second round of contributions from the participating agencies will go out in March 2018.

The Board discussed the priority of developing a financing plan for next fiscal year. Acos to help with formation of a plan and fee study.

10) EXECUTIVE DIRECTOR'S REPORT

Vandermeer stated that she and Kuebler, with notes from Bergen, met with Dave Reeser, website designer to update the website. Kuebler handed out an incomplete list of his suggested changes and requested comments and additional suggestions be sent to him or Cece. Directors were asked to comment specifically on what phone number and email address, if any, they want shown on website.

11) ADJOURNMENT – The meeting was adjourned at 5:00 pm. The next regular Board meeting will be April 12, 2018 at 1:00 pm at the Casitas Municipal Water District Meeting Room, 1055 Ventura Ave., Oak View, CA 93022.

Action: _____

Motion: _____ 2nd: _____

B. Kuebler ___ M. Bergen ___ J. Pratt ___ D. Engle ___ K. Brown ___

L. Rose ___ E. Ayala ___

A year in the life of Upper Ventura River Groundwater Basin

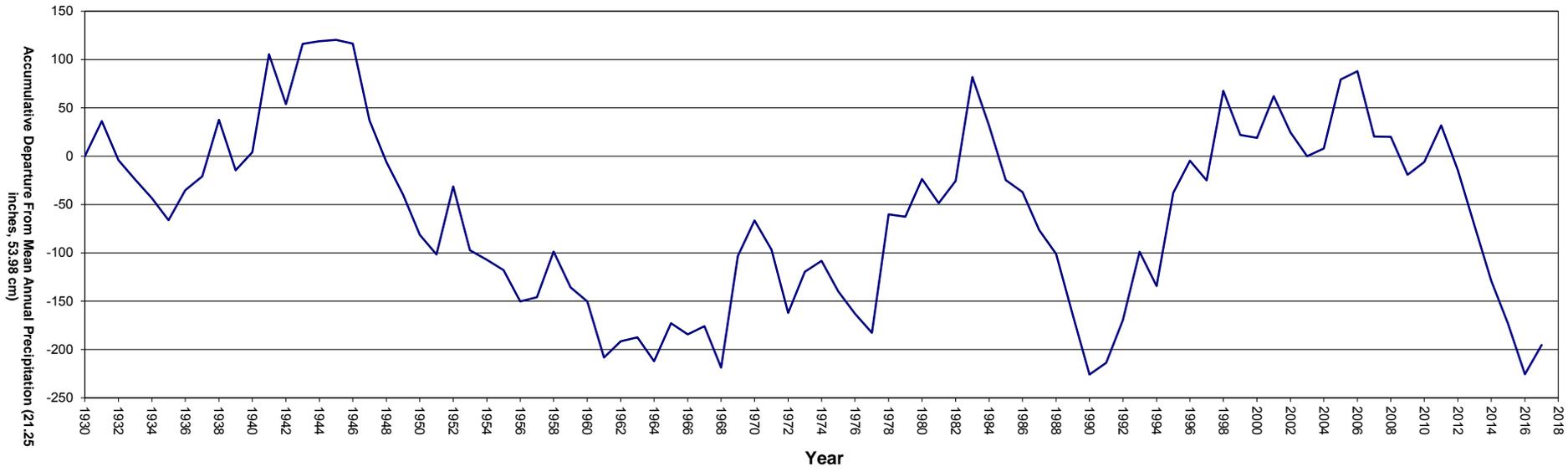
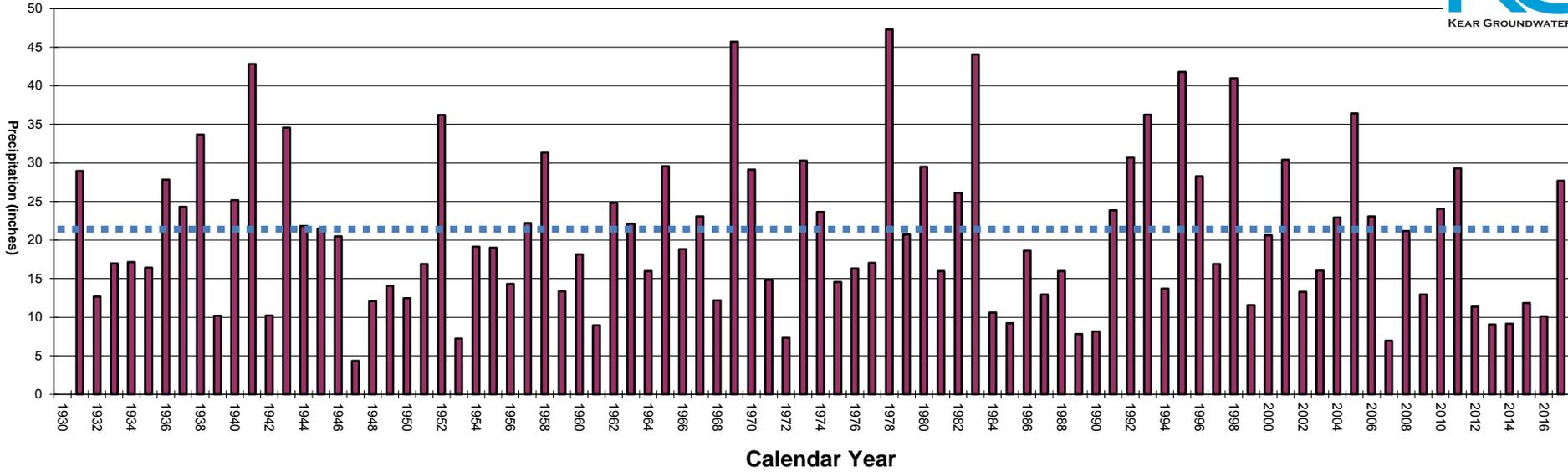
Upper Ventura River Groundwater Basin
UVRBGSA

Jordan Kear, PG, CHG
08 March 2018

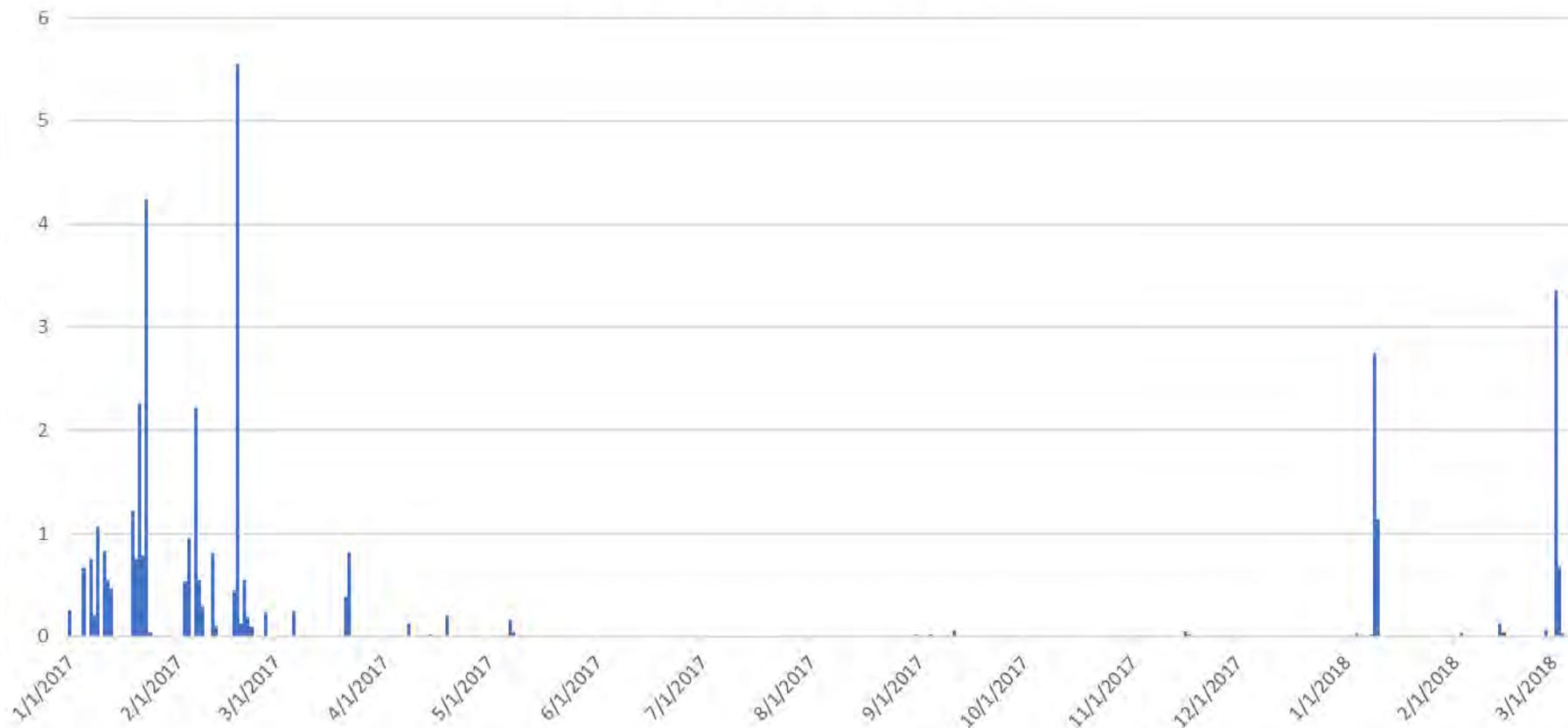


Today's Discussion...

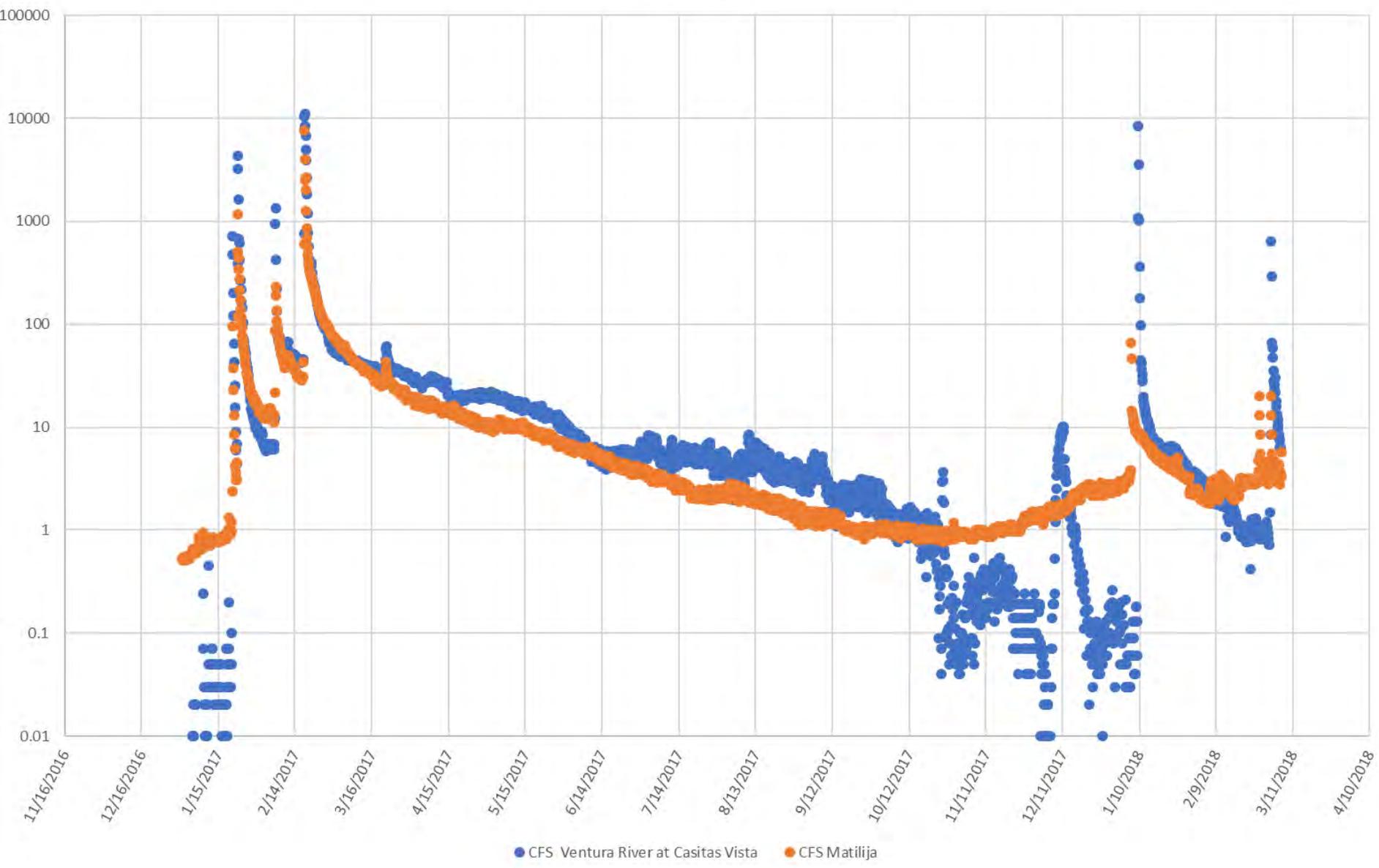
- Upper Ventura River Groundwater Basin
Geology and Well Locations
- Precipitation in 2017 and 2018 and historically
- Surface flow in the river and its tributaries
- Groundwater Levels responses
- Fires and debris flows affects on surface water
and groundwater resources from a chemical
and physical perspective



Daily Precipitation at Matilija Dam



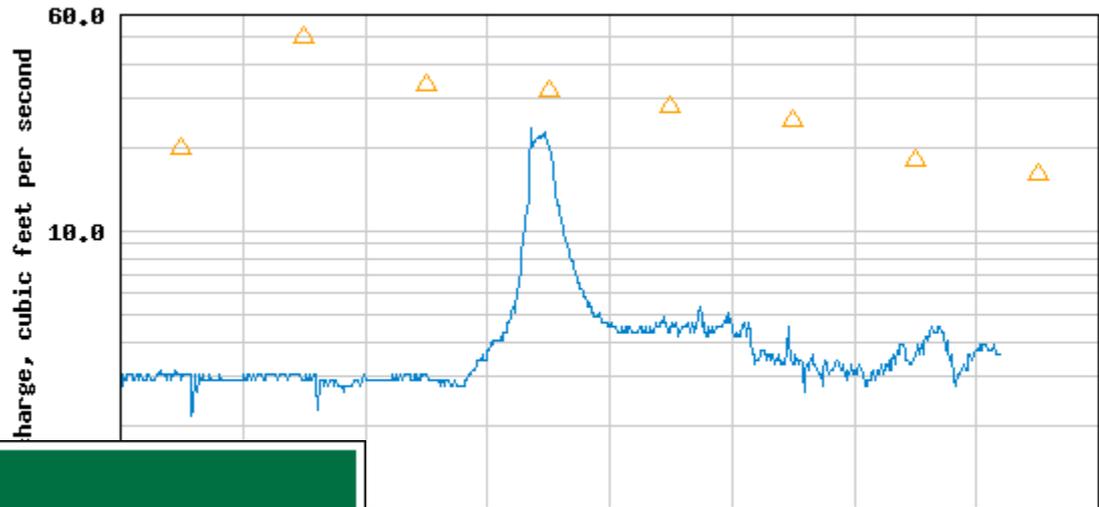
River Flow



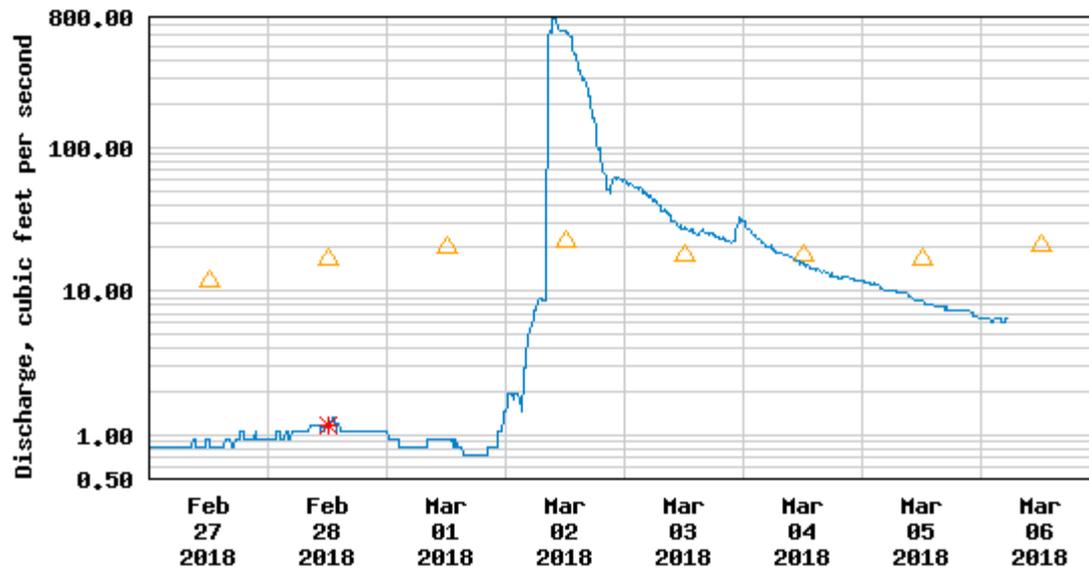
● CFS Ventura River at Casitas Vista ● CFS Matilija



USGS 11114495 MATILIJA C NR RES NR MATILIJA HOT SPRINGS CA



USGS 11118500 VENTURA R NR VENTURA



----- Provisional Data Subject to Revision -----

△ Median daily statistic (58 years) * Measured discharge
 — Discharge

Mar 01 2018	Mar 02 2018	Mar 03 2018	Mar 04 2018	Mar 05 2018	Mar 06 2018
-------------	-------------	-------------	-------------	-------------	-------------

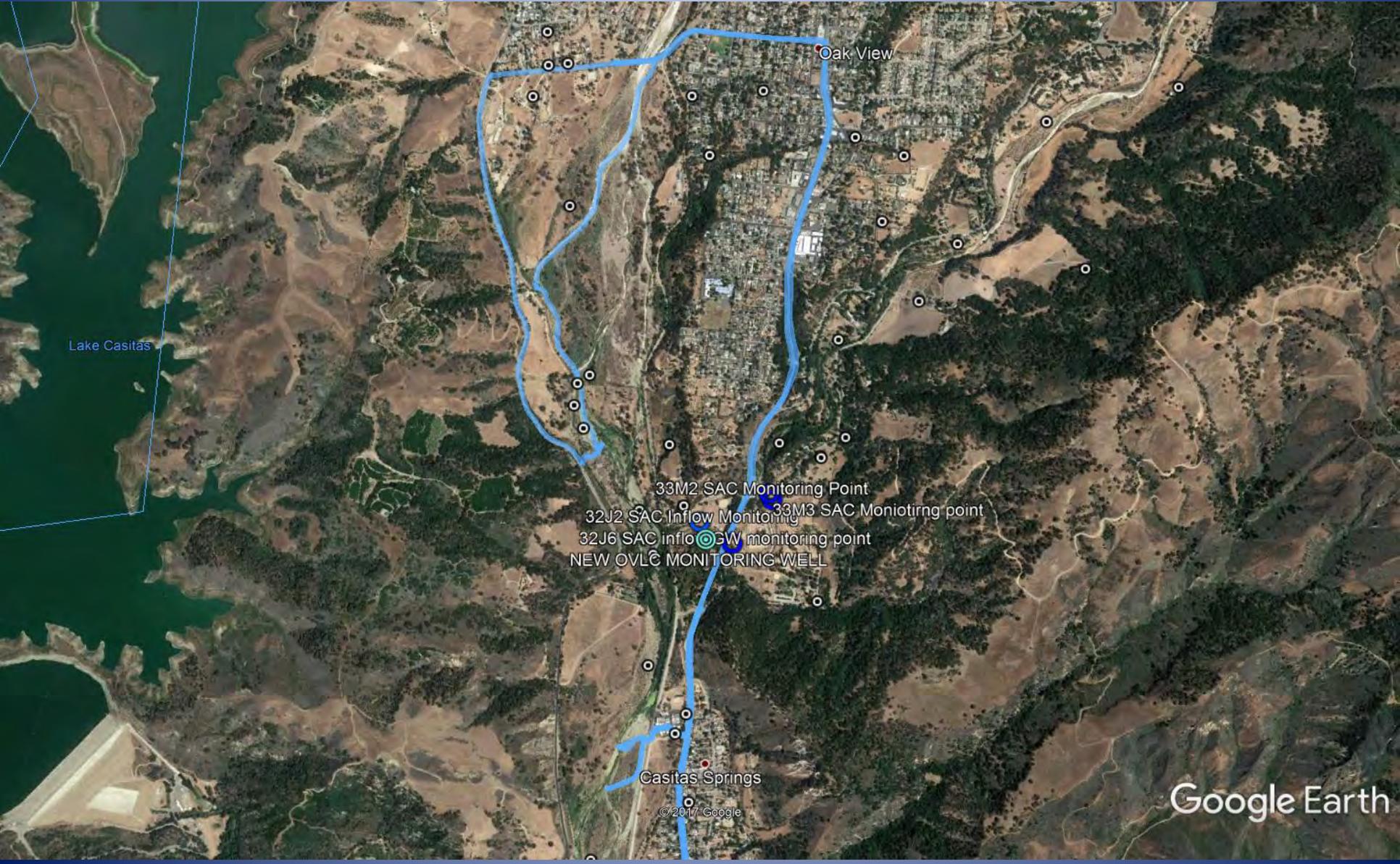
Provisional Data Subject to Revision -----

Historic (15 years) — Discharge





September 20, 2017



Lake Casitas

Oak View

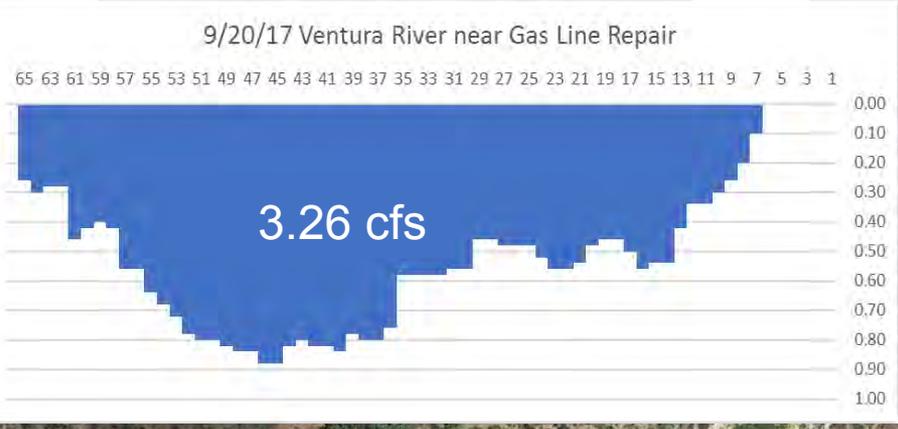
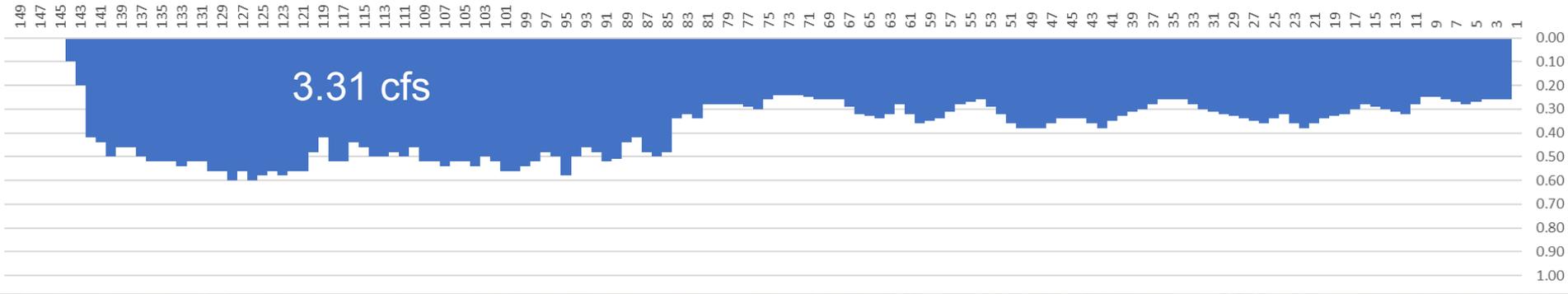
33M2 SAC Monitoring Point
32J2 SAC Inflow Monitoring
33M3 SAC Monitoring point
32J6 SAC info SW monitoring point
NEW OVLC MONITORING WELL

Casitas Springs

Google Earth

© 2017 Google

9/20/17 Ventura River Near Casitas Springs Mobile Home Park



Google Earth

MOWD 8

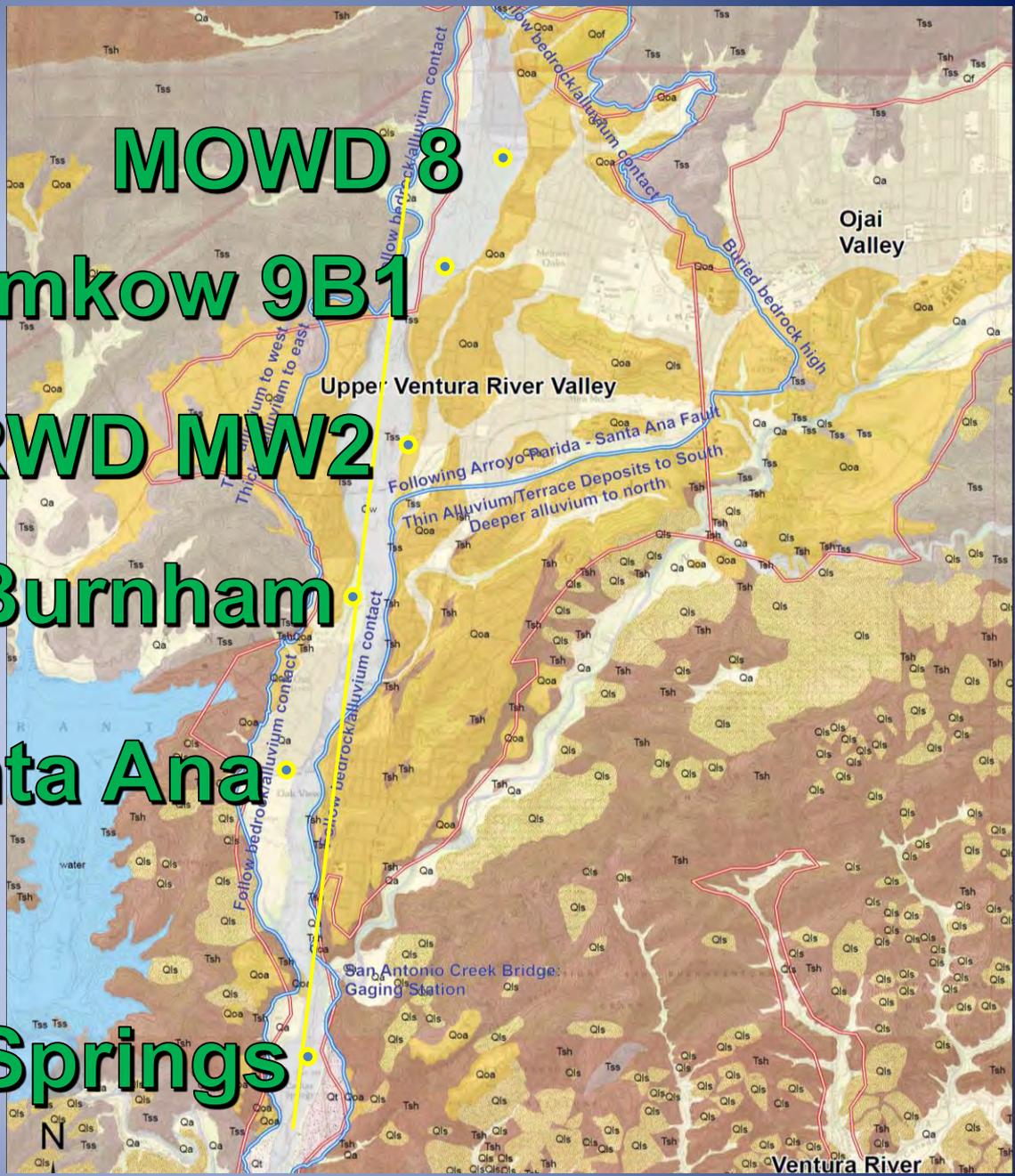
Gramkow 9B1

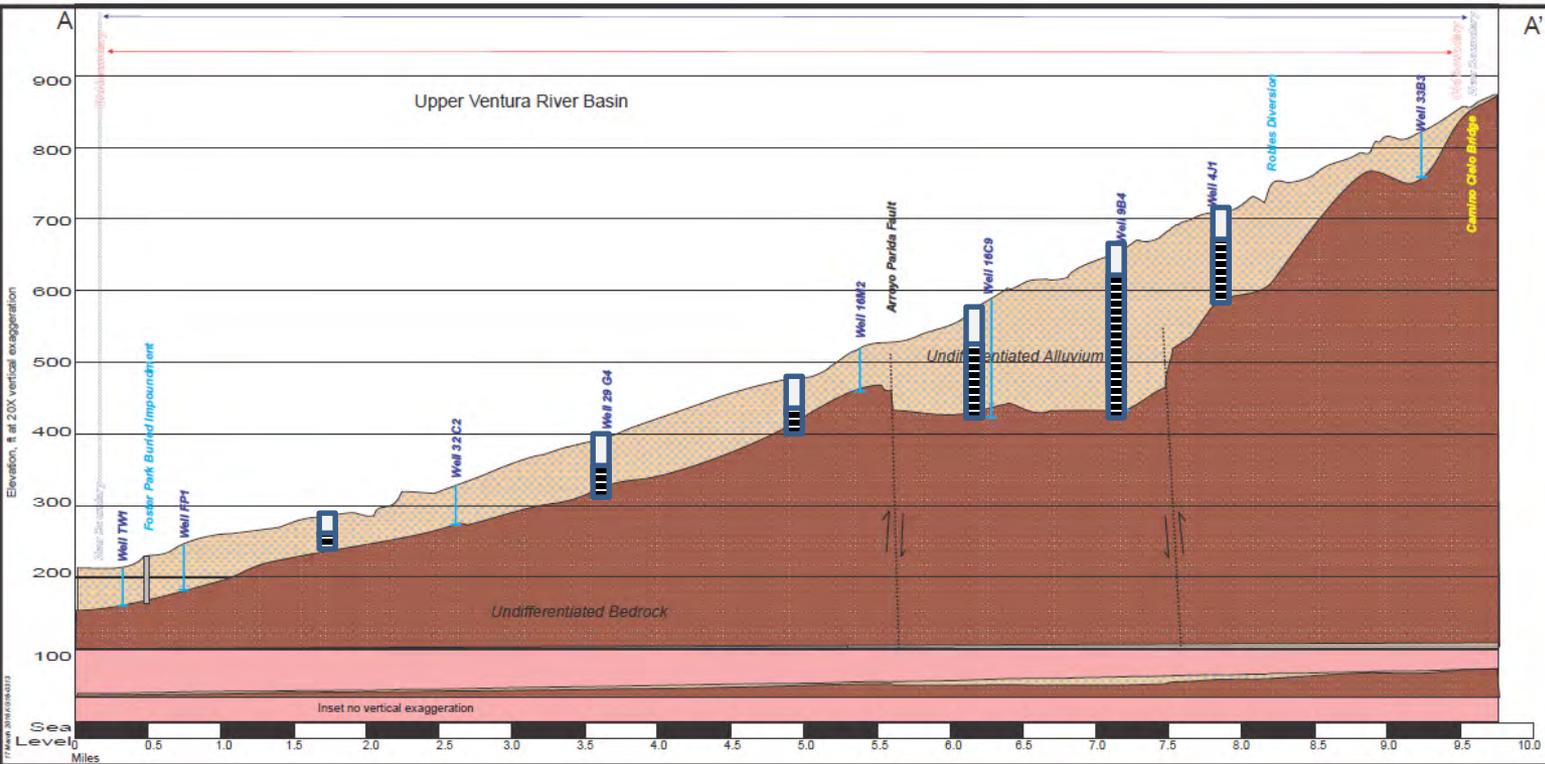
VRWD MW2

1000 Burnham

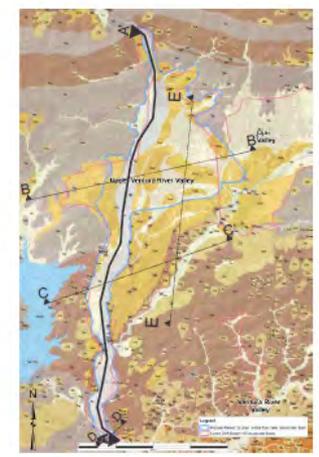
873 Santa Ana

Casitas Springs





A'

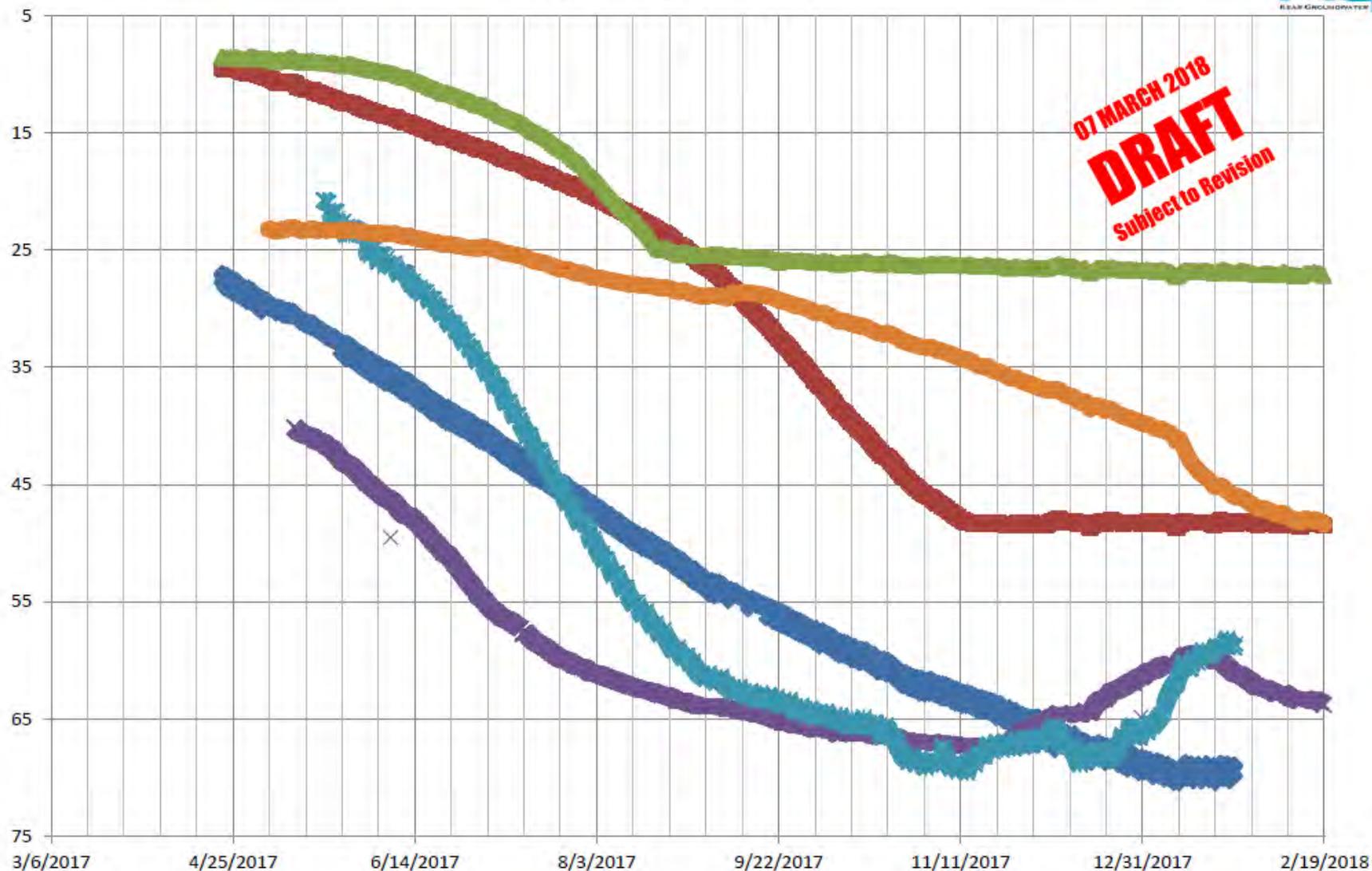


Upper Ventura River Basin
Figure 4
Central Cross Section
 Ventura River Profile
 View looking west



©2010 KGV
www.kgv.com

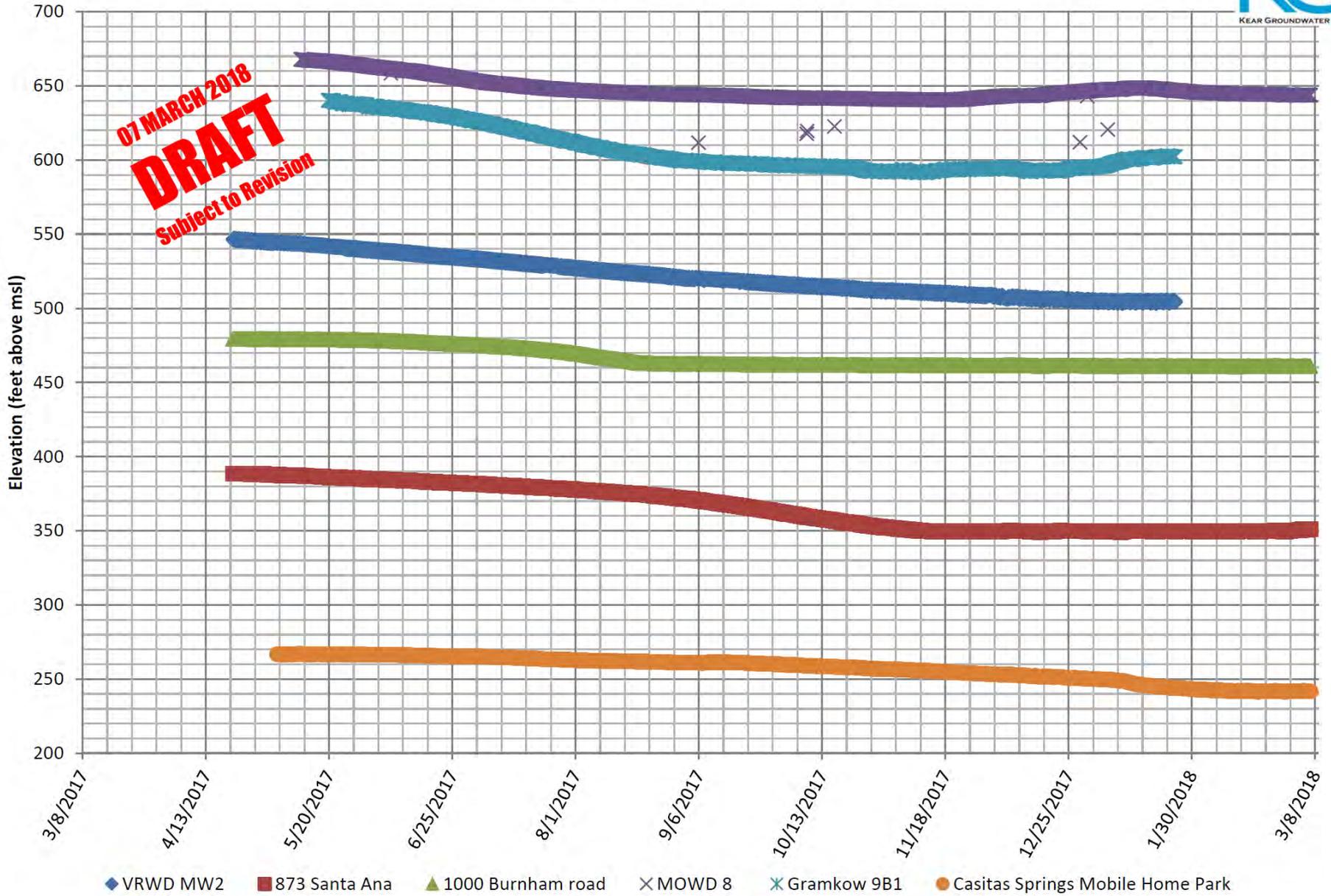
UVRB - Depths to Water



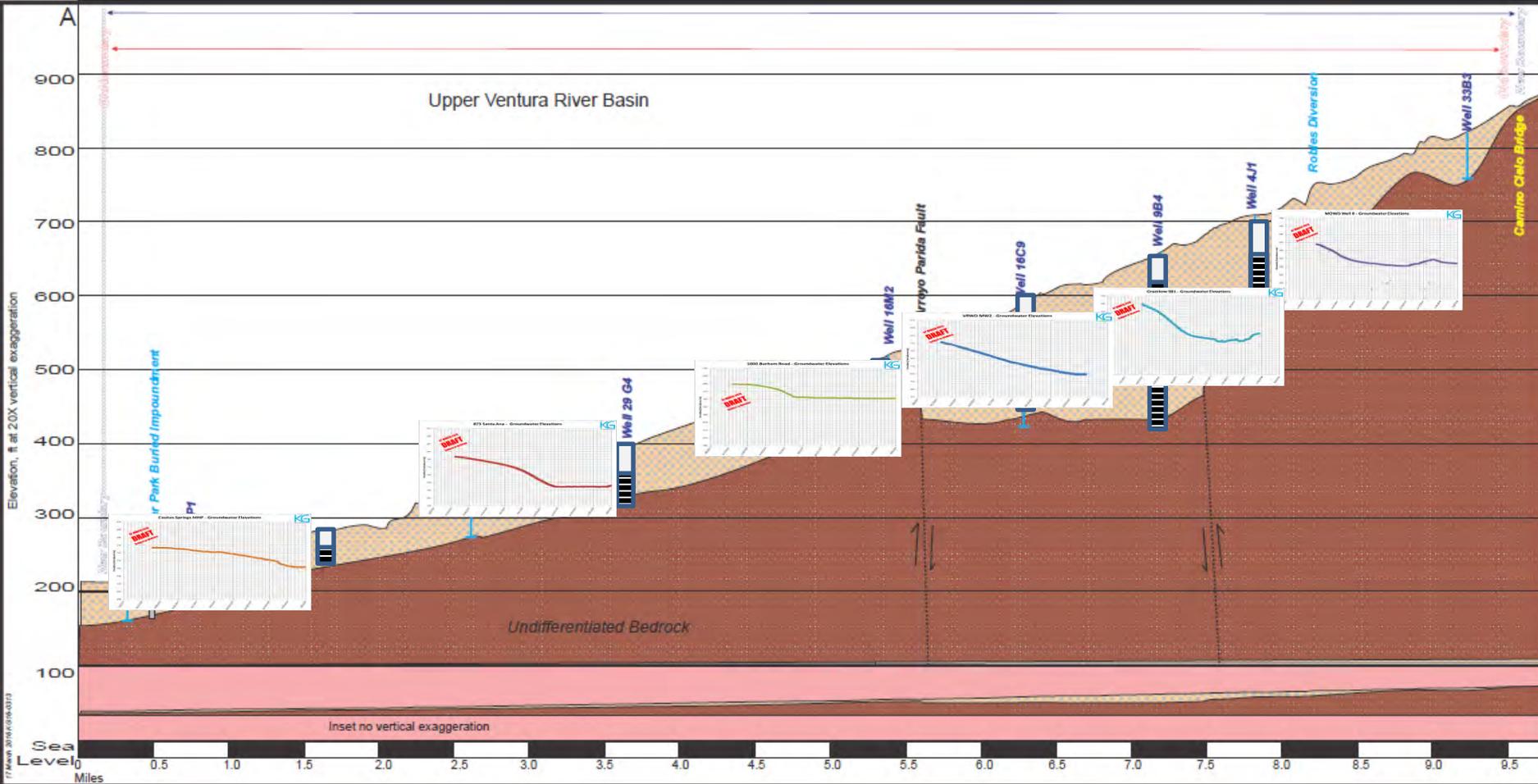
07 MARCH 2018
DRAFT
Subject to Revision

- ◆ VRWD MW2
- 873 Santa Ana
- ▲ 1000 Burnham road
- × MOWD 8
- * Gramkow 9B1
- Casitas Springs Mobile Home Park

UVRB Groundwater Elevations



◆ VRWD MW2 ■ 873 Santa Ana ▲ 1000 Burnham road × MOWD 8 ✕ Gramkow 9B1 ● Casitas Springs Mobile Home Park

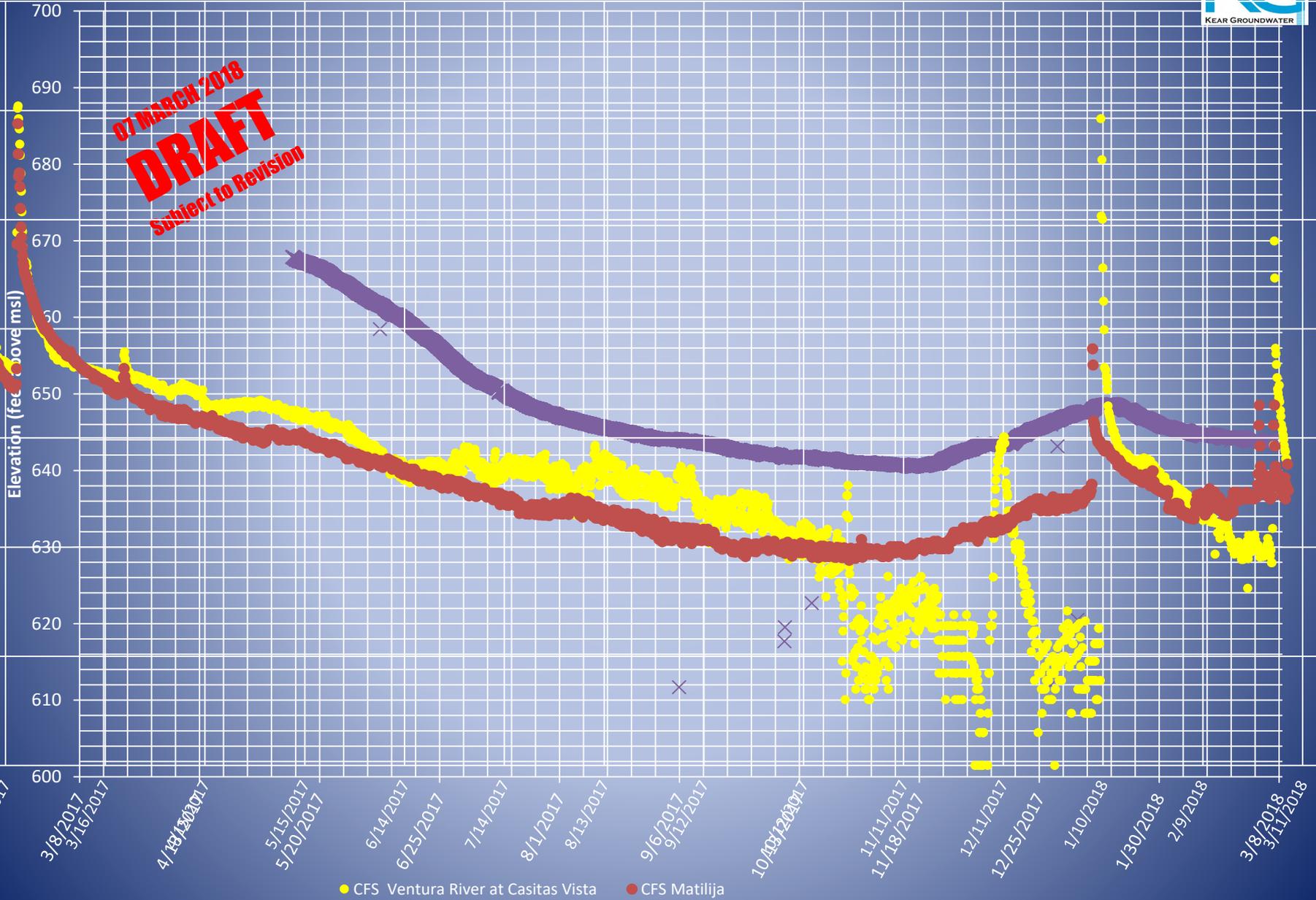


17 MAR 2016 09:43:23

MOWD Well 8 River Flow Groundwater Elevations

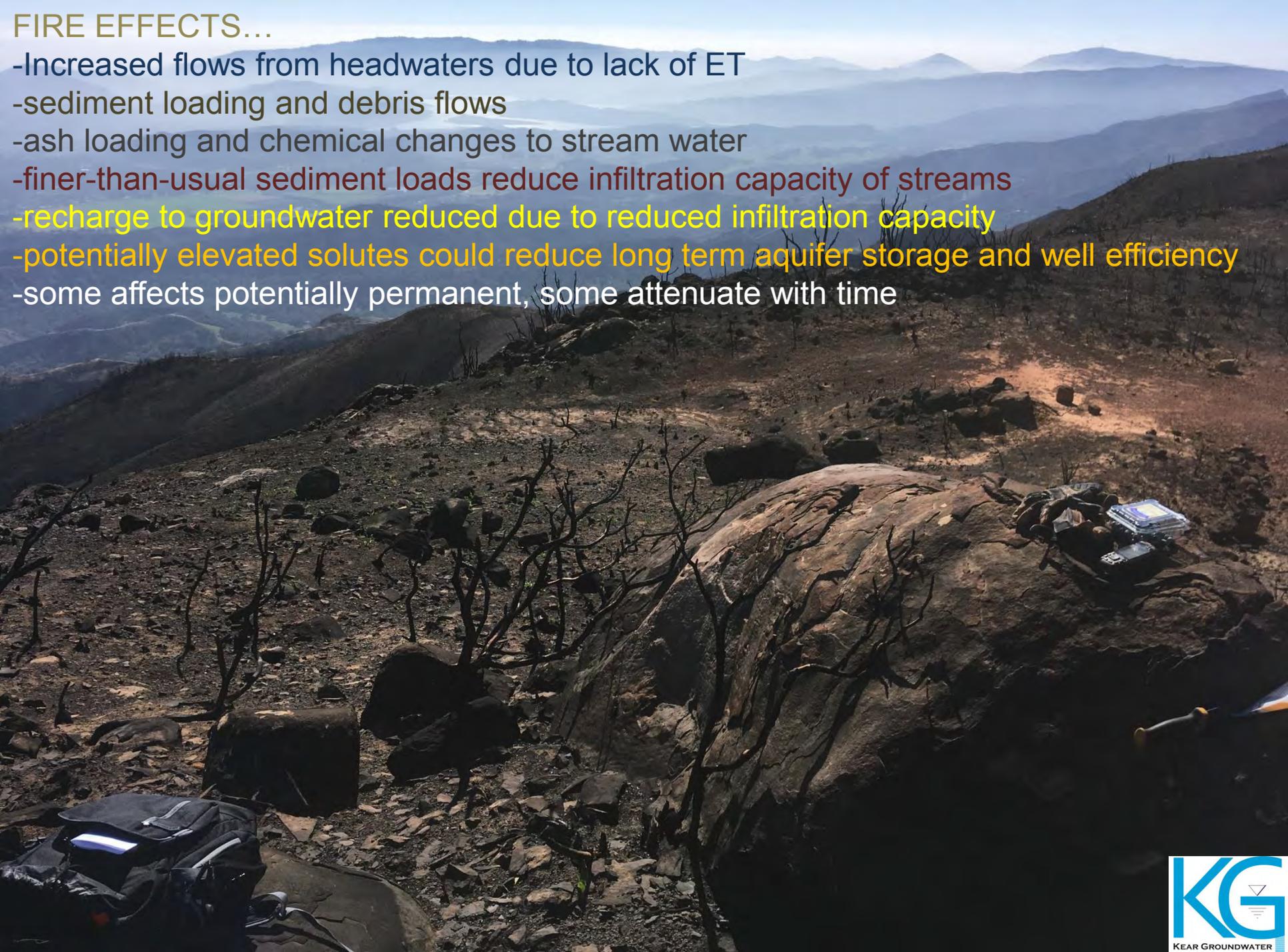


07 MARCH 2018
DRAFT
Subject to Revision

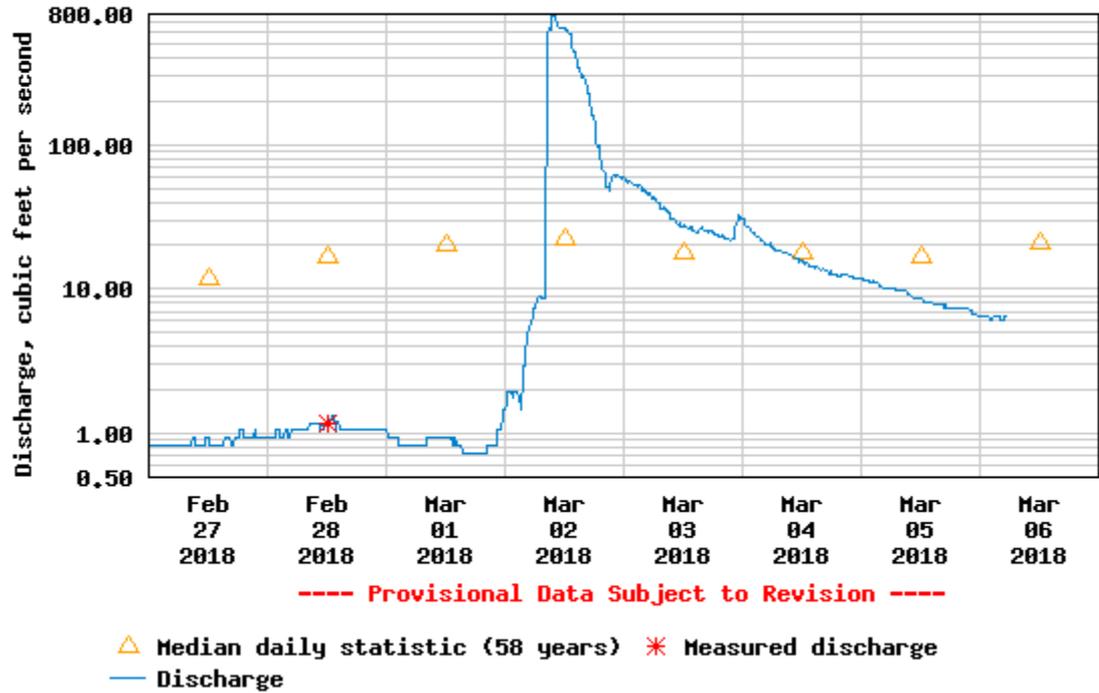


FIRE EFFECTS...

- Increased flows from headwaters due to lack of ET
- sediment loading and debris flows
- ash loading and chemical changes to stream water
- finer-than-usual sediment loads reduce infiltration capacity of streams
- recharge to groundwater reduced due to reduced infiltration capacity
- potentially elevated solutes could reduce long term aquifer storage and well efficiency
- some affects potentially permanent, some attenuate with time



USGS 11118500 VENTURA R NR VENTURA



6.2 cfs
28 February 2018

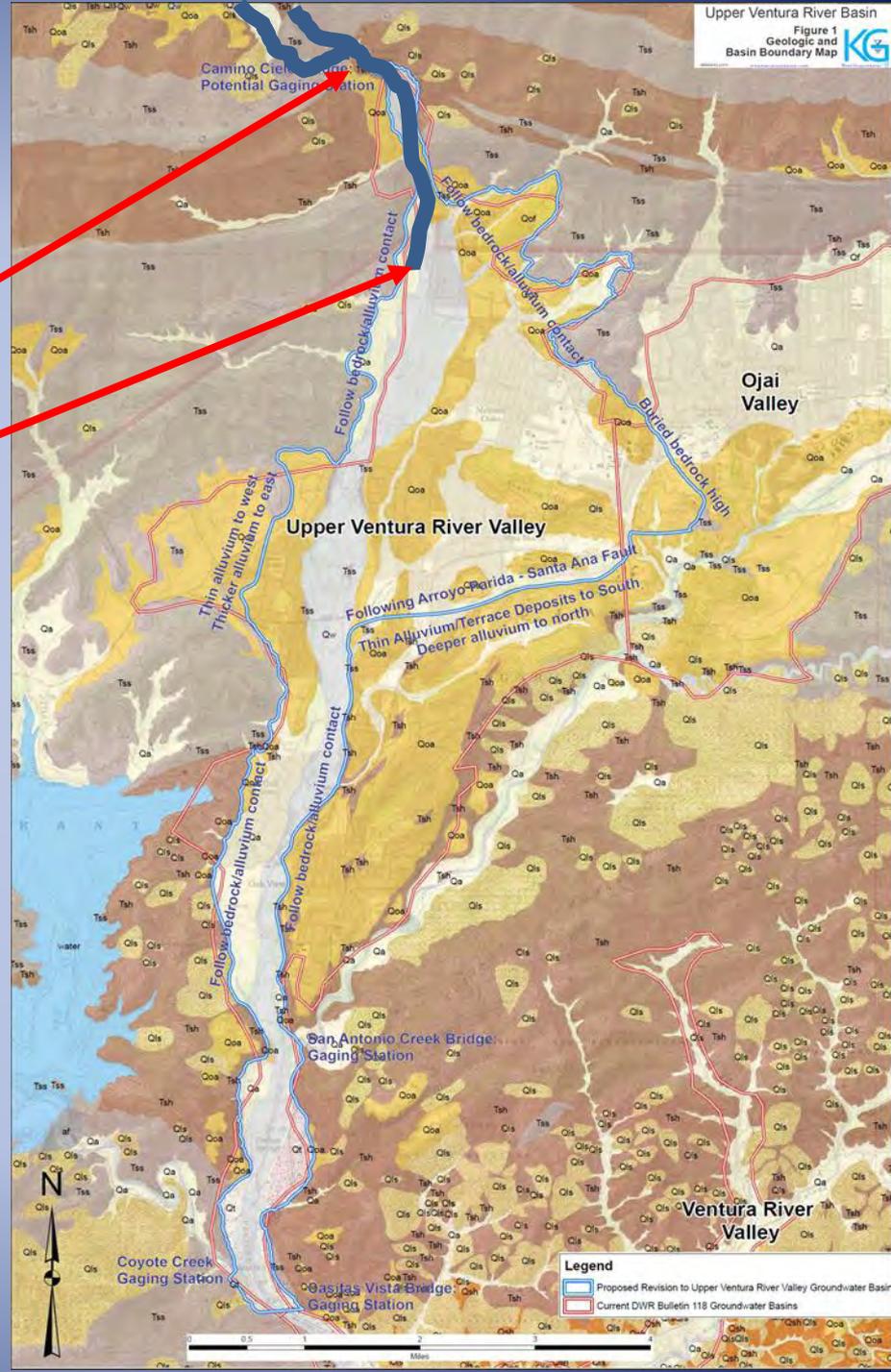


INFILTRATION FLUX

Measured in flow into aquifer
per mile of stream reach

Pre-fire:

5 cfs at Camino Cielo Bridge
Infiltrates completely by 2 miles
 $= 5\text{cfs}/2\text{ mi} \Rightarrow 2.5\text{cfs}/\text{mile}$



INFILTRATION FLUX

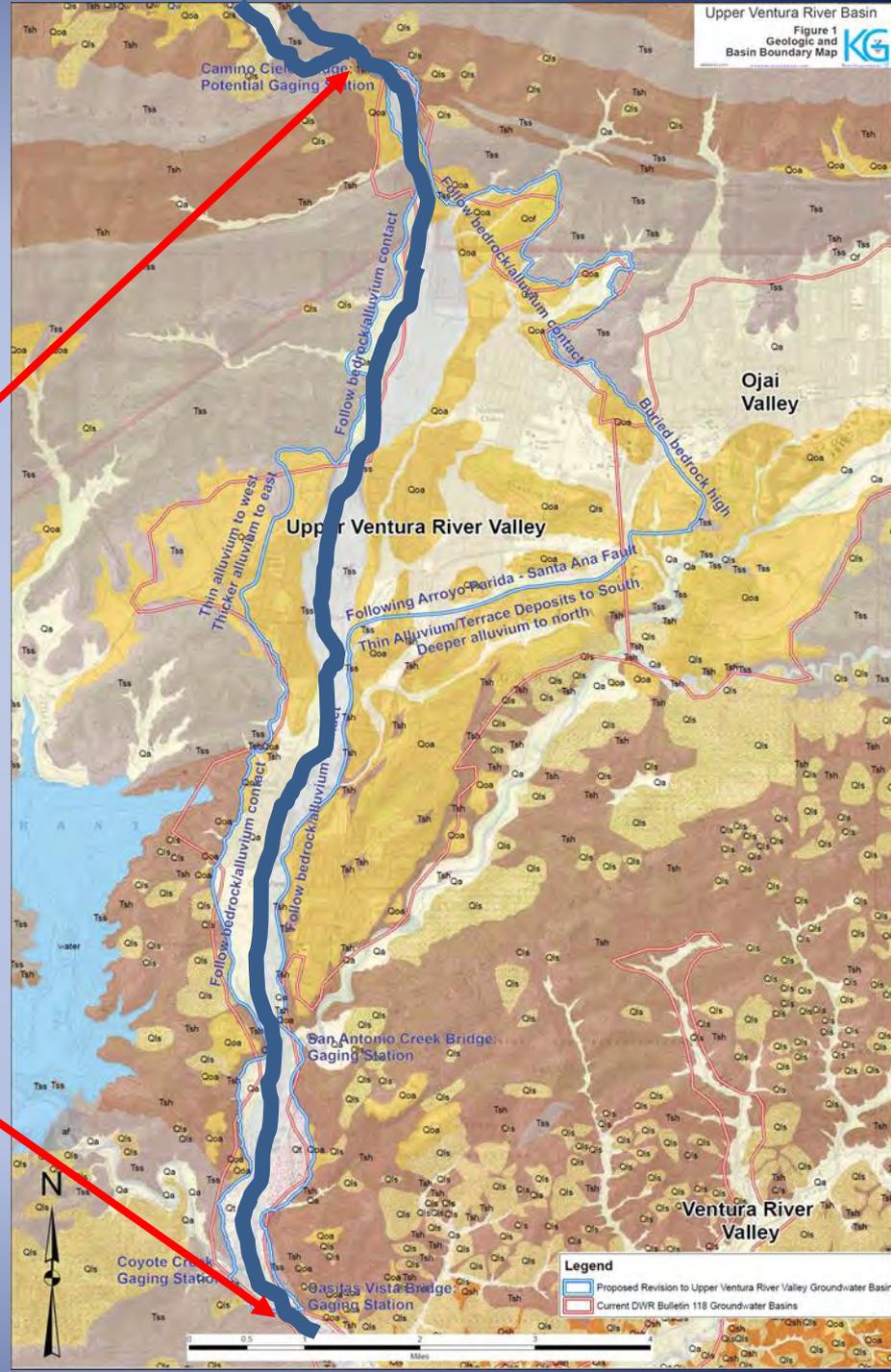
Measured in flow into aquifer
per mile of stream reach

Pre-fire:

5 cfs at Camino Cielo Bridge
Infiltrates completely by 2 miles
 $= 5 \text{ cfs} / 2 \text{ mi} \Rightarrow 2.5 \text{ cfs/mile}$

Post-fire:

6.2 cfs at Camino Cielo Bridge
1.2 cfs at Casitas Vista Bridge
 $= 5 \text{ cfs} / 10 \text{ mi} = > 0.5 \text{ cfs/mile}$



INFILTRATION FLUX

Measured in flow into aquifer
per mile of stream reach

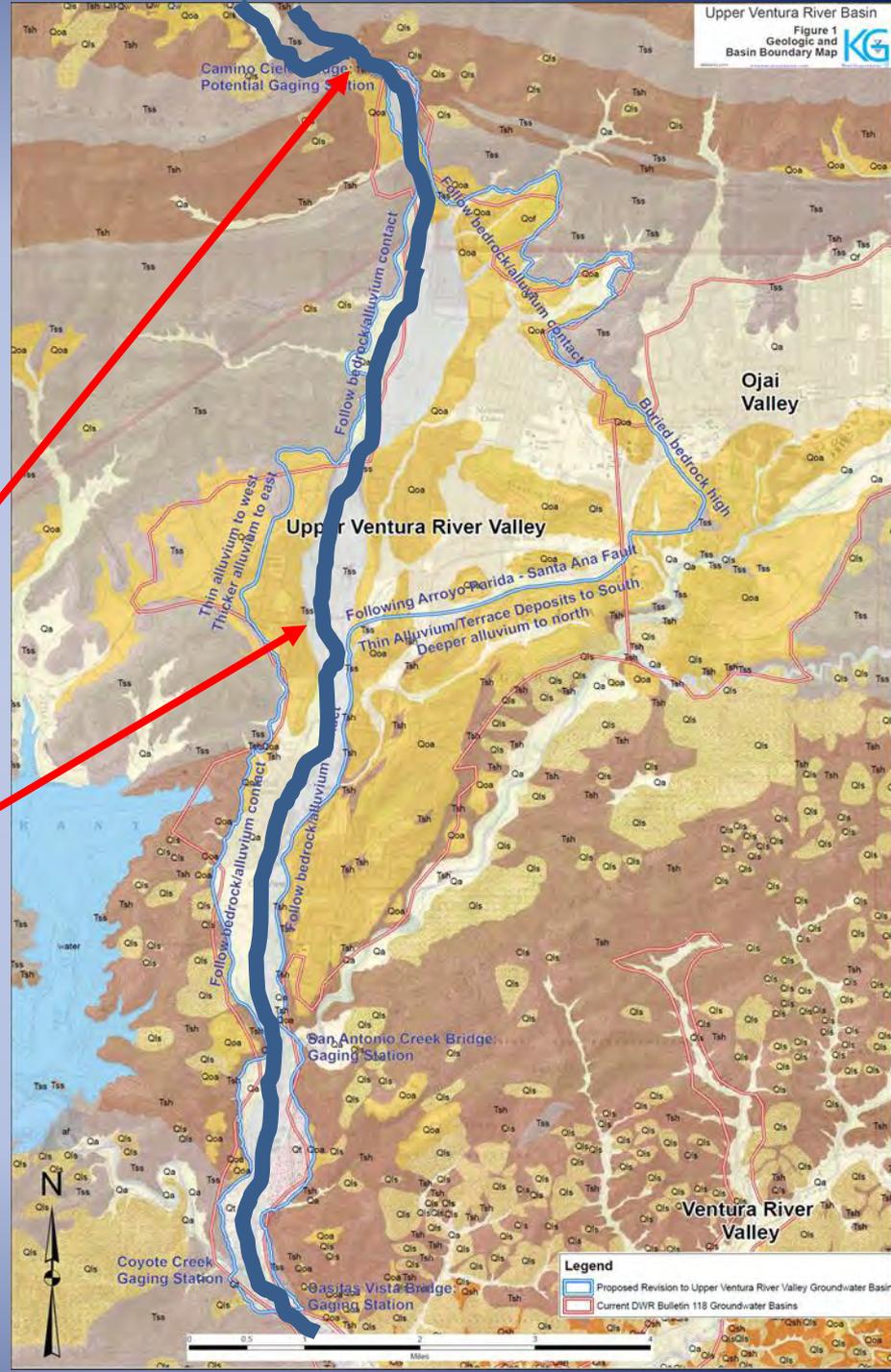
Pre-fire:

5 cfs at Camino Cielo Bridge
Infiltrates completely by 2 miles
=5cfs/2 mi => 2.5cfs/mile

Post-fire:

6.2 cfs at Camino Cielo Bridge
1.2 cfs at Casitas Vista Bridge
=5 cfs/10 mi => 0.5 cfs/mile

6.2 cfs at Camino Cielo Bridge
1.2cfs at Highway 150 bridge
=5 cfs/5 mi => 1 cfs / mile



Southern Wet Edge Of Surface Flow

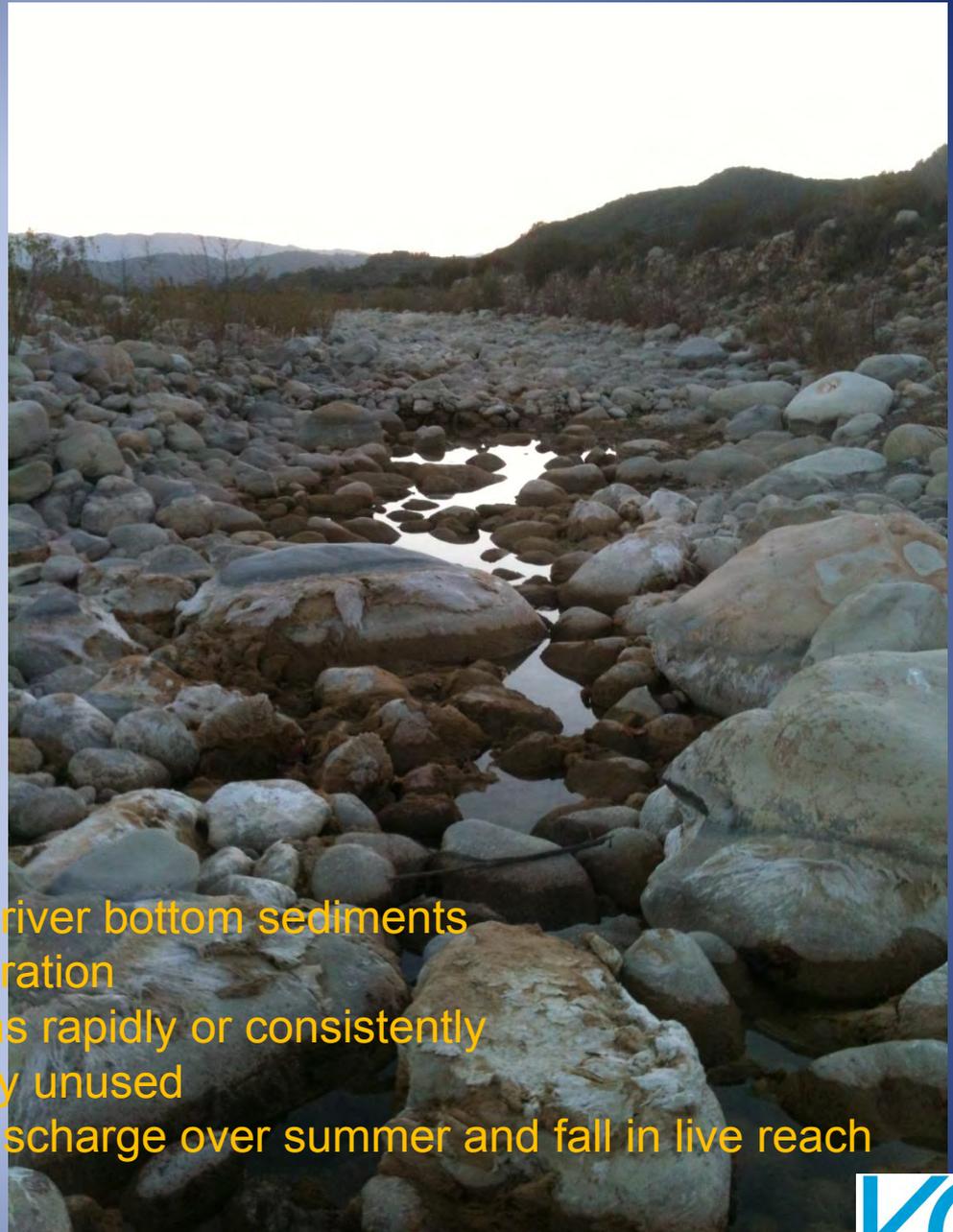
Moves constantly

-Advances southward with:
increase surface water
or increased groundwater
storage

-Recedes northward with:
decreased surface water and loss
or decreased groundwater
in storage in balance with surface
water

Ash component:

- decreases infiltration capacity of river bottom sediments
- River flows to ocean without infiltration
- Groundwater does not respond as rapidly or consistently
- Available aquifer storage capacity unused
- less water available for natural discharge over summer and fall in live reach



Water escapes watershed





Test Description	Result				Graphical Results Presentation				
	mg/L	Meq/L	% Meq	Lbs/AF	Good	Possible Problem	Moderate Problem	Increasing Problem	Severe Problem
Cations									
Calcium	100	5	42	270	**				
Magnesium	30	2.5	21	82	**				
Potassium	2	0.051	0	5	**				
Sodium	103	4.5	37	280					
Anions									
Carbonate	< 10	0	0	0					
Bicarbonate	200	3.3	31	540	**				
Sulfate	225	4.7	45	610	**				
Chloride	88	2.5	24	240					
Nitrate	< 0.5	0	0	0					
Nitrate Nitrogen	< 0.1			0					
Fluoride	0.9	0.047	0	2					
Minor Elements									
Boron	1.5			4.1					
Copper	< 0.01			0.00					
Iron	0.090			240					
Manganese	0.010			27					
Zinc	< 0.02			0.00					
TDS by Summation	749			2000					
Other									
pH	7.8			units					
E. C.	1.15			dS/m					
SAR	2.3								
Crop Suitability									
No Amendments	Fair								
With Amendments	Fairly		Good						



Fe

TSS

As

Turbidity

Mn

pH

TOC

ORP

Na

LSI

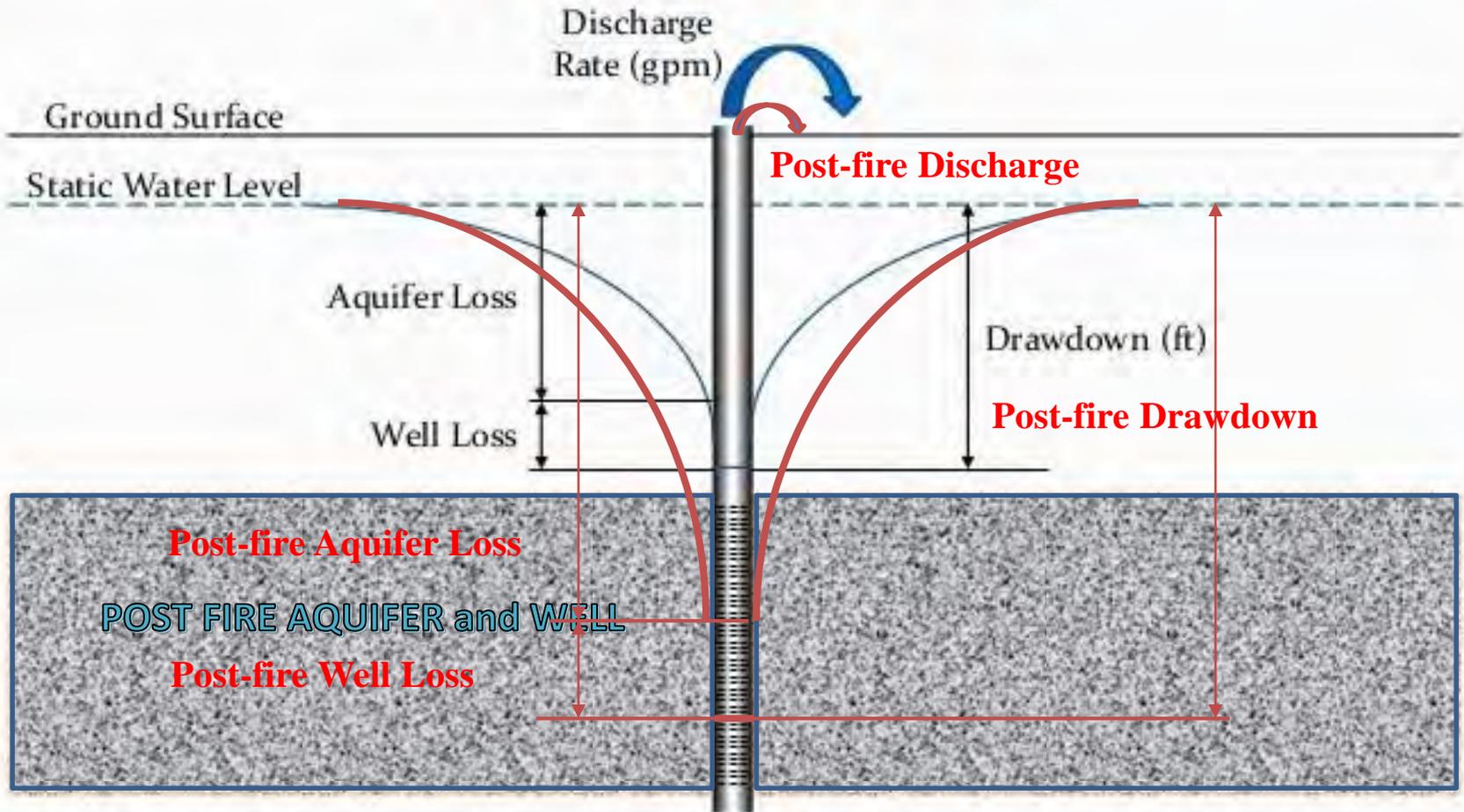
Cl

Alkalinity

SO₄

Tannin

Well Efficiency



$$\text{Well Efficiency (\%)} = \text{Aquifer Loss} / \text{Total Drawdown}$$

