

**AGENDA**  
**WATER RESOURCES COMMITTEE**  
**Tuesday, May 2, 2023, at 9:00 a.m.**  
**UNITED WATER CONSERVATION DISTRICT**  
**Boardroom, 1701 N. Lombard Street, Oxnard, CA 93030**

**OPEN SESSION:**

**1. Public Comment**

The public may address the Water Resources Committee on any matter on the agenda or within the jurisdiction of the Committee. All comments are subject to a five-minute time limit.

**2. Approval of Minutes - Motion**

The Committee will review and consider approving the minutes from the Water Resources Committee meeting of April 4, 2023.

**3. Annual Investigation and Report of Groundwater Conditions within UWCD (20 minutes: Dr. Hanson)**

Staff will brief the committee on the annual report on groundwater conditions within the District for the past, current and ensuing water year.

**4. Annual Supply and Demand Assessment for the Oxnard Hueneme System (25 minutes: Dr. Hanson)**

Staff will summarize the annual assessment of water supply and demand for the OH system as required by CA Department of Water Resources.

**5. Progress on Planning and Design for New EBB Water Project Monitoring Wells (10 minutes: Mr. Lindquist)**

Staff will present a brief update on progress to date toward design and planning for construction of up to 20 new monitoring wells at NBVC-Point Mugu. This effort is funded largely by the DWR Sustainable Groundwater Management (SGM) Grant, which is being administered by the FCGMA.

**6. Update on Water in Storage in Castaic Lake and Releases to the Downstream Users (10 minutes: Mr. McEachron)**

Staff will provide an update on the storage of storm flows in Castaic Lake and how water is being released to the Downstream Users.

**7. Water Resources Department and GSA Activities Update (5 minutes, Mr. Detmer)**

Staff will provide an update to the Committee on recent Water Resources Department activities and provide an update on GSA activities and schedules for the Fillmore and Piru Basins, Mound Basin and Fox Canyon Groundwater Management Agency (Oxnard, Pleasant Valley and Las Posas Valley basins).

## FUTURE AGENDA ITEMS

## ADJOURNMENT

### Directors:

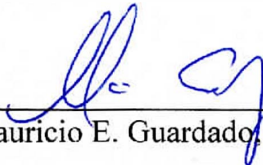
Daniel C. Naumann, Chair  
Mohammed Hasan  
Gordon Kimball

### Staff:

Mauricio E. Guardado, Jr.	Dr. Maryam Bral
Dr. Zachary Hanson	Kathleen Kuepper
John Lindquist	Murray McEachron
Dr. Bram Sercu	Dr. Jason Sun
Dan Detmer	

*The Americans with Disabilities Act provides that no qualified individual with a disability shall be excluded from participating in, or denied the benefits of, the District's services, programs or activities because of any disability. If you need special assistance to participate in this meeting, or if you require agenda material in an alternative format, please contact the District's offices at (805) 525-4431. Notification of at least 48 hours prior to the meeting will enable the District to make appropriate arrangements.*

Approved: \_\_\_\_\_

  
Mauricio E. Guardado, Jr., General Manager

  
Dr. Maryam Bral, Chief Engineer

Posted: (date) April 27, 2023

(time) 4:45 p.m.

(attest)

At: UWCD Headquarters, 1701 N. Lombard Street, Oxnard, CA 93030

Posted: (date) April 27, 2023

(time) 5:00 p.m.

(attest)

At: [www.unitedwater.com](http://www.unitedwater.com)



Board of Directors  
Bruce E. Dandy, President  
Sheldon G. Berger, Vice President  
Lynn E. Maulhardt, Secretary/Treasurer  
Mohammed A. Hasan  
Catherine P. Keeling  
Gordon Kimball  
Daniel C. Naumann

General Manager  
Mauricio E. Guardado, Jr.

Legal Counsel  
David D. Boyer

**MINUTES**  
**WATER RESOURCES COMMITTEE**  
**Tuesday, April 4, 2023, at 9:00 a.m.**  
**UNITED WATER CONSERVATION DISTRICT**  
**Boardroom, 1701 N. Lombard Street, Oxnard CA 93030**

**Committee Members Present:**

Daniel Naumann, chair  
Mohammed Hasan, director  
Gordon Kimball, director

**Staff Present:**

Anthony Emmert, assistant general manager  
Dr. Maryam Bral, chief engineer  
Marissa Caringella, environmental services manager  
John Carman, operations & maintenance program supervisor  
Brian Collins, chief operations officer  
Dan Detmer, water resources manager  
Dr. Zachary Hanson, hydrogeologist  
Eva Ibarra, clerk for the Committee  
Tessa Lenz, environmental scientist/regulatory affairs  
John Lindquist, supervising hydrogeologist  
Murray McEachron, principal hydrologist  
Josh Perez, chief human resources officer  
Zachary Plummer, technology systems manager  
Vanessa Vasquez, administrative assistant  
Brian Zahn, chief financial officer

**Public Present:**

Jared Bouchard, Pleasant Valley County Water District  
Alden Broome, Guadalupe Mutual Water Company  
Omar Castro, City of Oxnard  
Brian Franz, GSI Water Solutions  
Jorgen Gramkow, Southland Sod Farms  
Tony Morgan, DBS&A

**OPEN SESSION: 9:00 a.m.**

Director Nauman called the meeting to order at 9:00 a.m. All Committee members were in attendance (Naumann, Kimball and Hasan).

**1. Public Comment**

Chair Naumann asked if there were any public comments. None were offered.



**2. Approval of Minutes - Motion**

Motion to approve the Minutes from the Water Resources Committee meeting of January 31, 2023. Director Naumann; second, Director Kimball. Voice vote: three ayes (Naumann, Kimball, Hasan). Motion carries unanimously 3/0.

**3. Hydrologic Conditions Update for the Santa Clara River Watershed, March 2023**

UWCD's Principal Hydrologist Murray McEachron presented on weather forecasts from 2022, rainfall totals from October-March 2023, rainfall totals in Santa Paula, conditions at Lake Piru, forecasted flows at the Freeman Diversion, updates from the Santa Clara River and projected flows at the Freeman Diversion facility and release flows from Castaic Lake (see attached slides).

Director Naumann asked Mr. McEachron about the left-over water referencing a yellow line on a graph from his presentation on slide eighteen (projected flows at the Freeman Diversion). Mr. McEachron replied that stored water would be available through May. This prompted Director Kimball to ask if UWCD would have competition for Article 21 water. Mr. McEachron responded that UWCD would have to wait to see how it plays out, but a purchase isn't likely this year. Mr. McEachron continued the discussion by stating that a common question that's been received is whether or not CA remains in a drought and noted that Dr. Bram Sercu would be explaining this during his presentation. Director Naumann asked about water in the summer months and about diversions, including where staff expect to store Article 21 water. Mr. McEachron said the District will be able to meet surface water demands and will encourage users to take surface water deliveries. For Article 21, staff would need to wait to see if it is available in June and consider the condition of the recharge basins at that time. The water could potentially be diverted through Castaic.

**4. Optimization of groundwater recharge at the Saticoy Facility**

Senior Hydrologist Dr. Bram Sercu delivered a presentation to the Committee which included diversion goals for 2023, conveyance of water to the Rose Basin, the Saticoy-Ferro Recharge Pilot Project, United's Recharge Basin Maintenance and Rotation Program, current status of the Saticoy basins and the Forebay monitoring wells. He commented on what is required to end the "groundwater" drought in the Forebay and activities to manage sediment accumulation in the Diversion Canal and Desilting Basin (see attached slides).

Director Naumann asked if the Rose Basin and Noble 1 were being considered and if the Ferro Basin was being used? Dr. Sercu answered yes, the Rose Basin has been used, and added that if the water level rises in the basins this might affect mounding. The plan for the Ferro pilot project is to install pumps and piping to convey 54 cfs from Noble 3 to the Ferro Basin. Director Naumann continued the conversation by asking what percolation range was measured at El Rio. Dr. Sercu replied up to about eight feet per day and that measurements wouldn't be possible without looking at the gauges. He added that as mounding continues, optimizing recharge would be required and that basins that are currently unused will be rotated in.

Director Naumann pointed out a zero line on slide five (Recharge Basin Maintenance and Rotation Program) and asked if this represented sea level? Dr. Sercu responded yes. Other feedback from Director Naumann included adding some footnotes to slide 11 (What will it take to end the "Groundwater Drought in the Forebay?") on how the RPs have changed. Chief Operations Officer





Brian Collins added that the District sometimes pumps the desilting basin dry in April and then removes sediment when it is sufficiently dry.

Omar Castro from City of Oxnard made a public comment stating that residents are anxious to pump their Recycled Water Allocation (credits) as the Fox Canyon GMA resolution provides. He stated if the credits are not redeemed, recycled water will be used for water injection in the future. Based on Dr. Sercu's projection, he asked when can the less than 80,000 AF of available storage threshold be reached? Water Resources Manager Dan Detmer noted that the recent 2022 annual report reports on drought conditions from last year. He added that since then there has been significant recharge and groundwater mounding near the Saticoy basins, and the available storage estimate is down to 68,000 acre-feet in the Forebay. Mr. Detmer also stated that perhaps later this year that window will open for allocation recovery. One of the things that is not clear as of yet, he said, is if the City's production will increase greatly if recycled water allocation recovery becomes available. If UWCD can understand Oxnard's intentions related to allocation recovery, then staff can make a better argument.

Jurgen Gramckow, from Southland Sod Farms, asked if conditions would improve to where Fox Canyon GMA's resolution would allow Oxnard to pump back recycled water allocations? Mr. Detmer replied that he reviewed the terms of the resolution and basin conditions and thinks it likely that recycled water allocations can be used this year.

Director Naumann asked if FCGMA decided where water is pumped from? Mr. Detmer replied that per the resolution the water would be pumped from the OH well field in the Forebay or from the City's wells.

Director Naumann suggested that for the presentations this information needed to be reflected on and discussed. Director Kimball suggested to Dr. Sercu and Mr. McEachron that staff work to show how staff will work through these challenges shared in the presentations. Director Naumann concluded that the Board does not need to know all the details presented to the Committee, and recommended that staff make the presentation more concise, adding that, overall, it was an excellent presentation. Supervising Hydrogeologist John Lindquist asked Committee members if staff should tighten presentations? Director Naumann responded that all information is important and to discuss all water coming in, Article 21 and recharge activities with the full Board.

## **5. Water Resources Department and GSA Activities Update**

Mr. Lindquist presented the Water Resources Department Updates that included staff actively supporting operations for releases and recharge and Groundwater modelers working on designs for the Extraction Barrier Brackish (EBB) Water Treatment Project. Next month staff recommended that Zach Hanson present on an annual report groundwater conditions and long-term overdraft.

Director Naumann added that all the District Facility Tours participants have had nothing but good feedback. He mentioned that within two to three hours after the tours, he receives phone calls from community members that were excited to see the work being done. He added that tour participants were thrilled to see water running and, addressing the public, he recommended they need to get out to the Santa Felicia Dam and see for themselves.

## **FUTURE AGENDA ITEMS**

Will be reviewed with MEG and see if he has changes.



**ADJOURNMENT 10:15 a.m.**

Chair Naumann adjourned the meeting at 10:15 a.m.

I certify that the above is a true and correct copy of the Minutes of the Water Resources Committee Meeting of April 4, 2023.

**ATTEST:**

\_\_\_\_\_  
Daniel Naumann, Chair



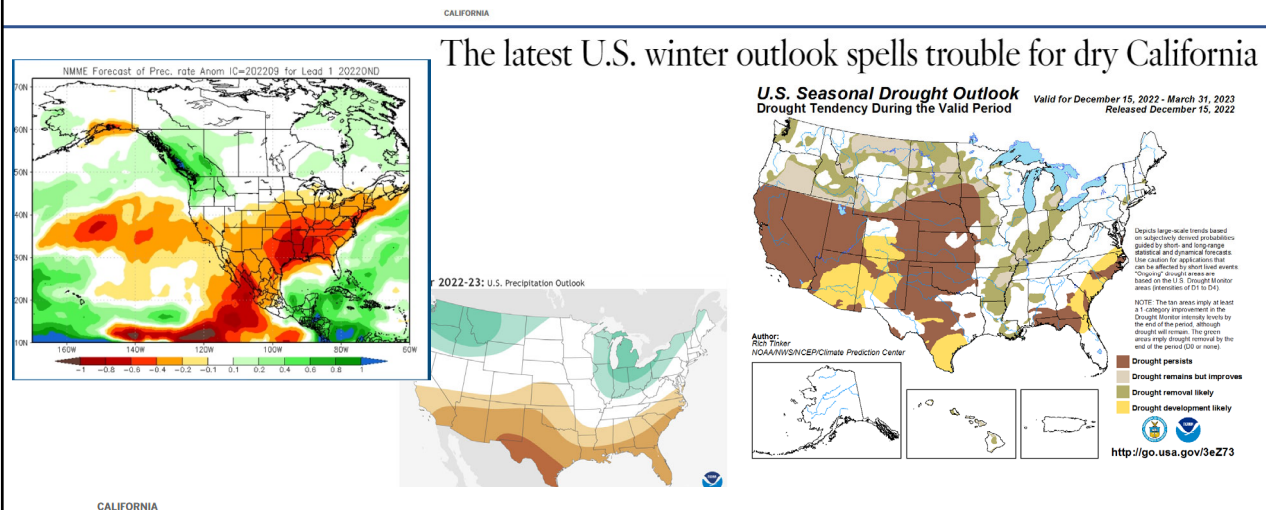
Legal Counsel  
David D. Boyer

# Hydrologic Conditions Update for the Santa Clara River Watershed March 2023



1

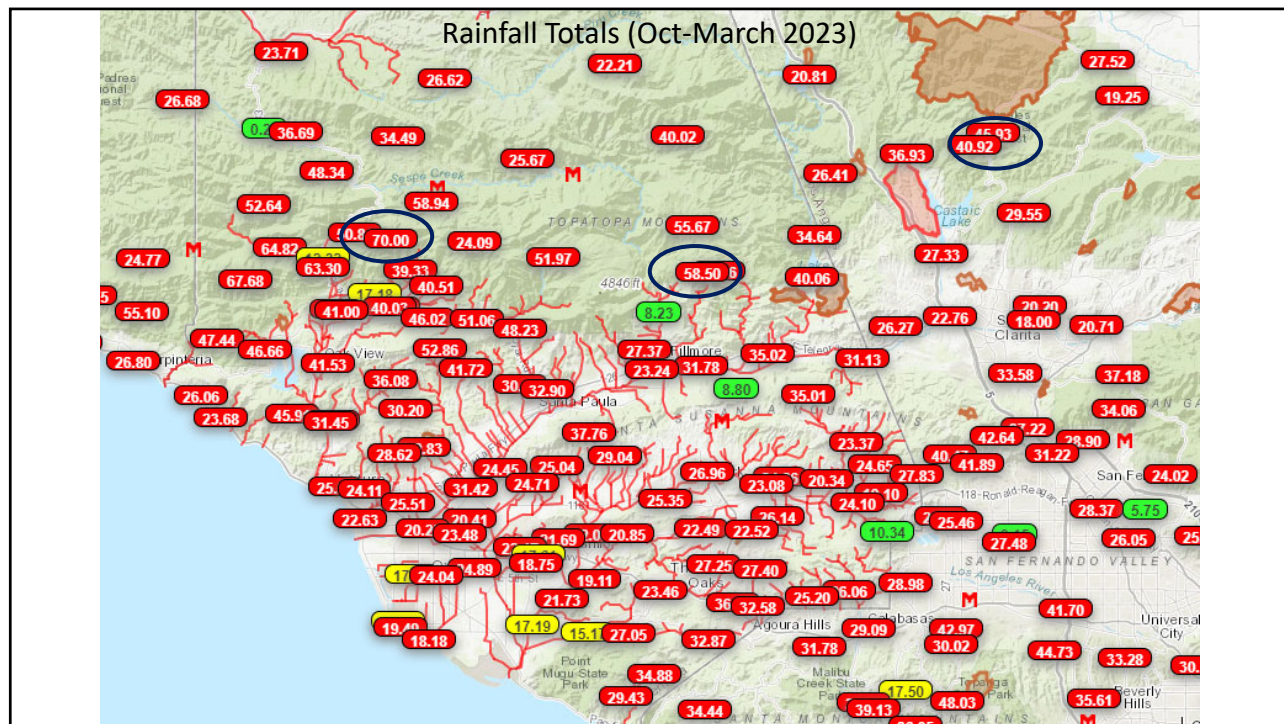
## Weather Forecasts in November 2022



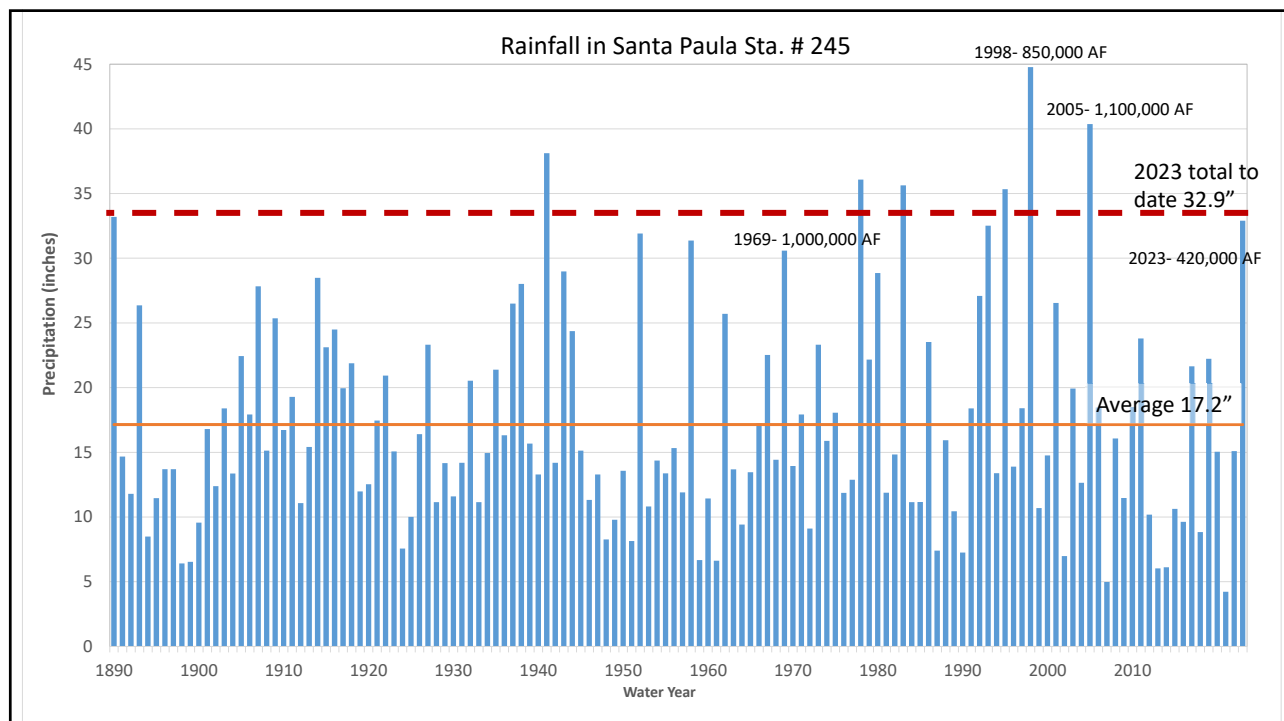
California should expect a 'fourth dry year' as drought persists

2



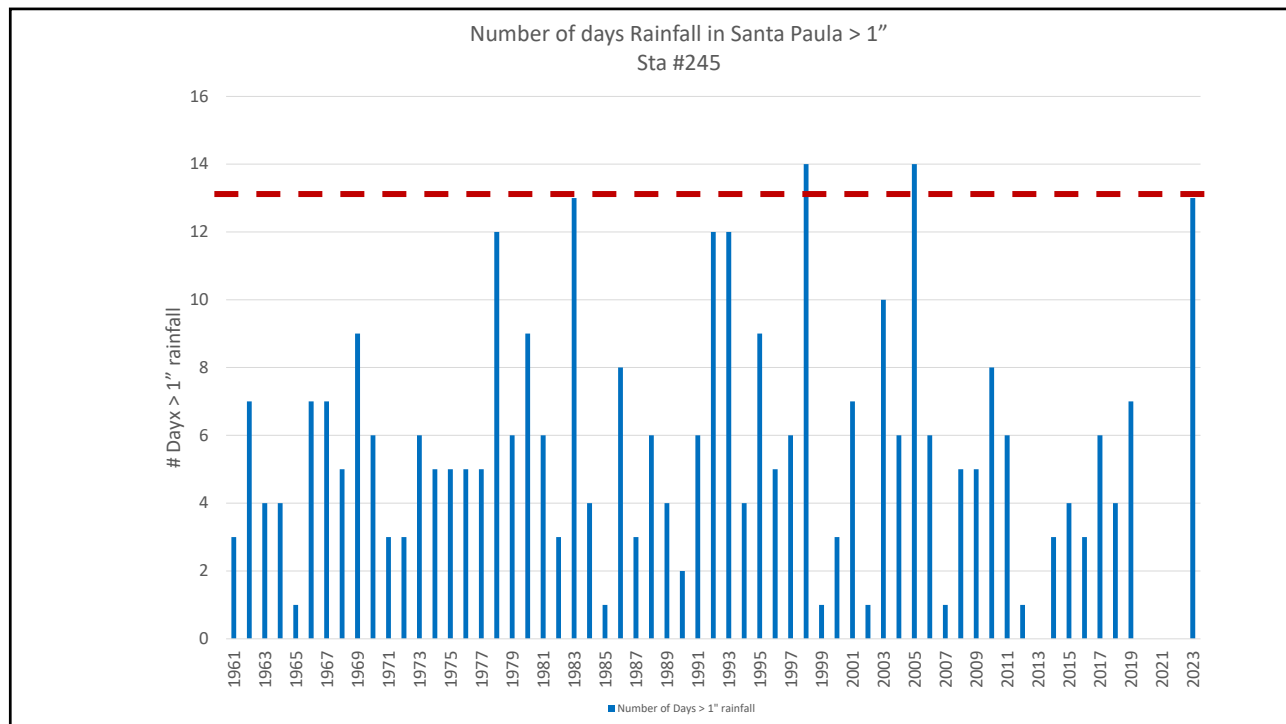


3



4

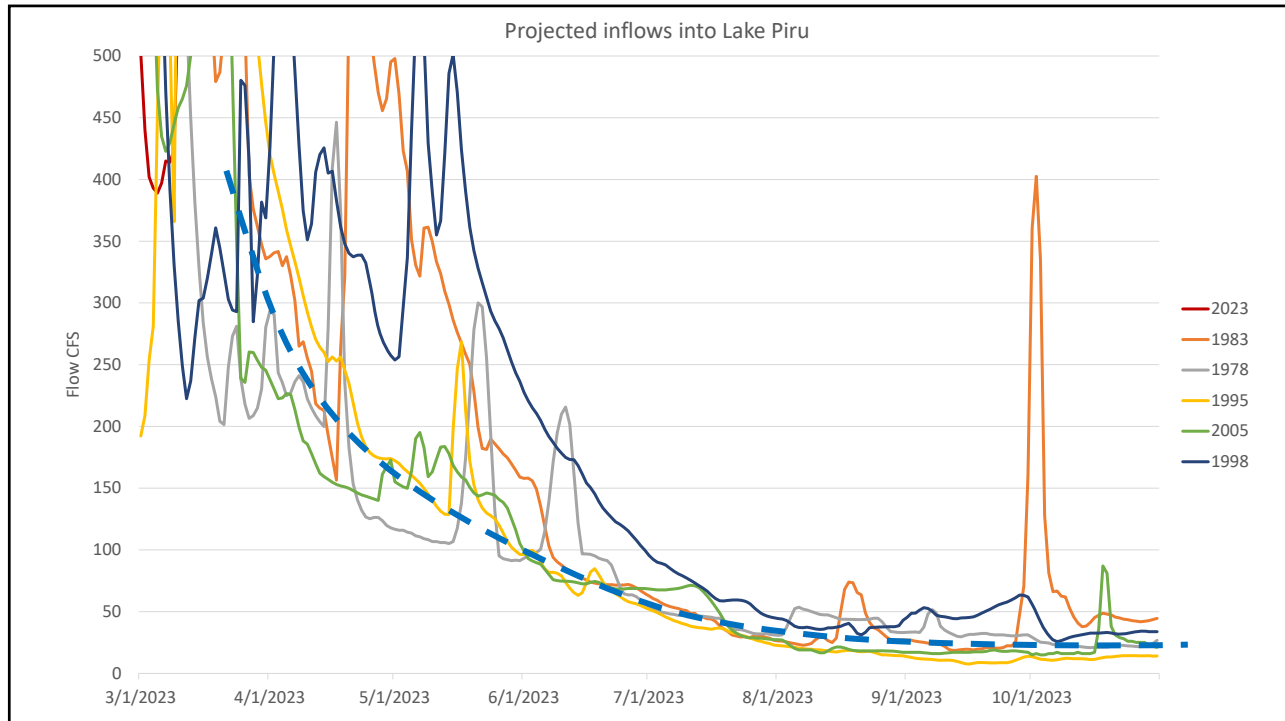




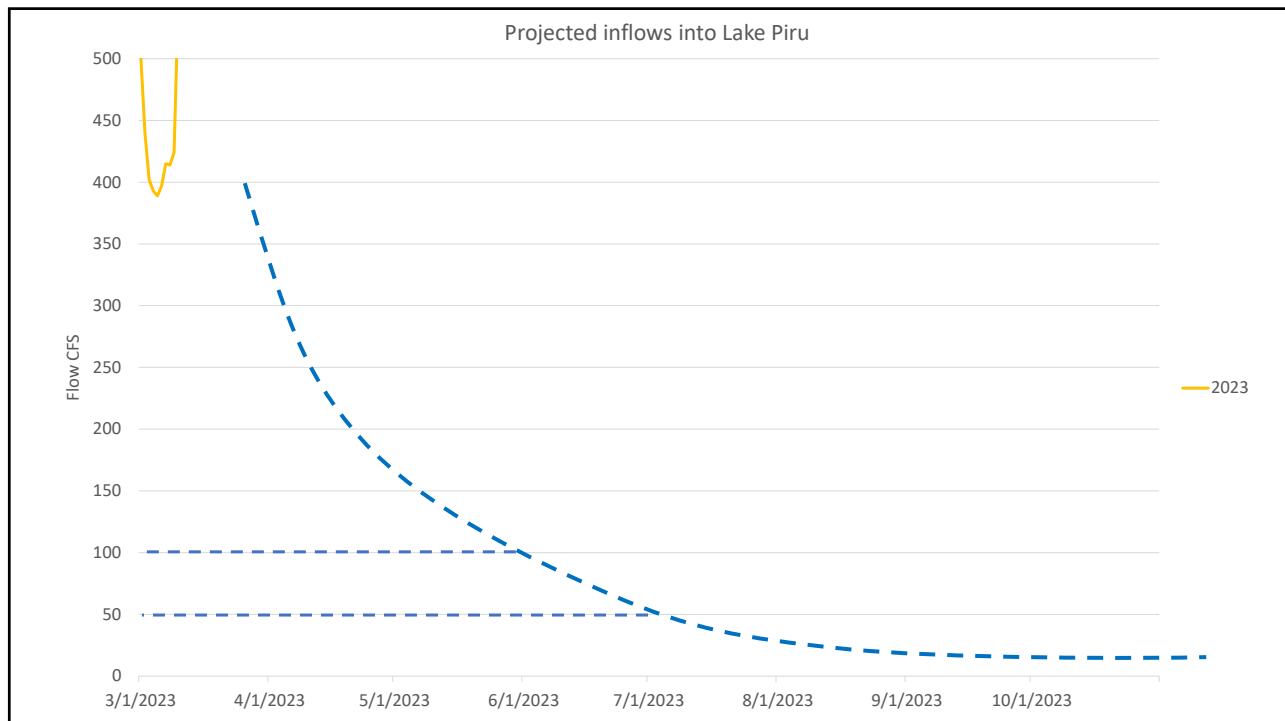
5



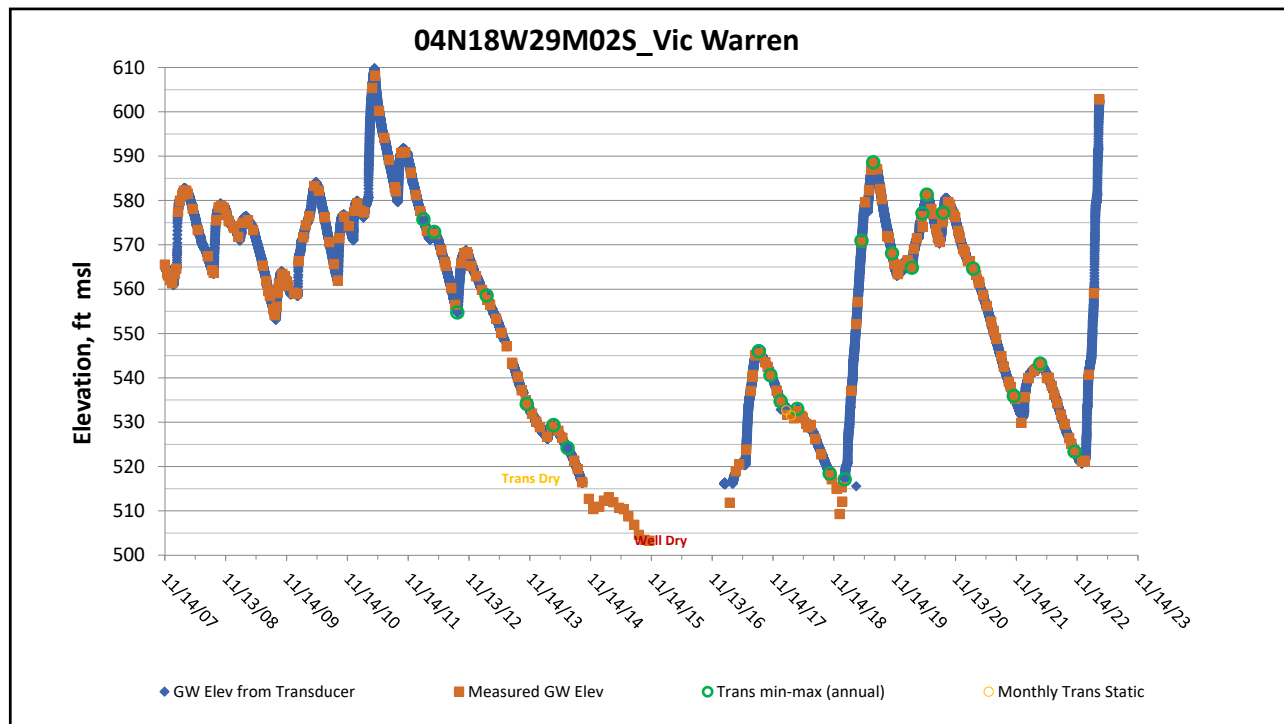
6



7



8



9



10



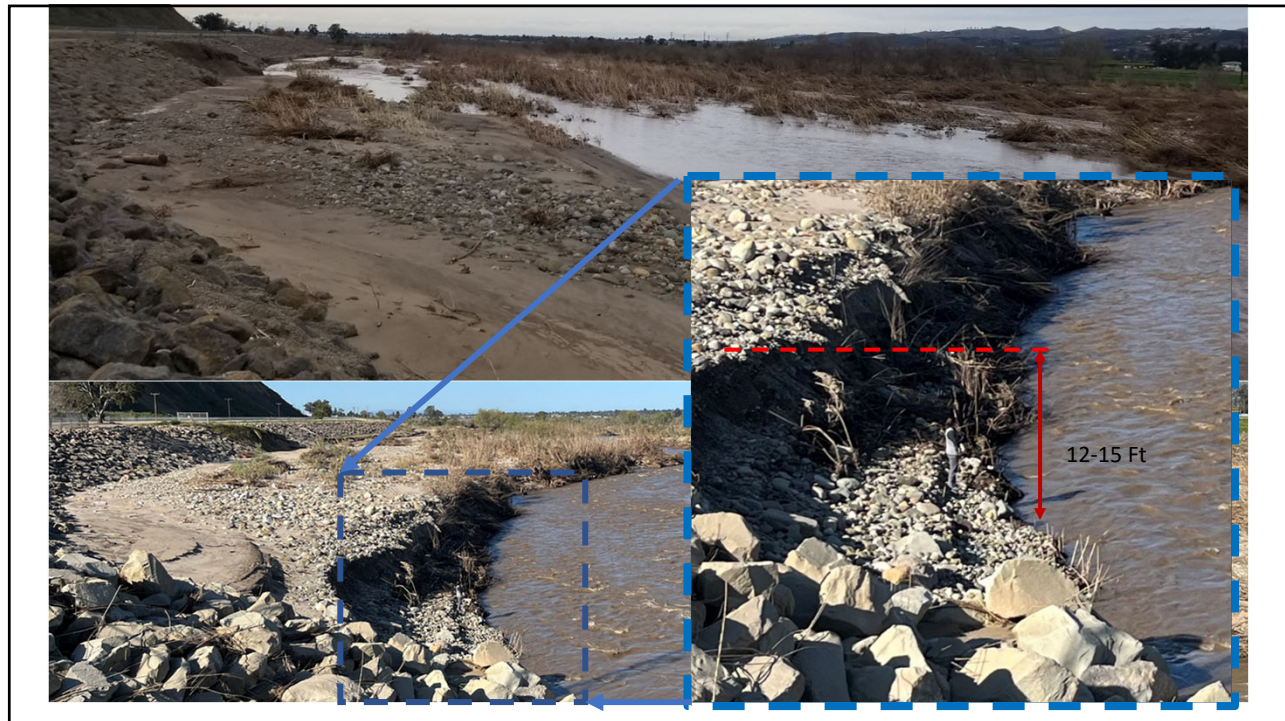


11



12



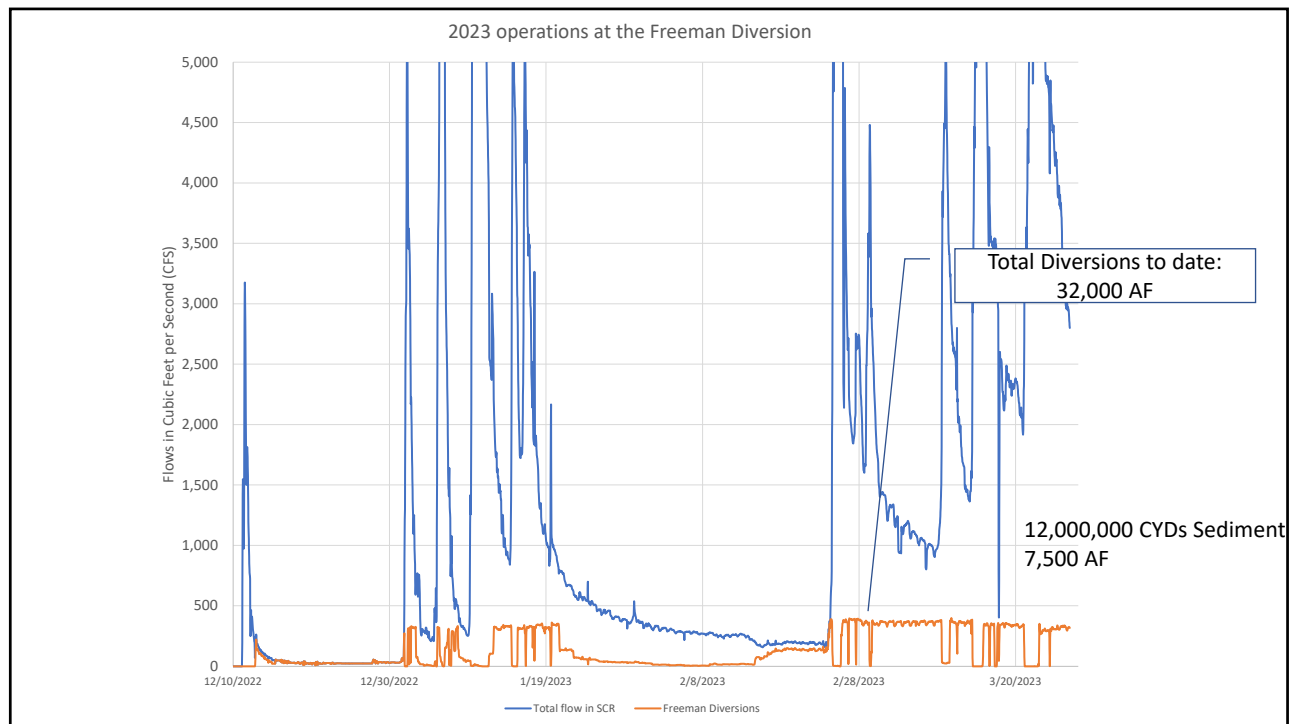


13

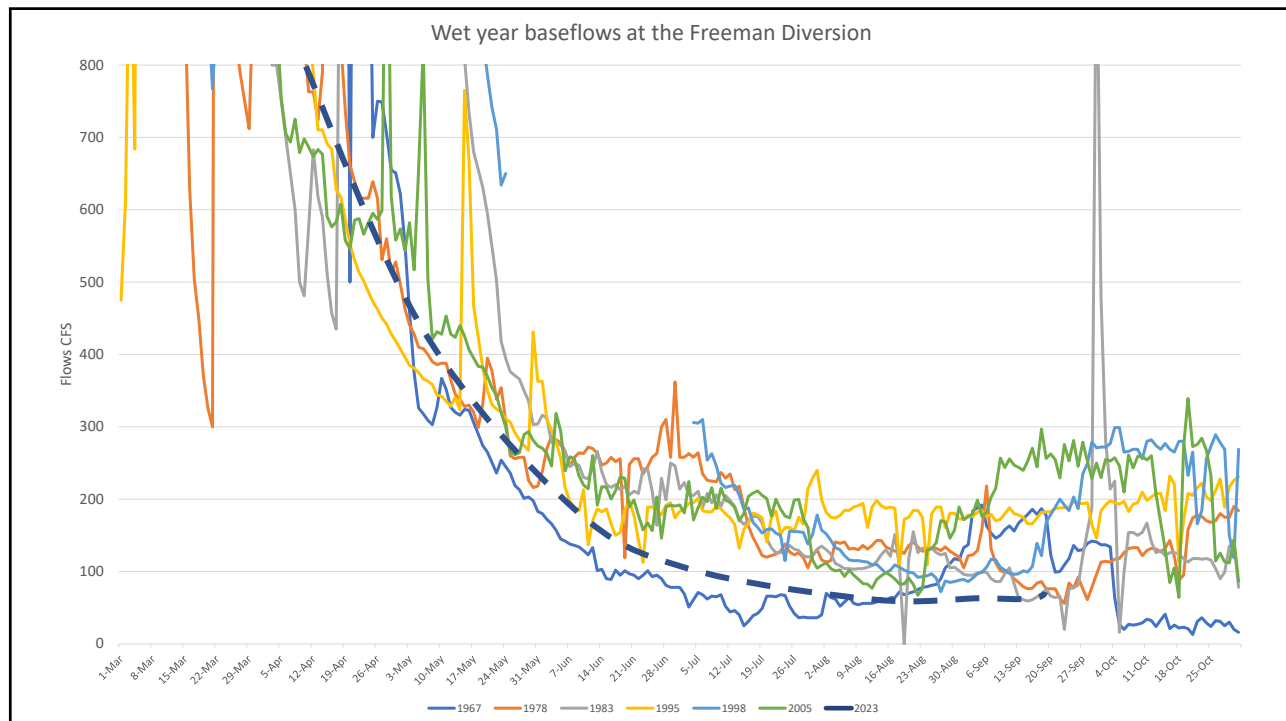


14

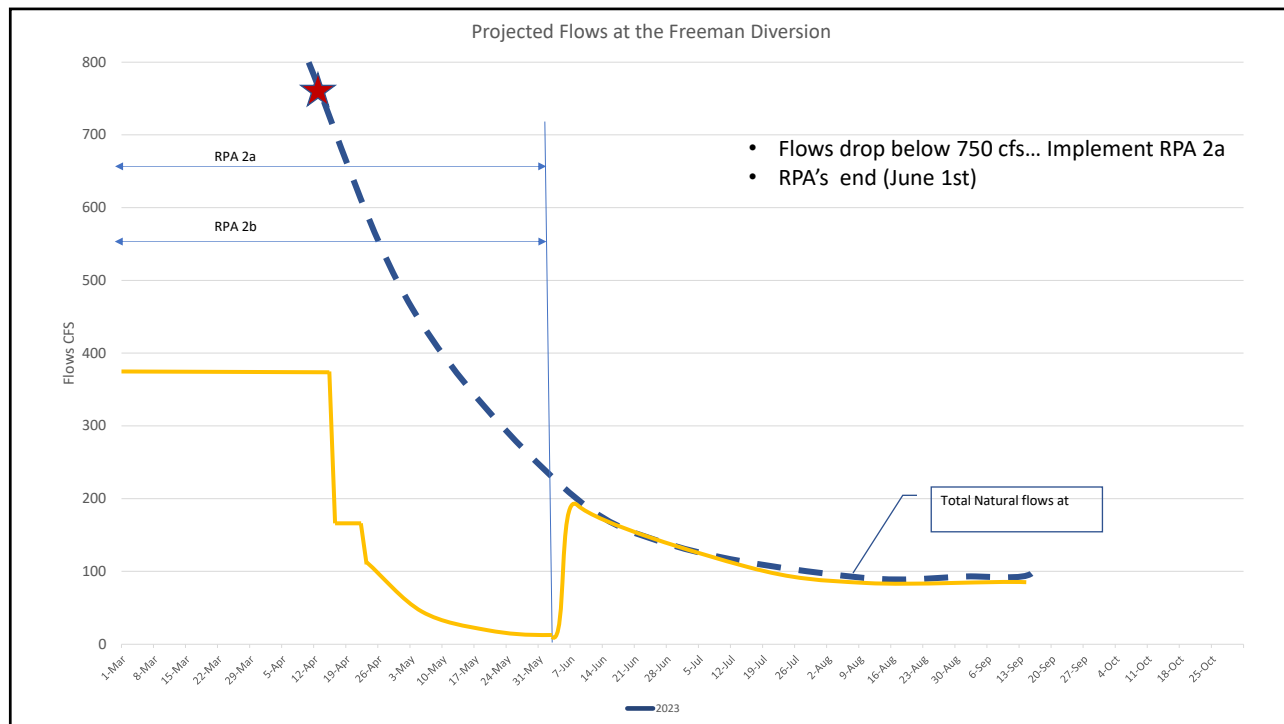




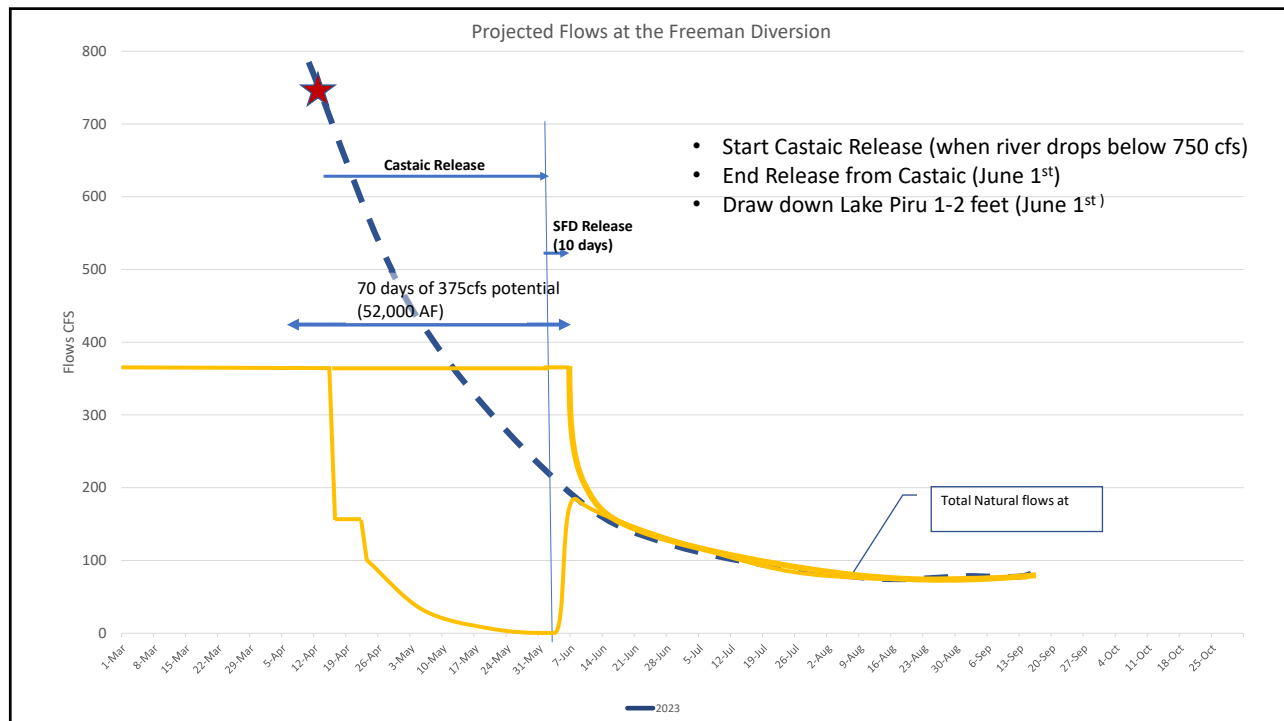
15



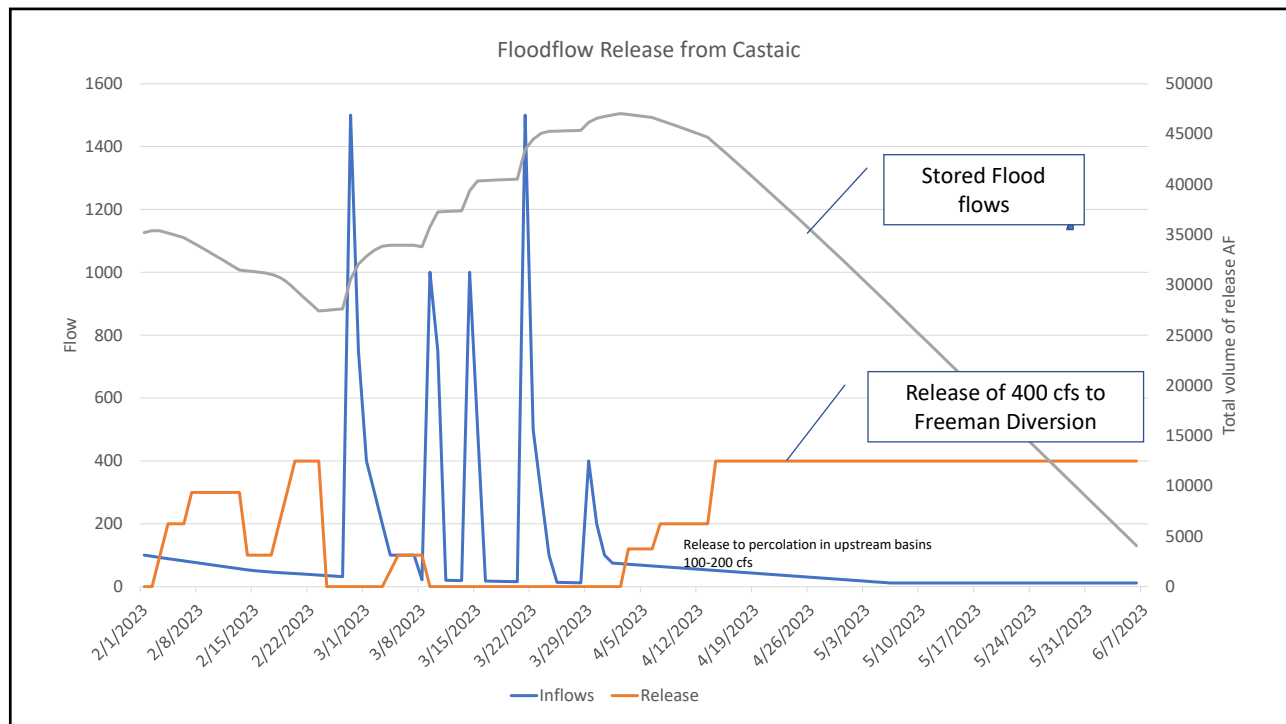
16



17



18



19



20

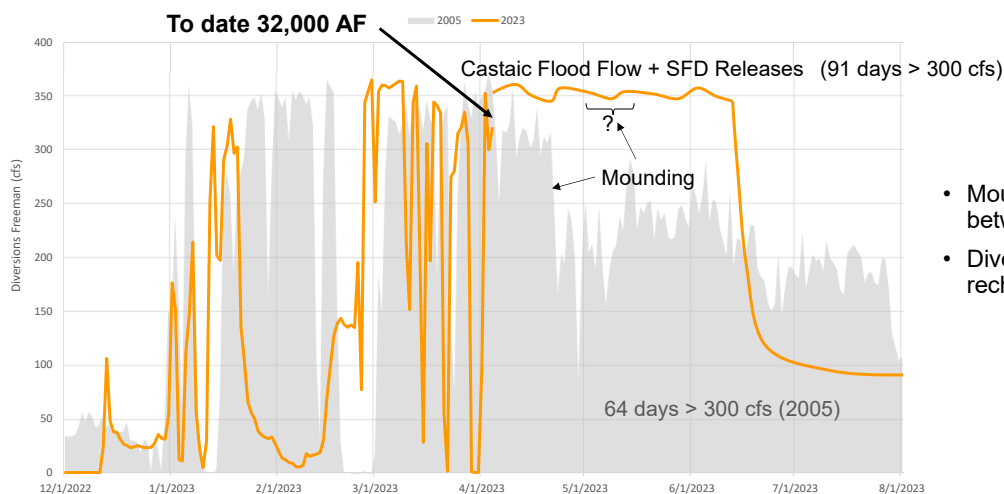
## 4. Optimization of Groundwater Recharge at the Saticoy Facility

Presented by Dr. Bram Sercu  
Water Resources Committee Meeting  
April 4, 2023



1

### DIVERSION GOALS FOR 2023



- Mounding anticipated between 5/1 – 5/15
- Diversions limited by recharge capacity

2

## ROSE BASIN



- Connected to Noble 1 in 2016
- 80 cfs conveyance to Rose
- Preliminary perc rates 4-5 ft/d
- Will be instrumental in maintaining diversion rates through June 10



3

## SATICOY-FERRO RECHARGE PILOT PROJECT

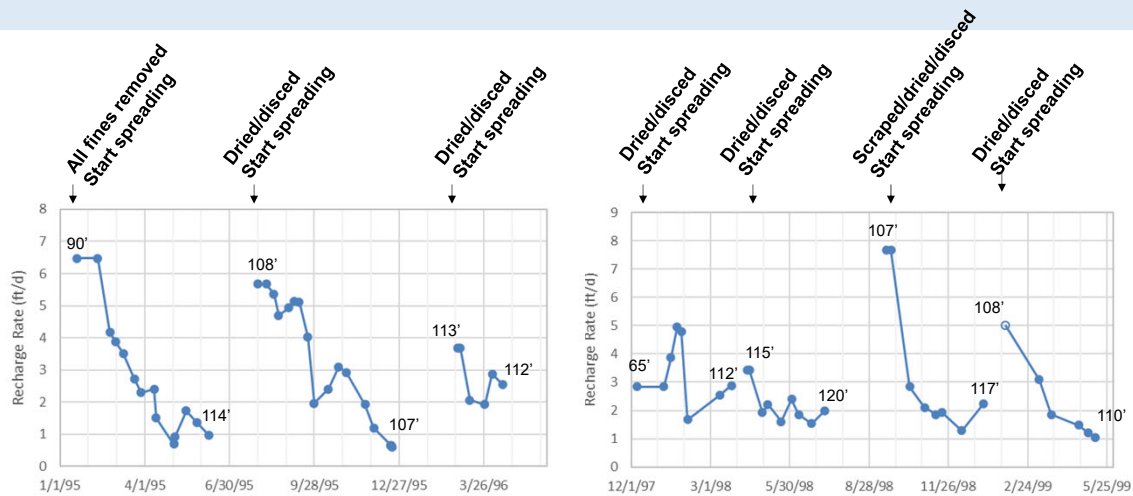
- Increase recharge capacity when mounding
- 54 cfs conveyance to Ferro
- Potential yield:
  - High estimate = 4,600 AF (5/1 – 6/10)
  - Low estimate = 2,700 AF (5/15 – 6/10)



4



## RECHARGE BASIN MAINTENANCE & ROTATION PROGRAM

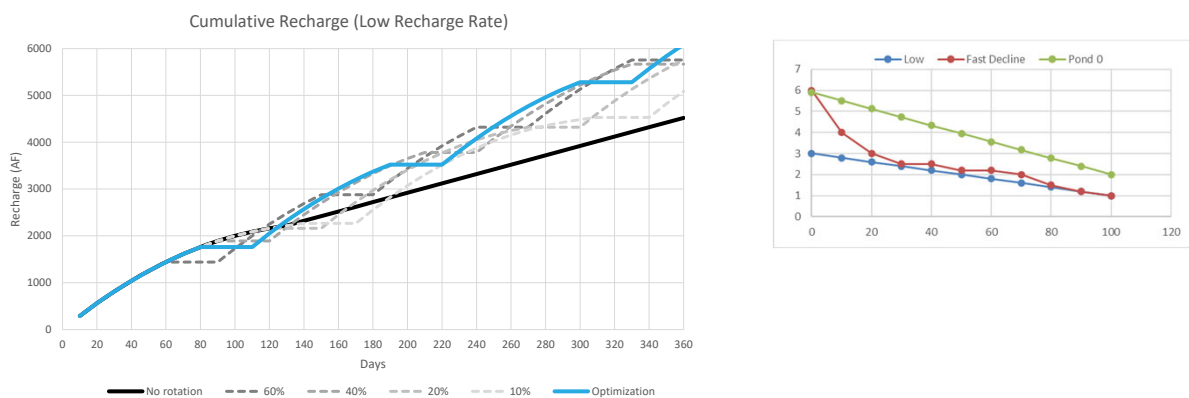


- Scraping works but not needed annually
- Drying + discing generally works
- Need to confirm effect of discing, drying time and local mounding



5

## RECHARGE BASIN MAINTENANCE & ROTATION PROGRAM



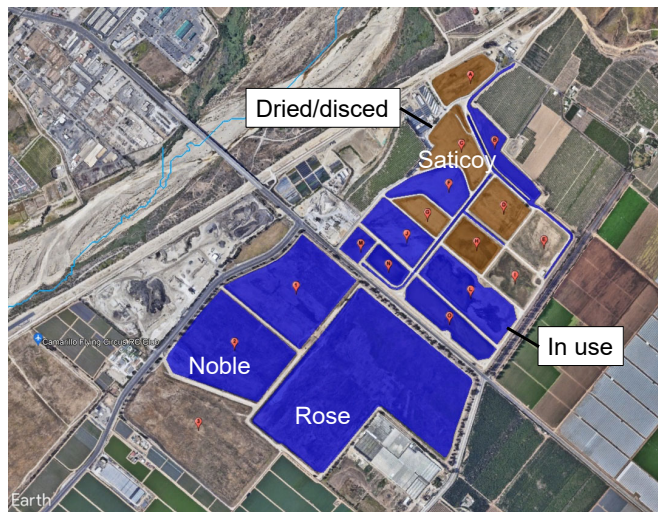
### Simulations confirmed that:

- 1) The maintenance and rotation approach is valid for long periods of recharge
- 2) Basin rotation not needed in first 3-4 months
- 3) Cumulative recharge is not sensitive to exact timing of initiating drying/discing (but do not dry near end of diversion season)



6

## SATICOY BASINS CURRENT STATUS



7

## SATICOY BASINS CURRENT STATUS

	Basin Percolation Rates (ft/day)															
	A	C	D	F	G	H	J	L	M	N	O	N1	N2	N3	Rose	
3/5/2023	1.7	3.9		2.7	3.3	x	1.2		x		6.6	1.5	x	x		
3/8/2023		2.5	4	1.9	2.5	x	1.6	2.8	5		6.4		x	x		
3/21/2023	x	x	x	1.6	x	1.4	1.3	x	4.2		4.3			x		
3/28/2023	x	x	x	1.8	x									x		

Dry

In use

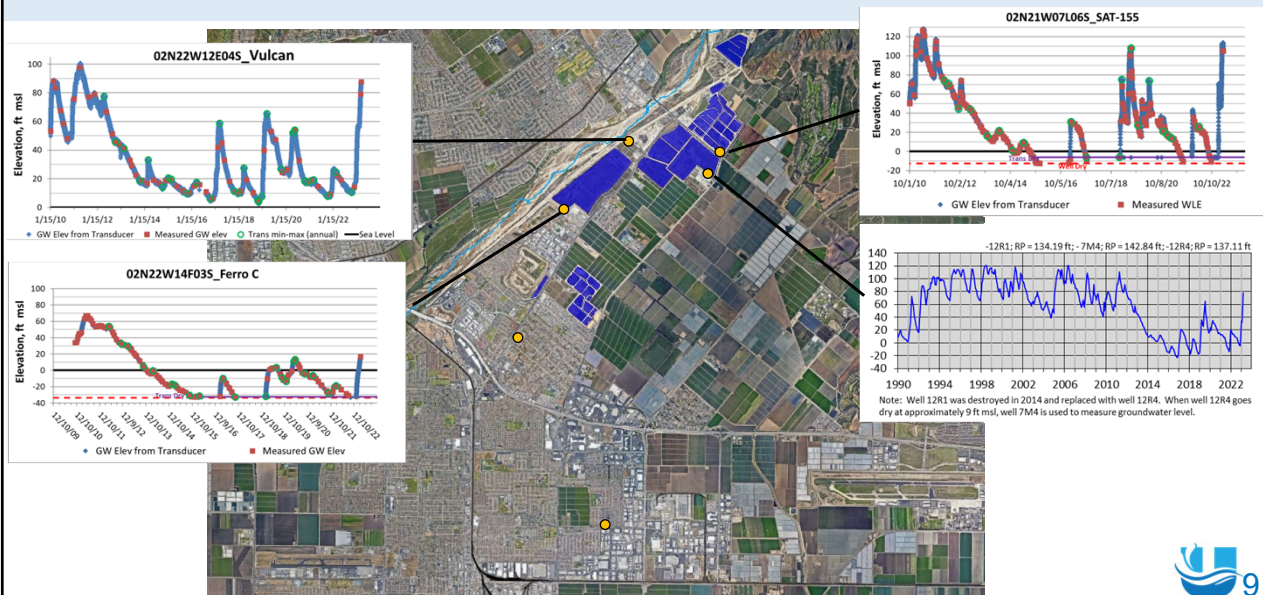
### Work Plan:

- 1) Continue coordination with operators to measure percolation rates and plan drying, discing and basin rotation
- 2) Also track recharge long-term to determine when removal top layer is needed



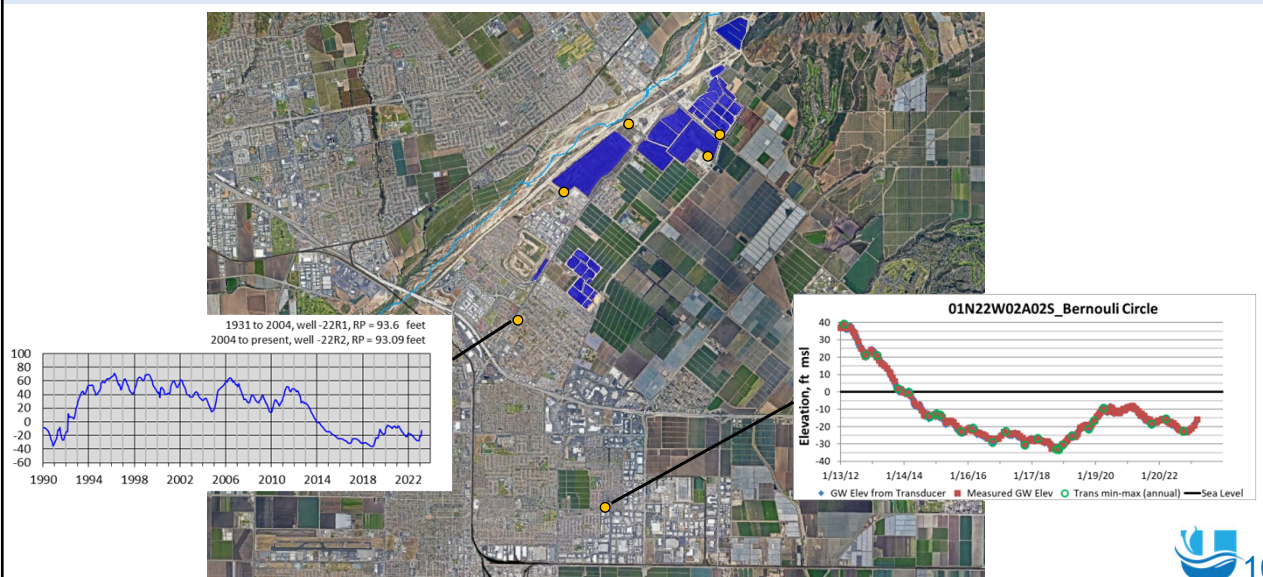
8

## FOREBAY MONITORING WELLS



9

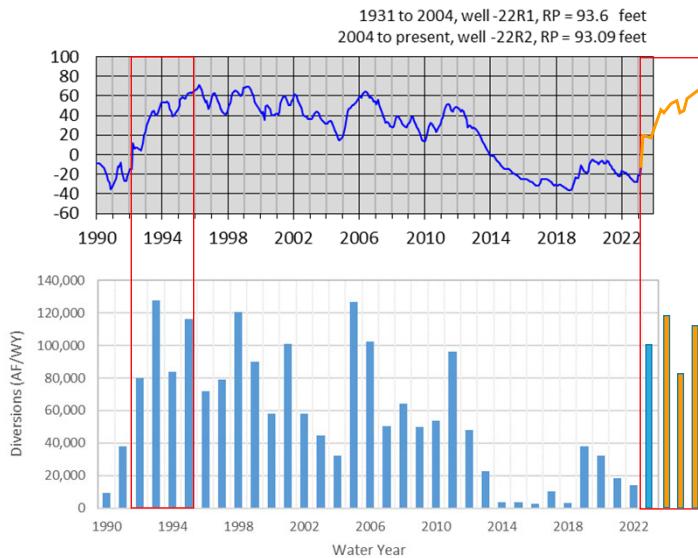
## LOWER FOREBAY/OXNARD PLAIN MONITORING WELLS



10



## WHAT WILL IT TAKE TO END THE “GROUNDWATER” DROUGHT IN THE FOREBAY?



**Up to 3 more wet years after 2023!**



11

## SEDIMENT ACCUMULATION DIVERSION CANAL



12

## SEDIMENT ACCUMULATION DESILTING BASIN



13

## QUESTIONS?



14





### **Staff Report**

**To:** Water Resources Committee

**Through:** Mauricio E. Guardado, Jr., General Manager

**From:** Maryam Bral, Chief Engineer  
Dan Detmer, Water Resources Manager

**Date:** April 26, 2023 (May 2, 2023, meeting)

**Agenda Item: 7. Monthly Water Resources Department Report and update on Activities of local Groundwater Sustainability Agencies (GSAs) Information Item**

---

#### **Staff Recommendation:**

The Committee will receive a summary report on various Water Resources Department activities for the month of April 2023, including a summary of the monthly activities of the three local Groundwater Sustainability Agencies (Fox Canyon Groundwater Management Agency, Fillmore and Piru Basins GSA, and Mound Basin GSA), for which District board members serve as member directors, and the Santa Paula basin (adjudicated) Technical Advisory Committee, for which District staff serve as members. Staff may also report on state-wide issues related to the implementation of the Sustainable Groundwater Management Act (SGMA) of 2014.

#### **Discussion:**

##### **Staff Activities**

In addition to the Department's routine, ongoing groundwater monitoring and reporting programs and its support of Groundwater Sustainability Agencies (summarized below), notable efforts and activities conducted by staff during the past month included the following:

- United's hydrologists are assisting other District staff with operational decisions at Freeman Diversion in order to manage problems with sediment accumulation near the intake structure, maximize diversions, and comply with regulatory requirements to provide opportunity for fish migration and passage.
  - United's hydrologists are assisting other District staff to assess and comply with *O. mykiss* migration release requirements at Santa Felicia Dam and bypass flows at Freeman Diversion.
-

**Agenda Item: 7. Monthly Water Resources Department Report and update on Activities of local Groundwater Sustainability Agencies (GSAs) Information Item**

Page 2

---

- United's hydrologists continue to coordinate the release to captured stormwater from Castaic Lake to the Downstream Users and are actively monitoring several gaging locations to assess flow conditions along the Santa Clara River and major tributaries.
- Staff is coordinating with recharge operators at Saticoy to measure percolation rates in individual basins and then dry and disc the basins when necessary to maintain optimum percolation rates for the facility.
- Groundwater Modeling:
  - Staff have developed and calibrated a Perched Aquifer Model (PAM) to simulate groundwater flow in the unconfined Semi-perched aquifer in the Extraction Barrier and Brackish (EBB) Water Project study area. The break-out model will allow higher resolution (both horizontally and vertically) forecasting of groundwater flow in the study area. The model will allow simulation of solute transport in the unconfined perched aquifer, including the inland extent of the natural seawater density wedge at the base of the aquifer near the coastline.
  - Staff continued to apply MODFLOW's "Subsidence package" to the District's existing groundwater flow model of the OPV basins to forecast potential occurrence and magnitude of land subsidence during the model calibration period (1985-2019) and under future assumed pumping scenarios and basin conditions.
  - Staff have assisted the City of Ventura and their consultant in modeling travel times and areas of influence for their proposed indirect potable reuse project located near their Golf Course wells in the NW portion of the Oxnard basin.
- Staff are assisting the Environmental Services and Engineering Departments in evaluating fish passage design modifications under consideration for United's Habitat Conservation Plan (HCP), including assisting with planning of physical modeling efforts at the Bureau of Reclamation's facility in Denver and at the University of Iowa.
- Staff continue to assist the Engineering and Environmental Services Departments and their consultants to conduct the environmental permitting and engineering design efforts for Phase 1 of United's EBB Water Project.
  - Staff continue to support selection of locations and design specifications for extraction wells to be included as Phase 1 of the EBB Water Project.
  - Staff continue to plan for installation of EBB Water Project Phase 1 groundwater monitoring wells and are managing the SGM Grant activities associated with this project. Staff are reviewing statements of qualifications and proposals from potential well-construction-oversight consultants and will likely recommend selection of a consultant to United's Board of Directors within the next two months.
  - Staff are developing a monitoring plan for Phase 1 of EBB Water (extraction of brackish water and discharge without treatment), to measure and evaluate potential effects on groundwater elevations, hydraulic gradients, and groundwater quality in the project area. The information collected will be used to adjust operations of Phase 1 (if necessary) and provide data to support optimization of design of Phase 2.

**Agenda Item: 7. Monthly Water Resources Department Report and update on Activities of local Groundwater Sustainability Agencies (GSAs) Information Item**

Page 3

---

- Staff are modeling and assessing various well field arrangements and production rates for Phase 2 of the EBB Water Project.
- Staff are assisting the Engineering Department in evaluating the feasibility and water resources impacts of releasing water from Lake Piru and operating at lower reservoir levels as an Interim Risk Reduction Measure prior to and during the construction of the new outlet works. During construction, unprecedented low reservoir levels in the range of elevations 940-945 feet are needed to be able to build the new multi-port slopping intake and a tunnel.
- Staff continue to assist with planning and coordination for the purchase and release of Table A water and supplemental State Water Project (SWP) water acquired from other SWP contractors. Staff are also working to determine what modifications to United's water right permits and licenses might be required to increase the instantaneous diversion rate at Freeman Diversion.

**Outreach and Educational Activities**

- Staff have led several tours of Freeman Diversion and United's recharge facilities for local and regional water users throughout the past month.

**Fox Canyon Groundwater Management Agency (FCGMA)**

Staff continue to monitor and, where appropriate, participate in the FCGMA's groundwater sustainability planning and implementation efforts in the Oxnard, Pleasant Valley, and Las Posas Valley basins. United staff continue to meet periodically with FCGMA staff and other stakeholders to develop analyses of benefits and impacts of water-supply projects and different variations of those projects in support of developing a sustainable, resilient water-supply portfolio for the service areas of both agencies. United staff also attended and, where appropriate, contributed to, FCGMA Board and Committee meetings, as follows:

*Board of Directors meetings* – The next regular FCGMA Board meeting is scheduled for April 26, at 1:30 pm. The meeting will be held after the submission of this staff report, and therefore a summary will be included in next month's staff report. Notable agenda items include:

- Receive a presentation from Agency staff on a new water well permit application from Ventura County Waterworks District No. 1 (WWD-1) and consider a request for an exception from the prohibition on new extraction facilities set forth in Article 4 of Emergency Ordinance E for the new well permit application.
- Receive a presentation from Agency staff regarding groundwater management in the Arroyo Santa Rosa Valley Basin (ASRVB) under the draft Groundwater Sustainability Plan (GSP); receive a presentation from the consultant that prepared the ASRVB GSP.
- Receive a presentation from Agency staff on recommendations for improving basin management and administration of combined operation of extraction facilities under "CombCodes."

The next regular Board meeting is scheduled for May 24 at 1:30 p.m.

**Agenda Item: 7. Monthly Water Resources Department Report and update on Activities of local Groundwater Sustainability Agencies (GSAs)**  
**Information Item**

Page 4

---

*Operations Committee meetings* – There was an Operations Committee meeting held on April 19, 2023, at 9:00 am. The main topic of discussion was weighting of criteria for prioritization of water supply and infrastructure projects. The Committee decided to return the current version of the weighting criteria to the full Board with a recommendation of approval. Staff were also directed by the Committee to provide more information about the proposed project-ranking process (e.g., who will review and score projects, the timeline for doing so).

*Executive Committee meetings* – None were held last month.

*Fiscal Committee meetings* – None were held last month.

*OPV Variance Review Committee meeting* – None were held last month.

*Ad Hoc OPV Projects Committee meetings* – None were held last month.

**Fillmore and Piru Basins Groundwater Sustainability Agency (FPBGSA)**

Staff continue to participate in FPBGSA activities supporting SGMA compliance and GSP preparation for the Fillmore and Piru basins, as follows:

*Board of Directors meetings* – The FPBGSA held a regular board meeting on April 20. Notable topics included:

- The Board selected Director Albert Mendez (City of Fillmore) as the new Board Secretary.
- The Board received a presentation from Southern California Edison Company on its Agricultural Energy Efficiency Program which provides incentives for irrigation variable frequency drives on farms.

The next FPBGSA Board meeting is scheduled for May 18, at 4:00 p.m.

*GSP implementation* – None this month, following assistance with the grant application for SGM implementation Round 2 funding in December 2022.

*Data Resources* - A web-based data management and mapping system that includes well construction information and available water level and water quality records for wells within the Piru and Fillmore basins remains available on the agency website, as are numerous technical references relating to the basins and development of the GSPs.

**Mound Basin Groundwater Sustainability Agency (MBGSA)**

Staff continue to participate in MBGSA activities supporting SGMA compliance and GSP implementation for the Mound basin, as follows:

*Board of Directors meetings* – The regular MBGSA Board meeting scheduled for April 24 was canceled, and the next regular Board meeting will be on May 22 at 3:00 p.m.

*GSP implementation* – Staff provide the MBGSA's Executive Director and consultants various groundwater level and quality data periodically, as requested, as part of implementation of the Mound Basin GSP.



**Agenda Item: 7. Monthly Water Resources Department Report and update on Activities of local Groundwater Sustainability Agencies (GSAs) Information Item**

Page 5

---

**Santa Paula Basin Technical Advisory Committee (TAC)**

Staff continue to participate in the Santa Paula basin TAC in support of the Santa Paula Basin Judgment and in conformance with SGMA reporting requirements for adjudicated basins, as follows:

- Staff are preparing a draft version of the Santa Paula Basin Annual Report for 2022.