



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
REGULAR BOARD MEETING
Wednesday, February 8, 2023, 12:00 P.M.
Board Room, UWCD Headquarters
1701 N. Lombard Street, Oxnard CA 93030

DIRECTORS IN ATTENDANCE

Bruce E. Dandy, Board president
Sheldon G. Berger, Board vice president
Lynn E. Maulhardt, Board secretary/treasurer
Mohammed A. Hasan, director
Catherine P. Keeling, director
Gordon Kimball, director
Daniel C. Naumann, director

STAFF IN ATTENDANCE

Mauricio Guardado, general manager
David Boyer, legal counsel
Dr. Maryam Bral, chief engineer
John Carman, operations and maintenance program supervisor
Pete Cervantes, recharge O&M worker II
Brian Collins, chief operations officer
Dan Detmer, water resources manager
Anthony Emmert, assistant general manager
Hannah Garcia-Wickstrum, associated environmental scientist
Tony Huynh, risk and safety manager
Kelly Johnson, lead recharge O&M worker
Evan Lashly, environmental scientist
John Lindquist, supervising hydrogeologist
Murray McEachron, principal hydrologist
Randall McInvale, principal environmental scientist
Craig Morgan, engineering manager
Josh Perez, chief human resource officer
Zachary Plummer, technology systems manager
Linda Purpus, environmental services manager
Ed Reese, technology systems specialist
Destiny Rubio, human resource generalist
Bryan Schaffer, recharge O&M worker I
Daryl Smith, controller
Kris Sofley, executive assistant/clerk of the Board
Clayton Strahan, chief park ranger
Jason Sun, principal hydrogeologist – modeler

PUBLIC IN ATTENDANCE

Jim Fryhoff, sheriff
Garo Kuredjian, commander

Rachel, Laenen, Kimball Ranches
Shane Matthews, assistant sheriff
John Reilly, undersheriff
Jose Rivera, assistant sheriff
Cesar Salas, senior deputy sheriff
Patti Salas, retired commander
Andrew Salinas, assistant sheriff
Eric Schatt, Rincon Consultants

1. FIRST OPEN SESSION 12:00 P.M.

President Dandy called the meeting to order at 12noon. He asked District Legal Counsel to outline the matters to be discussed in Executive (Closed) Session. Mr. Boyer stated that pursuant to Government Code Section 54956.9(d)(2), one case of anticipated litigation would be discussed and that, pursuant to Government Code Section 54956.0(d)(1), six cases of existing litigation, including the City of San Buenaventura v UWCD, Wishtoyo Foundation v UWCD, OPV Coalition v Fox canyon GMA, UWCE v United States, UWCD v California Fish and Game Commission and Wishtoyo Foundation v UWCD, would be discussed by the Board members in Executive Session.

**1.1 Public Comments
Information Item**

President Dandy asked if there were any public comments. None were offered.

1.2 EXECUTIVE (CLOSED) SESSION 12:05 P.M.

President Dandy adjourned the meeting to Executive Session at 12:05p.m.

2. SECOND OPEN SESSION AND CALL TO ORDER 1:13 P.M.

President Dandy called the Second Open Session to order at 1:13p.m.

2.1 Pledge of Allegiance

President Dandy asked Vice President Berger to lead everyone in reciting the Pledge of Allegiance

**2.2 Public Comment
Information Item**

President Dandy asked if there were any public comments. None were offered.

**2.3 Approval of Agenda
Motion**

President Dandy asked GM Mauricio Guardado if there were any changes to the agenda. Mr. Guardado reported that there were no changes to the agenda, however, he added that the President's new Committee assignments were included in the Board members' blue folders and copies were available on the reception desk.

Motion to approve the agenda, Director Berger; Second, Director Naumann. Voice vote: seven ayes (Berger, Hasan, Keeling, Kimball, Maulhardt, Naumann, Dandy); none opposed. Motion carries unanimously 7/0.

2.4 Oral Report Regarding Executive (Closed) Session

Information Item

District Legal Counsel Mr. Boyer reported out of Executive Session that the Board discussed the U.S. Court of Federal Claims decision to dismiss the District's complaint for just compensation under the 5th Amendment, and the Board voted to appeal the Court's decision. Motion to appeal, Director Naumann; Second, Director Maulhardt. Roll call vote: five ayes (Berger, Keeling, Maulhardt, Naumann, Dandy); one nay (Hasan) and one absent (Kimball). Motion carried 5/1/1.

2.5 Board Members' Activities Report

Information Item

President Dandy pointed out that there was a duplication of Activities reports. Ms. Sofley said she would correct the error and repost the Board packet on the District's website. President Dandy asked if there were any questions or comments on the Directors' Monthly Activities (aka per diem) Reports. None were offered.

2.6 Presentation of Proclamation to Ventura County Sherriff Senior Deputy Cesar Salas

Ceremonial Item

President Dandy welcomed Ventura County Sherriff Senior Deputy Cesar Salas as well as Sheriff Jim Fryhoff, Assistant Sheriffs Andrew Salinas, Shane Matthews and Jose Rivera; Undersheriff John Reilly, Commander Garo Kuredjian and retired Commander Patti Salas, wife of Senior Deputy Salas, to the District to witness the presentation of UWCD's Proclamation recognizing Senior Deputy Cesar Salas on his retirement in March 2023. President Dandy spoke of Senior Deputy Salas' numerous contributions ensuring the public safety for visitors and staff at Lake Piru Recreation Area over his career and expressed the District's profound appreciation.

2.7 Staff Service Awards, Part II 2022

Ceremonial Item

President Dandy presented service awards to staff members Peter Cervantez (5 years), Kelly Johnson (15 years) and Bryan Schaffer (15 years) who were unable to attend the earlier January presentation of staff service awards as they were needed to manage operations at the Freeman Diversion during the January storm events. President Dandy noted that the District recognizes the vital contributions of staff in ensuring ongoing operations and successful water management, especially during storm events, and thanked all three staff members for their service and dedication.

Mr. Guardado added that staff faced emergency situations, mudslides, road closures and worked round the clock. He also thanked them for their commitment to the District and the people who rely on them and referred to them as first responders.

2.8 General Manager's Report

Information Item

Mr. Guardado reported that he had been invited to give a presentation on local water conditions to the Associates Insectory organization that was well received. He also stated that the District had received a licensing agreement from the U.S. Navy regarding the District's EBB Water Treatment project, which he was currently reviewing and once executed, would provide staff with frequent access to the project site and monitoring wells. Mr. Guardado then asked the Board for its patience during the remainder of the meeting, as staff had a number of important presentations and reports to deliver to the Board.

President Dandy then interjected that Mr. Guardado was surprised during last night's VCSDA Awards dinner meeting as he was named General Manager of the Year by the association. He added that Mr. Guardado said he was "humbled" by the recognition. President Dandy added that he was no longer the President of the VCSDA and that Kara Ralston was elected as the new president of VCSDA.

Mr. Guardado said that his GM of the Year award was because of all of the UWCD staff, and that he is just a reflection of the UWCD team. He said he truly appreciates all the hard work, commitment and contributions of staff, that he is very grateful for all that staff does and that level of effort reflects on the entire organization.

2.9 Standing Committee Assignments and Appointments of Board Representation to Outside Agencies

Information

President Dandy provided the Board members with the 2023 Standing Committee assignments and copies were made available for the public as well.

2.10 Public Hearing

Proposed Ordinance No. 27 - Consideration to Increase the Compensation of the Board of Directors

Motion

President Dandy opened a Public Hearing and asked for any public comments on the proposed adoption of Ordinance No. 27, approving an increase in the Board of Director's per diem from \$248 to \$260 per day. No public comments were offered. President Dandy closed the Public Hearing and then asked if the Board would make a motion to agendize adoption of Ordinance No. 27 at the March 8, 2023 Regular Board meeting. Motion to agendize a motion adopting Ordinance No. 27 at the March 8, 2023 Board meeting, Director Hasan; Second, Director Naumann. Roll call vote: six ayes (Berger, Hasan, Kimball, Maulhardt, Naumann, Dandy; one nay (Keeling). Motion approved by a vote of 6/1. If approved at the March 8, 2023 Regular Board meeting, the increase in the Director's per diem will take effect in 60 days (May 8, 2023).

The Board meeting was interrupted when Mr. Guardado received a message that consultant Dr. Bill Mathis of Mathis Group had suffered a massive heart attack and died. President Dandy asked for a moment of silent, stating that Dr. Mathis had been working with the District for the last several years and was supposed to lead tomorrow's Board Norms Workshop. Director Maulhardt asked President Dandy if the Board could take a 10-minute break to collect itself before continuing. President Dandy agreed and adjourned the meeting for a 10-minute break.

President Dandy reconvened the meeting at 1:40p.m.

3. 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. (ROLL CALL VOTE REQUIRED)

A. Approval of Minutes

Motion

Approval of the Minutes for the Regular Board Meeting of January 11, 2023.

B. Groundwater Basin Status Reports

Information Item

Receive and file Monthly Hydrologic Conditions Report for the District.

C. Monthly Investment Report

Information Item

Report on the District's investments and the availability or restriction of these funds. All investments are in compliance with the District's investment policy, which is reviewed and approved annually by the Board.

Motion to approve the Consent Calendar items, Director Hasan; Second, Director Naumann. Roll call vote: seven ayes (Berger, Hasan, Keeling, Kimball, Maulhardt, Naumann, Dandy); none opposed. Motion carries unanimously 7/0.

4. PRESENTATIONS AND MONTHLY STAFF REPORTS (By Department)

Operations and Maintenance Department – Brian Collins

4.1 Monthly Operation and Maintenance Department Report

Information Item

Mr. Collins provided a presentation (see slides) in addition to his summary report on monthly activities of the Operations and Maintenance Department. He reported that Lake Piru received so much water that the lake rose 50 vertical feet. Director Maulhardt said that as a massive amount of water. Mr. Collins said that Chief Ranger Strahan was very aggressive in addressing the land-based clean-up and repairs and that the O&M team planned to have the Lake Piru Water Treatment plant online by this Thursday. Mr. Collins also stated that the amount of water diverted at the Freeman had a value of \$700,000 if the District were purchasing it.

Park and Recreation Department – Clayton Strahan

4.2 Monthly Park and Recreation Department Report

Information Item

Chief Strahan delivered a presentation (see slides) to the Board in addition to his summary report on monthly activities of the Park and Recreation Department. He reported on several projects that had been completed in the Park, including tree care maintenance, dry storage security fencing, improvements to Condor Point, and thanked Engineering for leading many of the improvement projects in the park. He also reported on the success of the Lake Piru Recreation Area staff participating in the Piru Christmas Parade and receiving the “best float” award. Chief Strahan reported that recent storm events delivered 10 inches of water to the lake in less than 12 hours, and that because of the Lime fire burn scar, the Dog Park and Day Use area was now covered in 18 inches of sediment. Board members recalled previous issues with runoff and the debris and boulders that come down the waterways. Mr. Guardado stated that the District was exploring assistance from FEMA and Director Kimball stated that FEMA is more proactive in “preventing” future damage. Chief Strahan reported that staff had a site visit with FEMA, County officials and was exploring options. He added that thankfully there was no loss of life, but the District did incur serious property damage. He also stated that he thought that boating at the lake would be closed for 45 to 60 days until the debris was cleaned out of the lake and was meeting tomorrow with FEMA and Ventura County Office of Emergency Services to discuss clean-up and repair reimbursements. Chief Strahan added that his goal was to have the lake fully open by Memorial Day weekend.

Water Resources Department – Dan Detmer

4.3 Monthly Water Resources Department Report

Information Item

Murray McEachron, principal hydrologist, delivered a presentation (see slides) demonstrating that all this water was a good thing. He said the snow had a very high water content and that currently the snow pack was 150 percent of the maximum recorded in April, and that he anticipates that Article 21 water will be available. Mr. McEachron reported that locally, over 1 million acre feet of rainfall/runoff had been received this year. There was a discussion among Board and staff regarding inflows and saturation levels and 35,000 acre feet of stored water that will be the most ever released for flood flows and that it must be used by the end of April or the District will lose it. Director Maulhardt said that it was very important to reiterate the message of how the basins are interrelated and the critical need of basins in the Oxnard Plain.

Dr. Jason Sun delivered a presentation on the EBB Water Treatment project (see slides). Director Kimball stated that we raise sustainable yield of basins by keeping seawater out. Director Maulhardt said there are lots of unknowns and Dr. Sun and his staff moved the Board through an experimental process to prove the theory and that it is spot on and a monumental discovery.

Administrative Services Department – Brian Zahn and Josh Perez

4.4 Monthly Administrative Services Department Report – Josh Perez and Brian Zahn

Information Item

UWCD Controller Darryl Smith stated that there was no Finance Committee meeting and asked if the Board had any questions or comments on the department's summary report. None were offered.

Chief Human Resources Officer Josh Perez reported on HR's use of "Government Jobs" website in recruiting for new career opportunities. Director Berger asked if there were still openings at the District and Mr. Perez said that due to a couple of retirements and seasonal job openings, the District did have several opportunities listed on the site and was also using social media to promote the positions.

Engineering Department – Dr. Maryam Bral

4.5 Monthly Engineering Department Report

Information Item

Chief Engineer Dr. Bral reported that Engineering had not made any presentations at the Committee and highlighted some of the items included in the department's summary report to the Board, including a site visit on January 24 with eight Navy staffers to look at proposed sites for the EBB Water Treatment infrastructure. She also said she was looking forward to a ribbon cutting or ground-breaking ceremony for the project.

Director Berger left the meeting at approximately 3p.m.

Environmental Services Department – Linda Purpus

4.6 Monthly Environmental Services Department Report

Information Item

Principal Environmental Scientist Randall McInvale provided an update on the District's quagga mussel monitoring and control program (see slides). He stated that the water and sediment delivered with the January storm events buried non-established mussels on the lakebed and while staff has not had time or the opportunity to monitor the situation fully.

Environmental Scientist Evan Lashly provided a storm update, reporting that as lead for Environmental Services on the Freeman Diversion Operations, there were no catastrophic failures and an estimated 115,000cfs flow on the Santa Clara River. He reported that backwater destroyed cameras mounted on the Freeman, which was reported to the appropriate agencies. He also said that the channel cut that was done last year had been destroyed. Fish passage study equipment was lost and he counted over 40 landslides between Juan Fernandez and Blue Point up at Lake Piru. He added that UTV access may be more accessible and less costly than road repairs.

Chief Strahan added that the road up to Blue Point was completely gone and boating is unsafe at this time.

5. MOTION ITEMS (By Department)

Environmental Services Department – Linda Purpus

5.1 California Environmental Quality Act Support for the Increased Importation of State Water Project Water – Amendment to Professional Consulting Services Agreement with Stantec Consulting Services, Inc. - \$286,288

Motion

Motion to authorize the General Manager to execute an amendment to the professional consulting services (PCS) agreement with Stantec Consulting Services, Inc. (Stantec) in the amount of \$286,288 to complete technical studies and provide additional support to United in the development of California Environmental Quality Act (CEQA) documentation for the pursuit of increased State Water Project (SWP) water imports to Lake Piru, Director Maulhardt; Second, Director Naumann. Roll call vote: six ayes (Hasan, Keeling, Kimball, Maulhardt, Naumann, Dandy); none opposed; one absent (Berger). Motion carries 6/0/1.

5.2 Freeman Diversion Multiple Species Habitat Conservation Plan – Amendment to Professional Consulting Services Agreement with Stillwater Sciences - \$230,000

Motion

Motion to authorize the General Manager to execute an amendment to the professional consulting services (PCS) agreement with Stillwater Sciences (Stillwater) in the amount of \$230,000 to continue the development of the Freeman Diversion Multiple Species Habitat Conservation Plan (MSHCP) and complete the submittal by the September 22, 2023, Court ordered permanent injunction and stipulation deadline, Director Maulhardt; Second, Director Kimball. . Roll call vote: six ayes (Hasan, Keeling, Kimball, Maulhardt, Naumann, Dandy); none opposed; one absent (Berger). Motion carries 6/0/1

5.3 Freeman Diversion Multiple Species Habitat Conservation Plan – Amendment to Professional Consulting Services Agreement with Rincon Consultants - \$215,381

Motion

Motion to authorize the General Manager to execute an amendment to the professional consulting services (PCS) agreement with Rincon Consultants (Rincon) in the amount of \$215,381 to continue the development of the Freeman Diversion Multiple Species Habitat Conservation Plan (MSHCP) and complete the submittal by the September 22, 2023, Court ordered permanent injunction and stipulation deadline, Director Naumann; Second, Director Keelings. . Roll call vote: six ayes (Hasan, Keeling, Kimball, Maulhardt, Naumann, Dandy); none opposed; one absent (Berger). Motion carries 6/0/1

**5.4 Freeman Diversion Multiple Species Habitat Conservation Plan –
Amendment to Professional Consulting Services Agreement with ICF Jones
& Stokes, Inc. - \$124,721**

Motion

Motion to authorize the General Manager to execute an amendment to the professional consulting services (PCS) agreement with ICF Jones & Stokes, Inc. (ICF) in the amount of \$124,721 to continue the development of the Freeman Diversion Multiple Species Habitat Conservation Plan (MSHCP) and complete the submittal by the September 22, 2023, Court ordered permanent injunction and stipulation deadline, Director Naumann; Second, Director Maulhardt. . Roll call vote: six ayes (Hasan, Keeling, Kimball, Maulhardt, Naumann, Dandy); none opposed; one absent (Berger). Motion carries 6/0/1

Park and Recreation Department – Clayton Strahan

5.5 Authorize an Amendment to the Licensing Agreement between United Water Conservation District (District) and Tommy's Boats LLC for Marina and Boat Rental Services at the Lake Piru Recreation Area

Motion

Motion to approve licensing agreement amendment between the District and Tommy's Boats, LLC and authorize the General Manager to execute the agreement on behalf of the Board of Directors, Director Naumann; Second, Director Hasan. . Roll call vote: six ayes (Hasan, Keeling, Kimball, Maulhardt, Naumann, Dandy); none opposed; one absent (Berger). Motion carries 6/0/1

6. BOARD OF DIRECTORS READING FILE

7. FUTURE AGENDA ITEMS


President Dandy asked if there were any future agenda items for consideration. None were offered.

8. ADJOURNMENT 4:02p.m.

President Dandy stated that he would like to adjourn the meeting in memory of Dr. William "Bill" Mathis at 4:02p.m. to the next Regular Board Meeting scheduled for Wednesday, March 8, 2023 or call of the President.


I certify that the above is a true and correct copy of the minutes of the UWCD Board of Directors meeting of February 8, 2023.

ATTEST:



Lynn E. Maulhardt, Board Secretary

ATTEST:



Kris Sofley, Clerk of the Board



Photo taken on January 20, 2023
Courtesy of O&M Supervisor John Carman

OPERATIONS AND MAINTENANCE DEPARTMENT MONTHLY UPDATE

February 8, 2023



Santa Felicia Dam

Storm Damage 2023

2

Santa Felicia Dam

Storm Damage 2023



3

3

Freeman Diversion

Water Harvest



4

4

OH Delivery

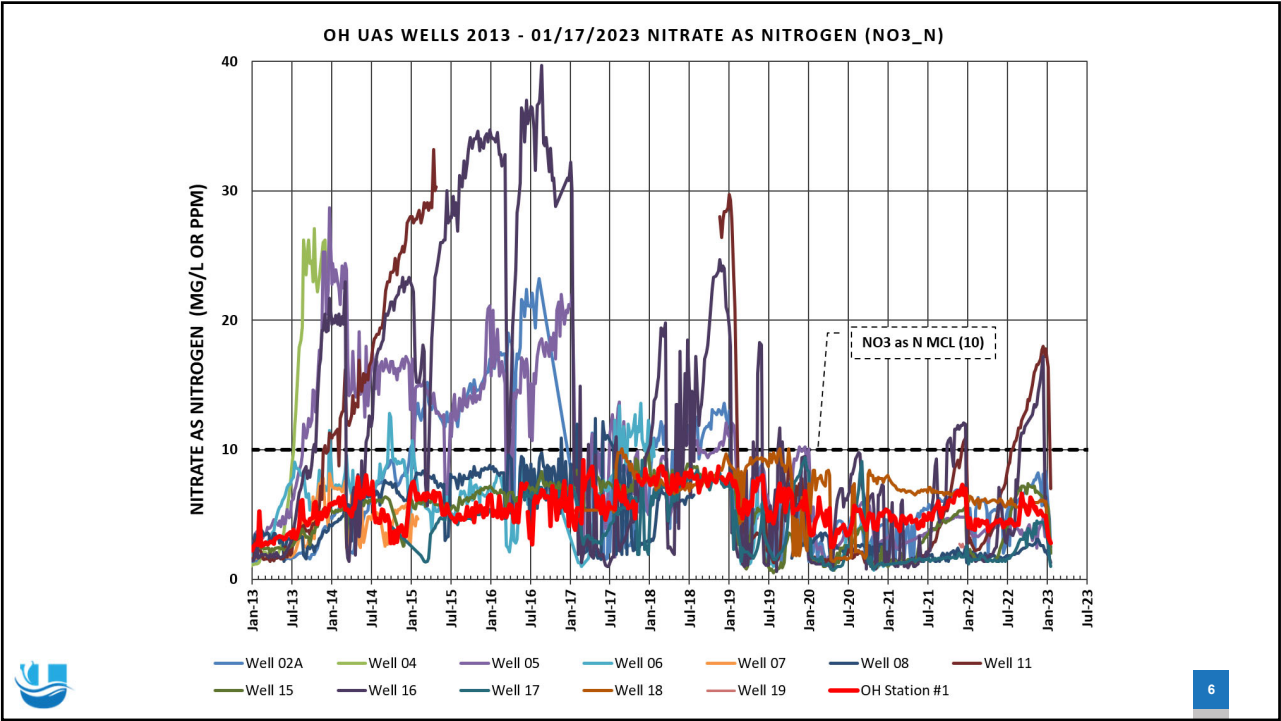
OH Well 12 Rehabilitation – El Rio Booster Plant Gas Engine #4



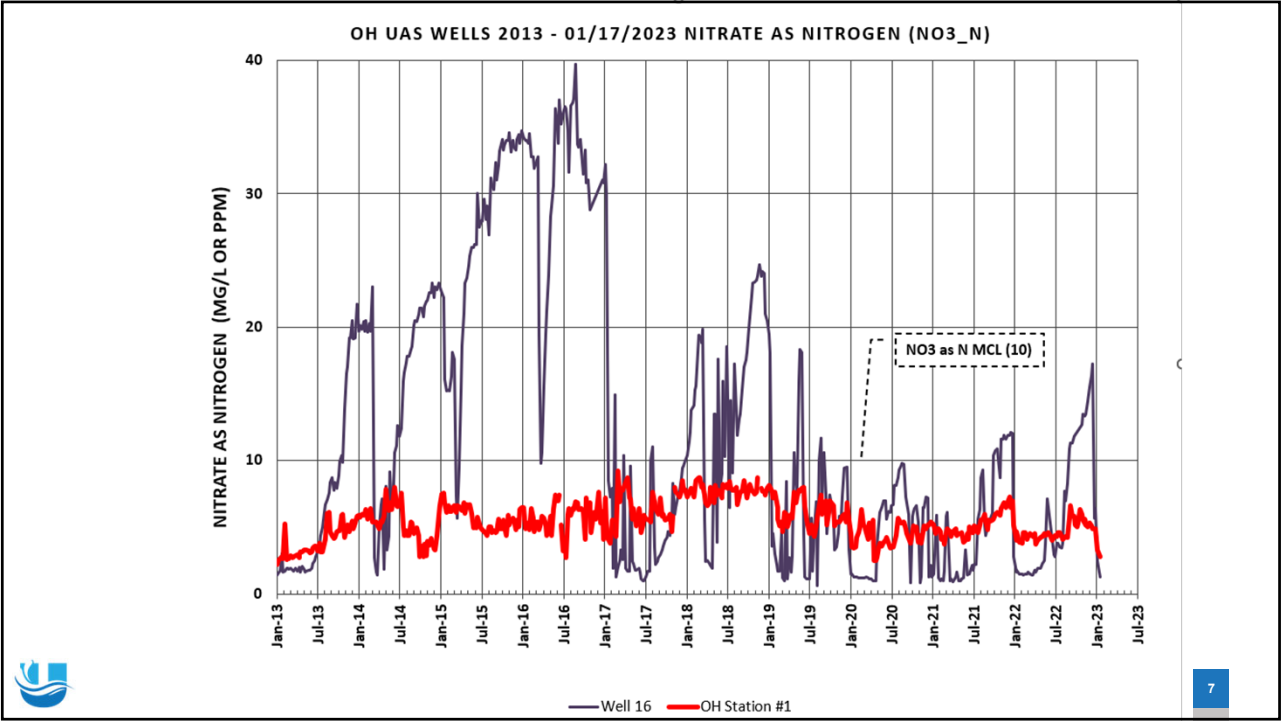


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PTP

PTP Reservoir Pump – PTP Well Signage

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Questions?



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February 08, 2023
PARKS AND RECREATION DEPARTMENT
Lake Piru Recreation Area Highlights and Updates

Operational Update: December 2022 and January 2023

Facilities Maintenance and Operational Update

- Completed phase 1 of annual tree care management program (Pepper trees and Aleppo pines in marina).
- The dry storage security fence improvement project was completed in early December, Condor Point improvement project completed 12/29/2022.
 - Includes landscaping, shade ramadas and hydroseeding.
- The lake Piru asphalt management project was at 95% complete on 12/31/2022.
- Areas of work included Olive Grove campground and the roadway immediately in front of the ranger's station.



United Water Conservation District

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Operational Update: September - January

Upcoming Training, Events, and Meetings

Dec. 5-23	Asphalt Paving Project
Dec. 12	VCFPD Service MOU
Dec. 15-29	Condor Point Landscaping Project
Dec. 16	Botched Film Shoot
Dec. 19	Piru Christmas Parade
Dec. 20	Kia Film Shoot
Jan. 4	Herbicide Applicator Training
Jan. 9-13	PC-832 Arrest and Control Training

United Water Conservation District

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Operational Update: December 2022 And January 2023

Operational Update – Storm/Disaster Recovery

Substantial Rainfall for December and January

- December Total = 5.11"
- January Total = 20.85"
- What does it mean, and what are the impacts?

United Water Conservation District



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Operational Update: December 2022 and January 2023

Operational Update – Storm/Disaster Recovery

Storms yielded 30,648 AF of runoff into Lake Piru

This equated to a 45.46' vertical increase

↓

Storms generated approximately \$2,000,000 in damages/cleanup

↓

Damages and cleanup include:

Replacing and cleaning drains	Removal of debris from the lake	Removal of mud/silt deposits (day use, dog park and roadways)	Potential replacement of entire marina	Minor damages to the water system barge	Loss of water system functionality (trucking water)
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United Water Conservation District



2022

01/15/2023

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Operational Update

Revenue Recap 2022 (Jan-Dec)

Year	Day Use Revenue	Camping Revenue	All Other Revenue	Revenue Collected	Revenue Received	Visitation (# of People)
2022	\$225,543	\$509,435	\$153,558	\$888,206	\$888,206	95,083
2021	\$270,273	\$502,232	\$108,504	\$874,128	\$874,128	82,053

United Water Conservation District

Operational Update

Other Revenue Recap - 2022

Year	Firewood	Ice/Water	Showers/Laundry	Wi-Fi	Filming/Events	Concessions
2022	\$17,952	\$17,476	\$16,906	\$29,793	\$19,386	\$8,500
2021	\$11,200	\$12,900	\$10,200	\$9,000	\$1,450	-

United Water Conservation District

QUESTIONS?

United Water Conservation District

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Hydrologic Conditions Update for the Santa Clara River Watershed January 2023

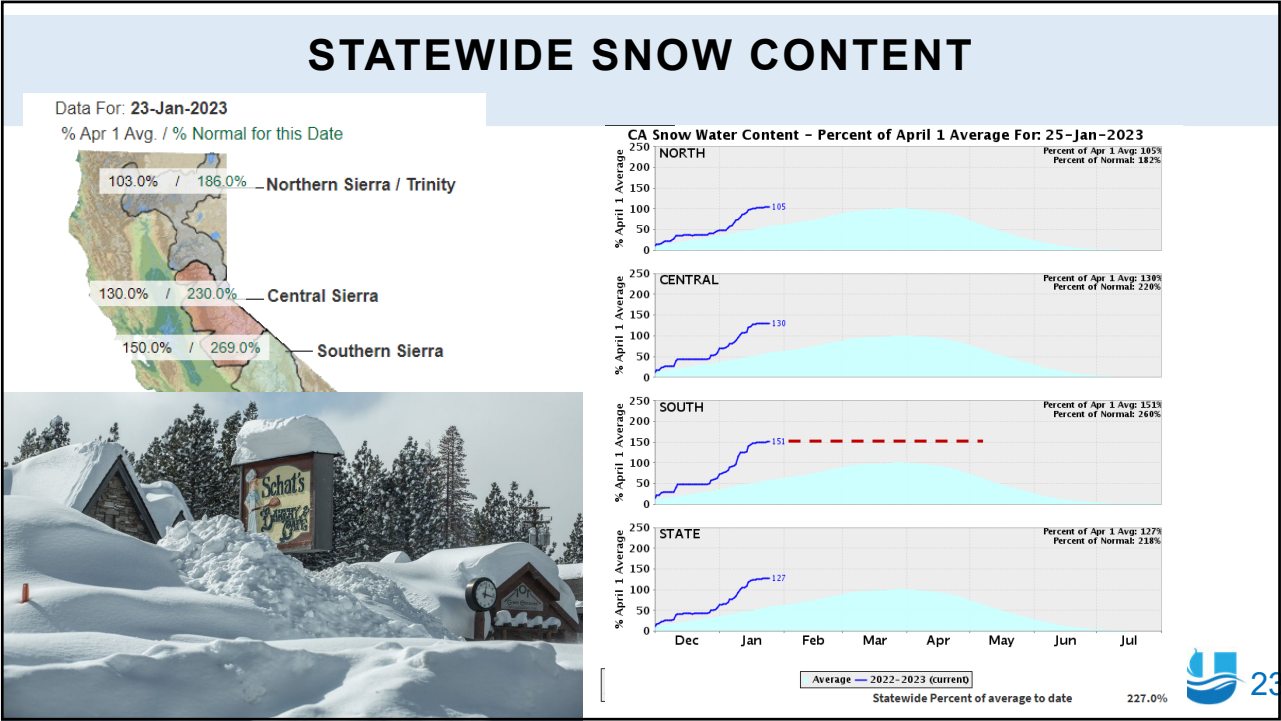


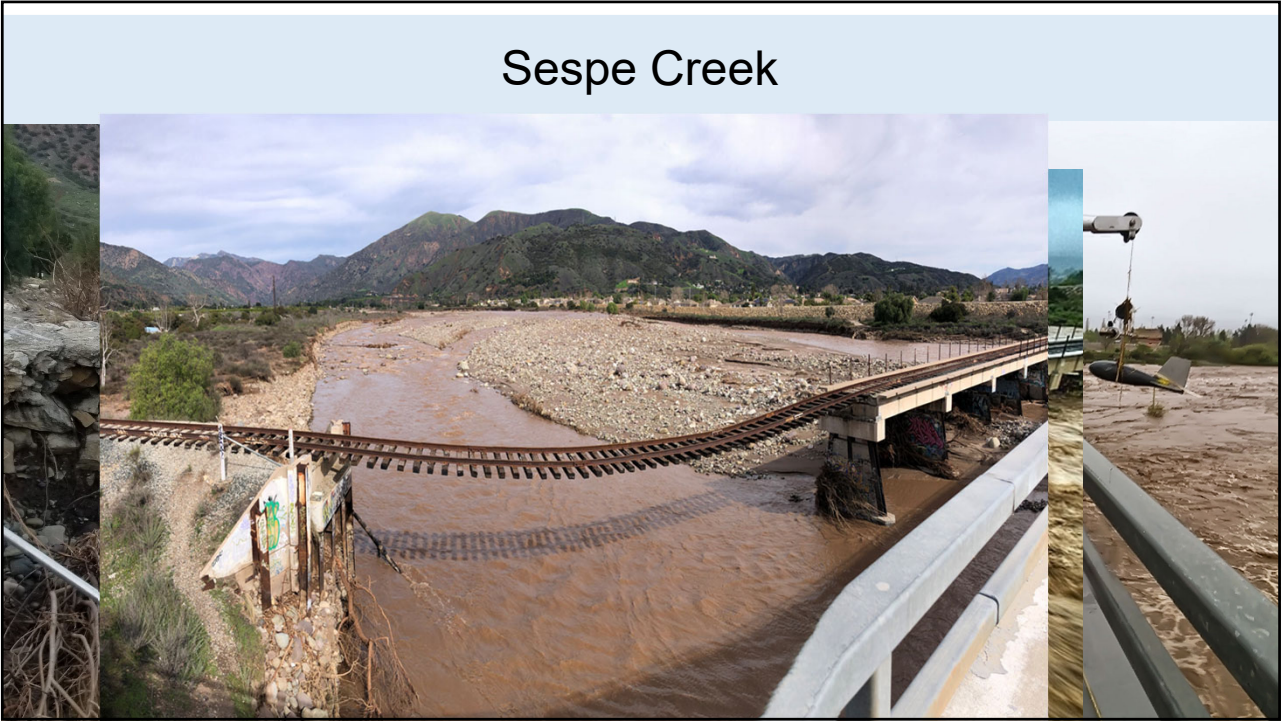
Saticoy Recharge Facility (January 2023)



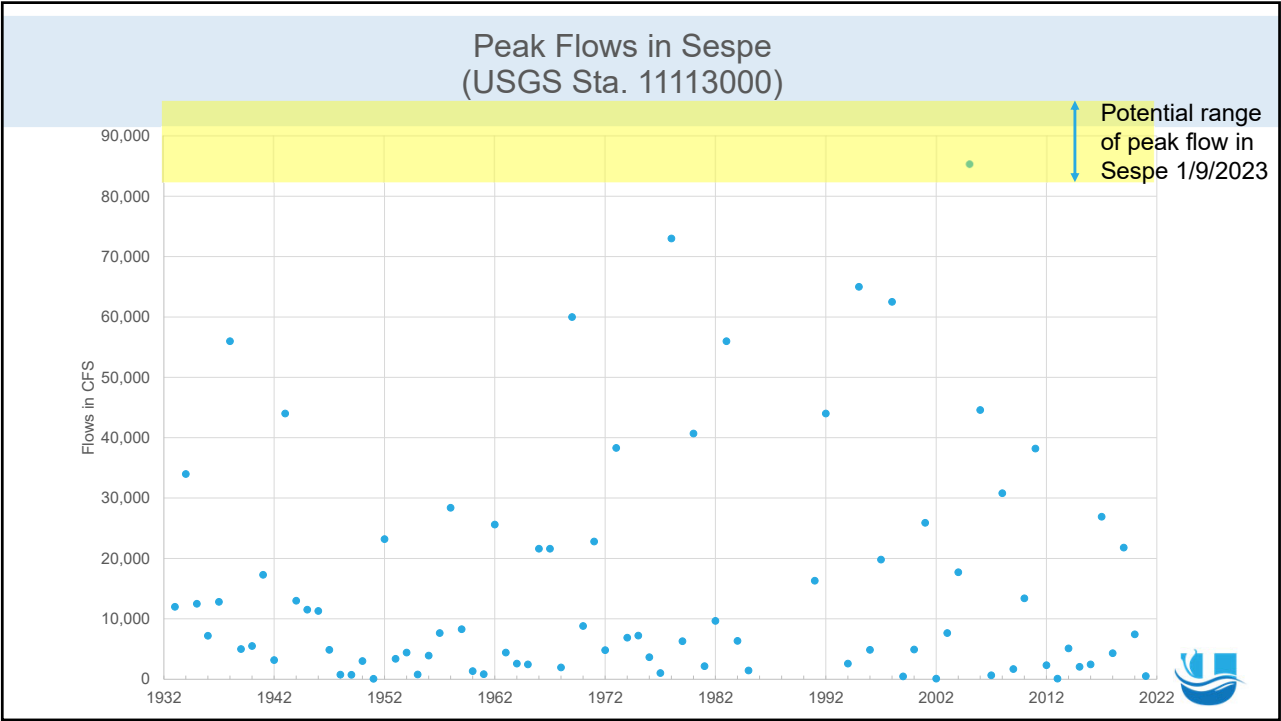
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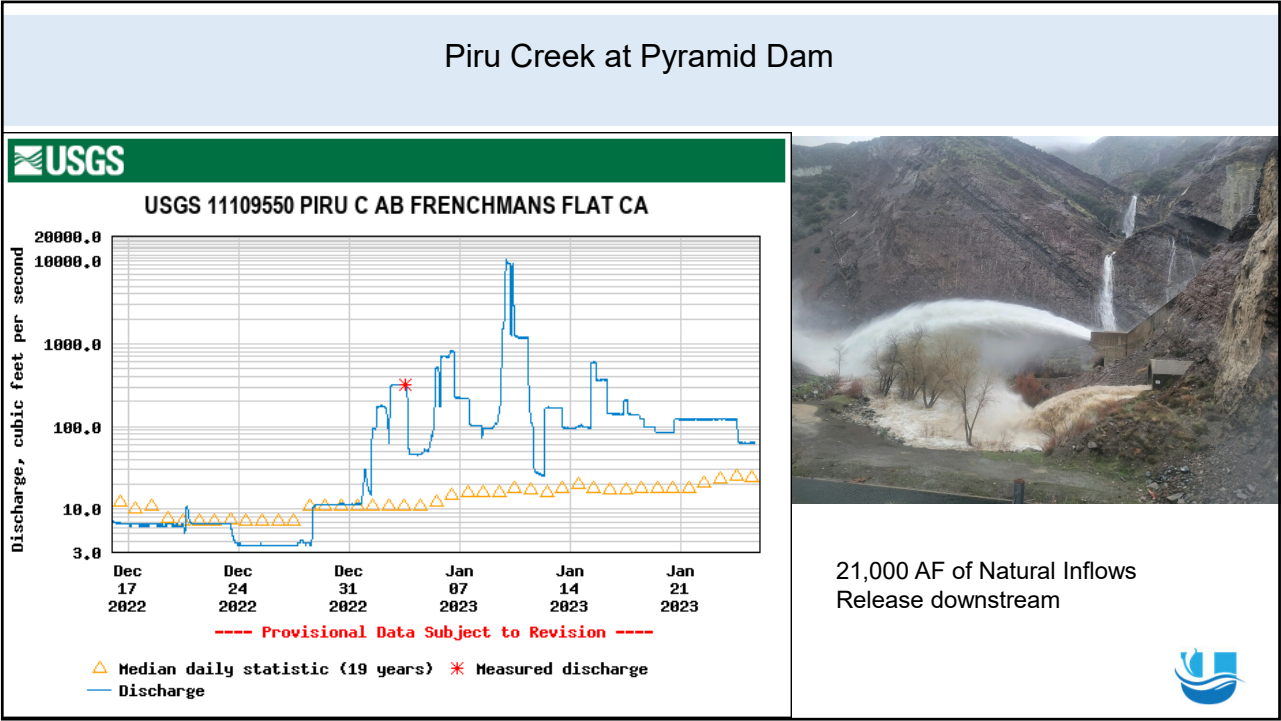
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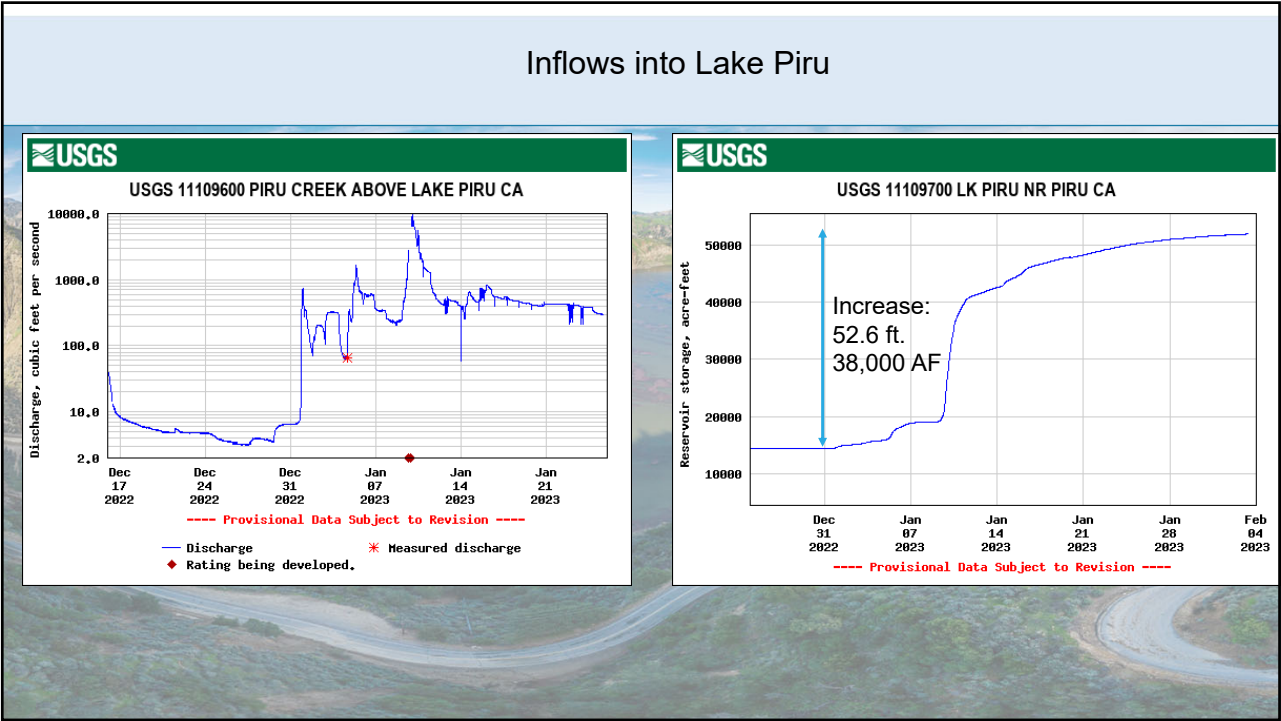
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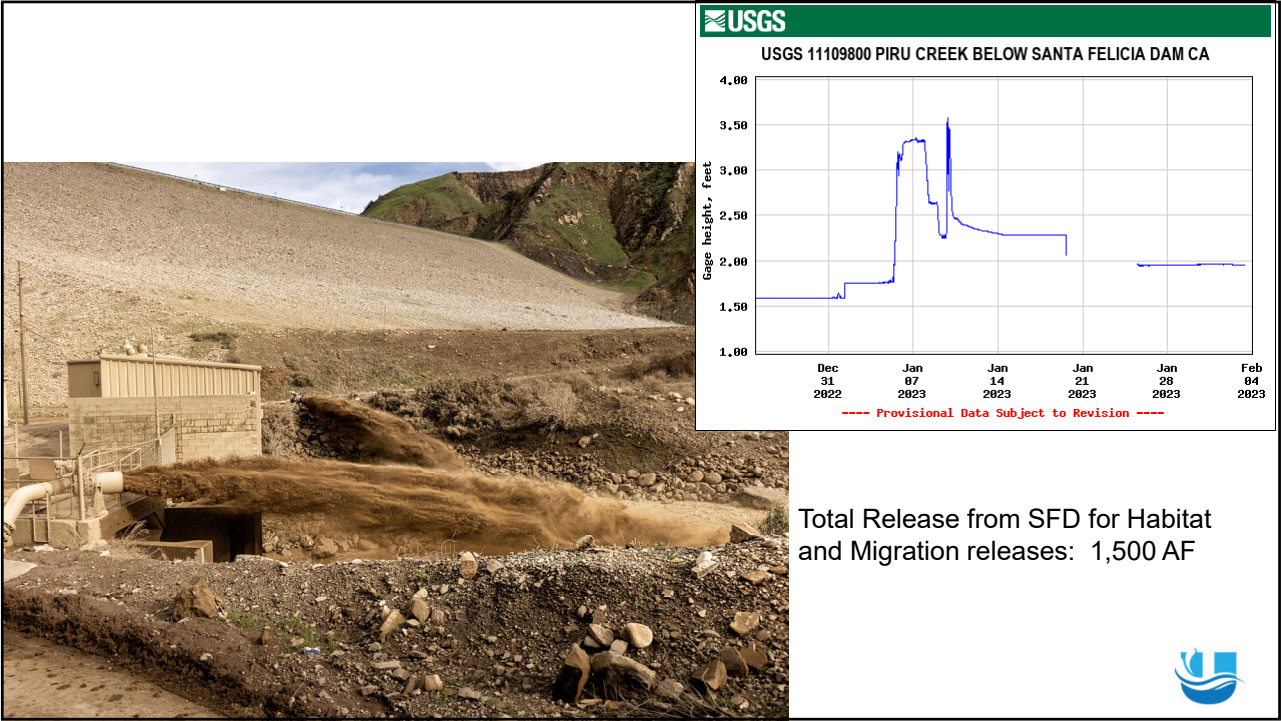
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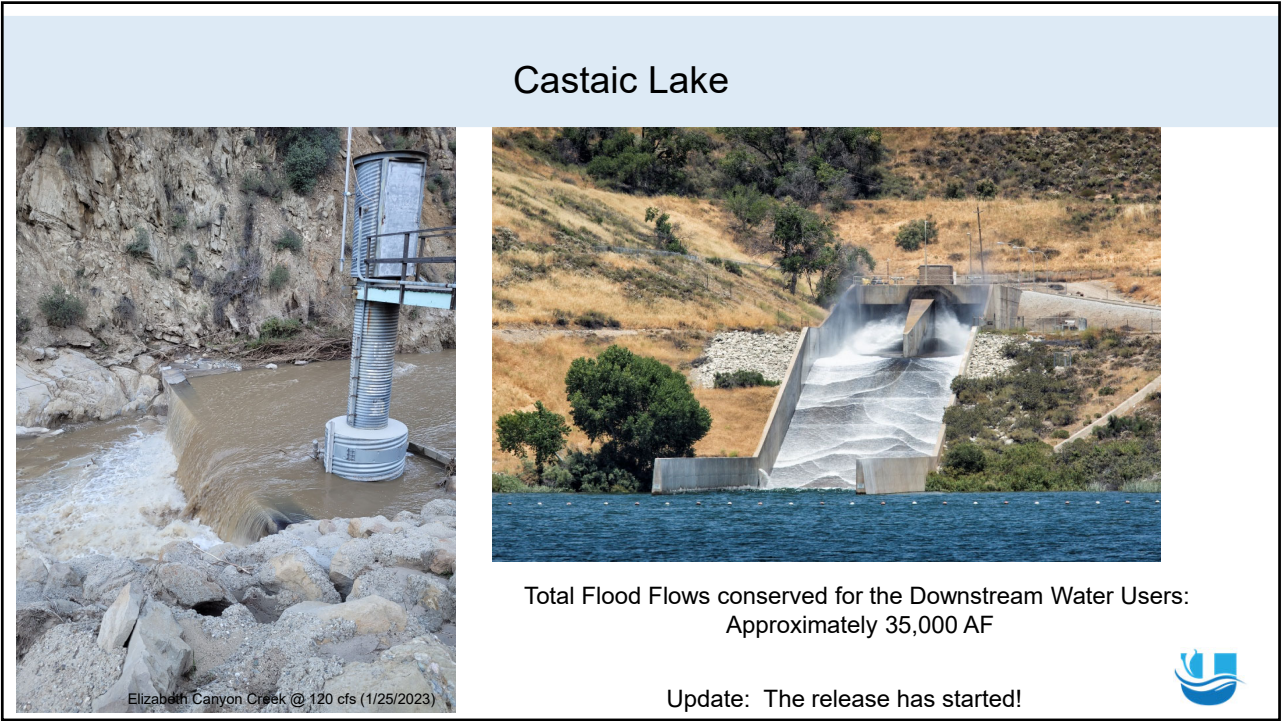
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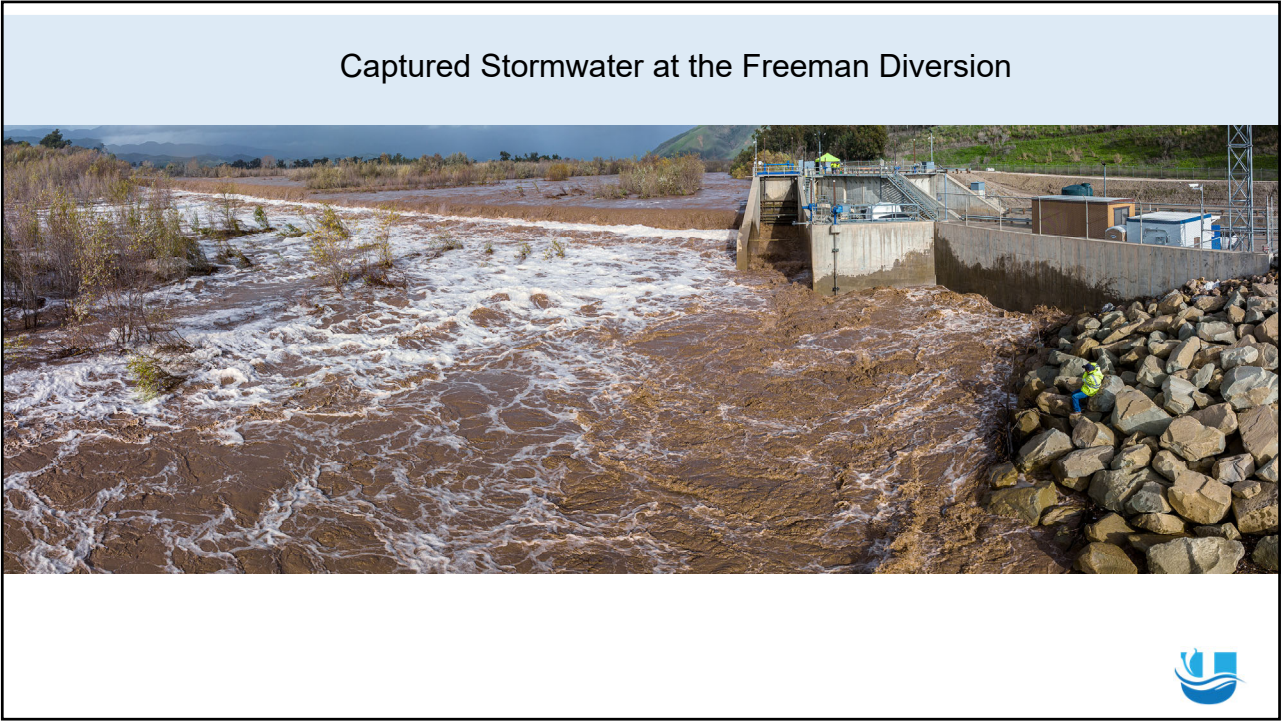
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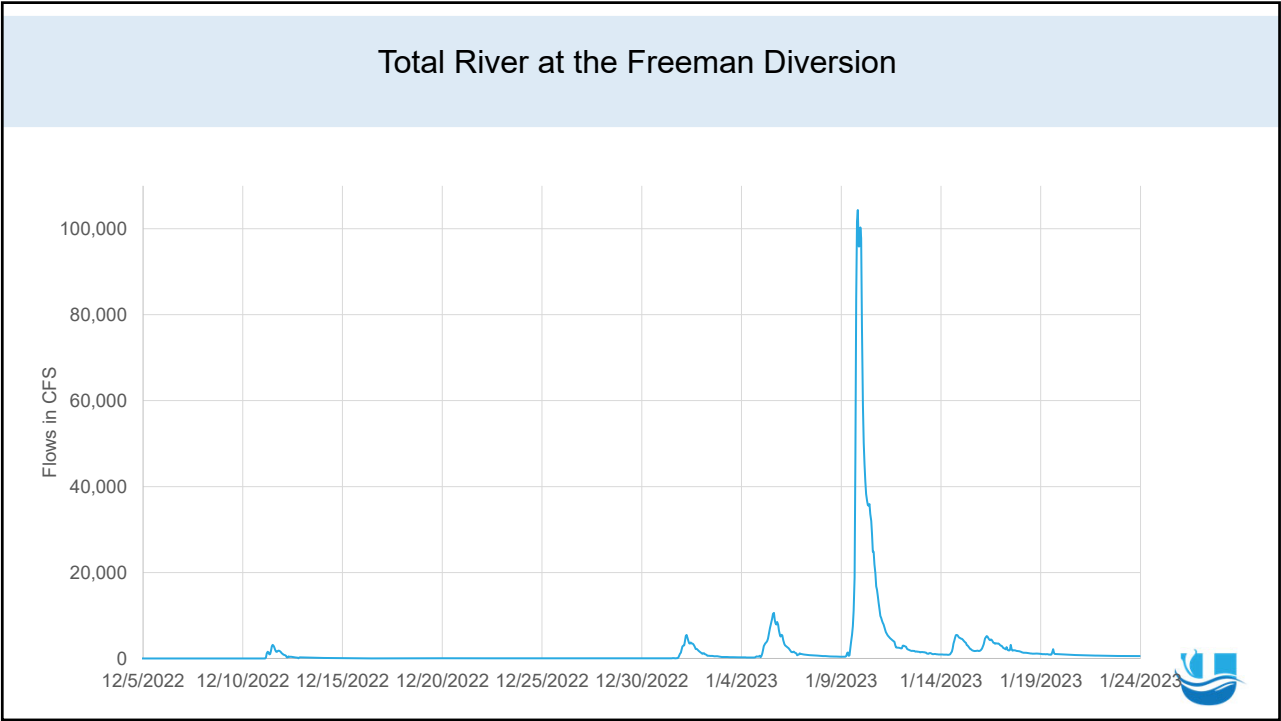
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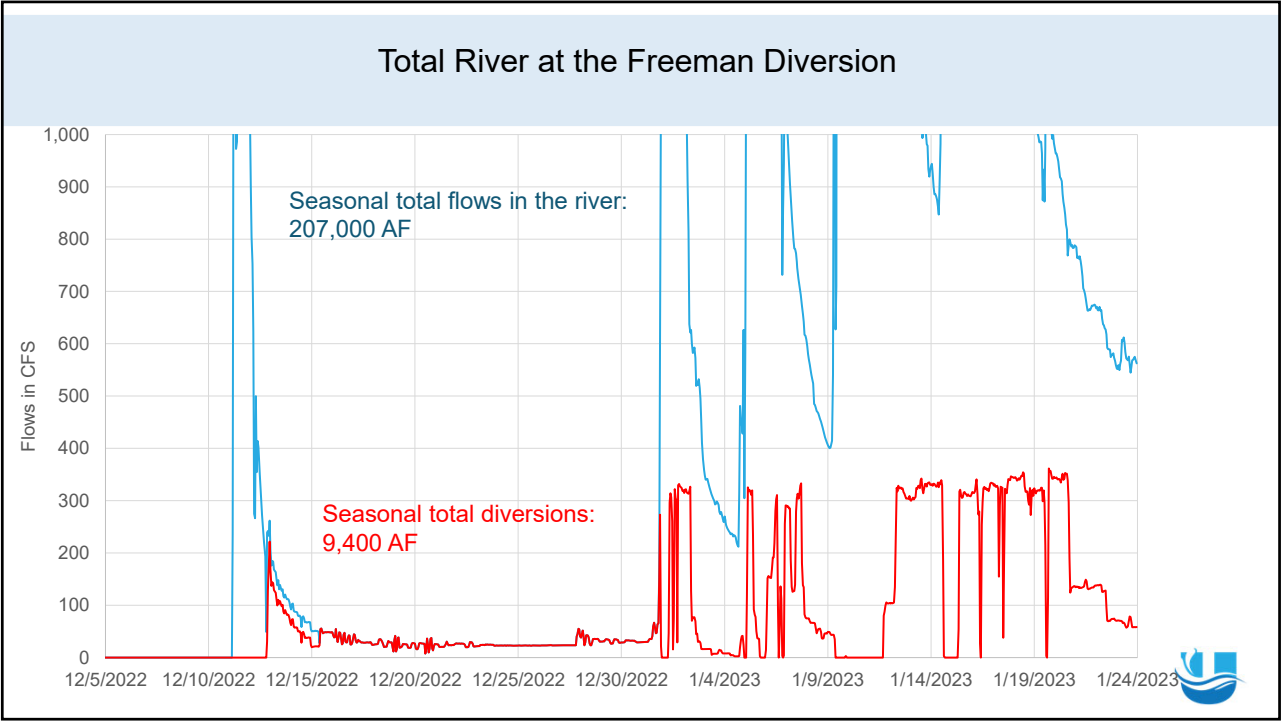
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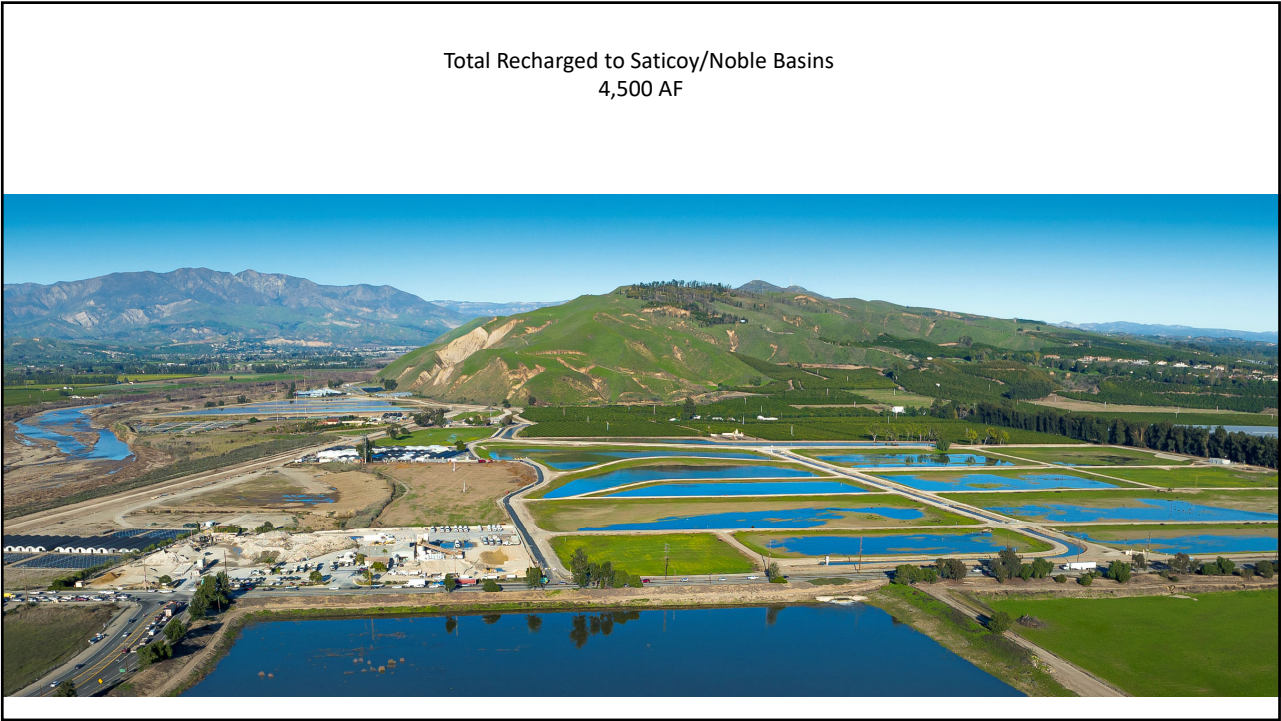
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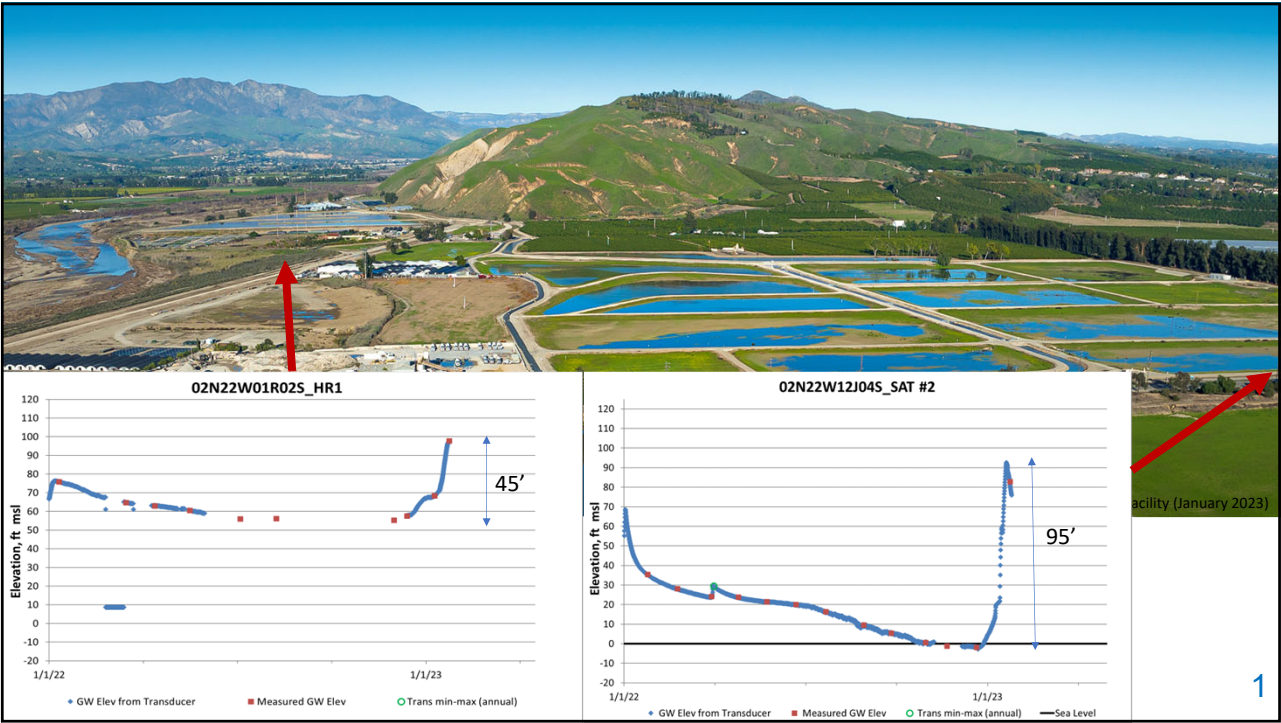
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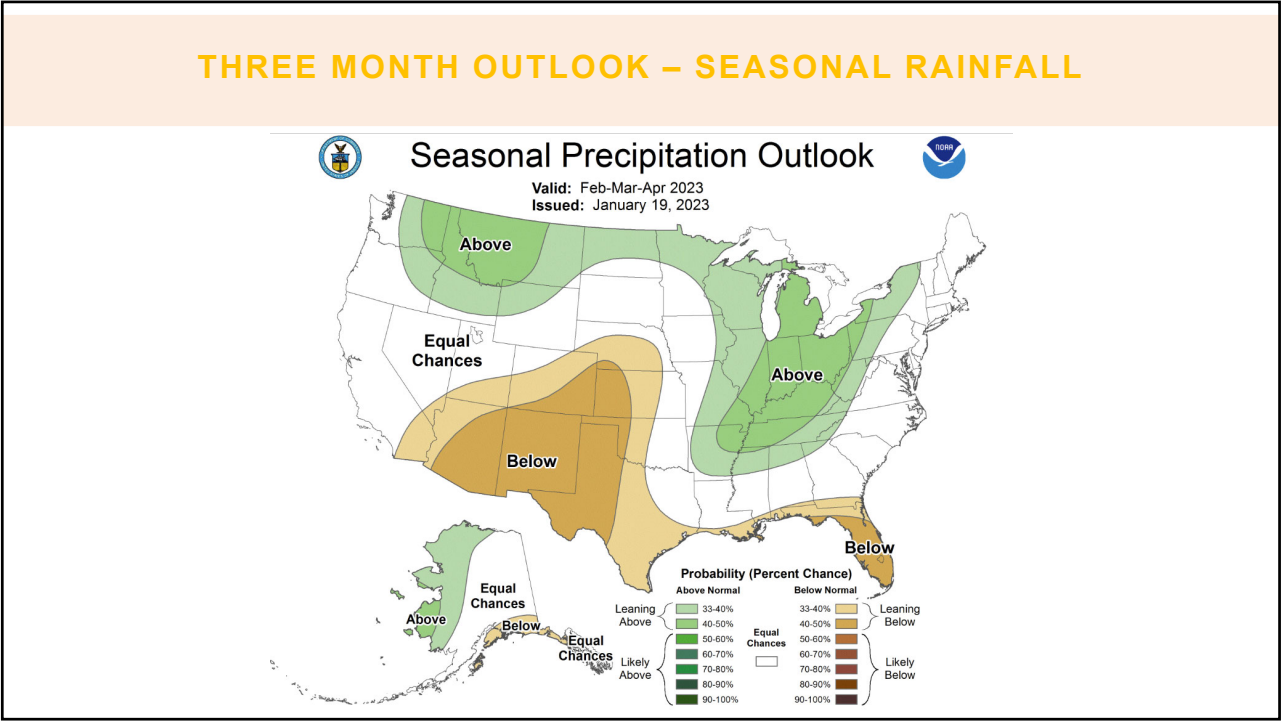
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DEVELOPMENT OF GROUNDWATER FLOW AND SOLUTE TRANSPORT MODELING OF THE EXTRACTION BARRIER AND BRACKISH (EBB) WATER TREATMENT PROJECT, SOUTHERN OXNARD BASIN


Presented by Jason Sun, Ph.D., P.E., Principal Hydrogeologist/Modeler
Board Meeting
February 8, 2023



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What is Extraction Barrier

- Barriers is an interception of groundwater flow (seawater intrusion) by injecting or extracting
- In orange / LA Counties where there is plenty of recycled water, injection barriers are used to intercept the seawater intrusion
- In Ventura County where there is not enough water, extraction barriers may be an efficient tool to tackle the seawater intrusion. The treated extracted brackish water may serve as a NEW source of water

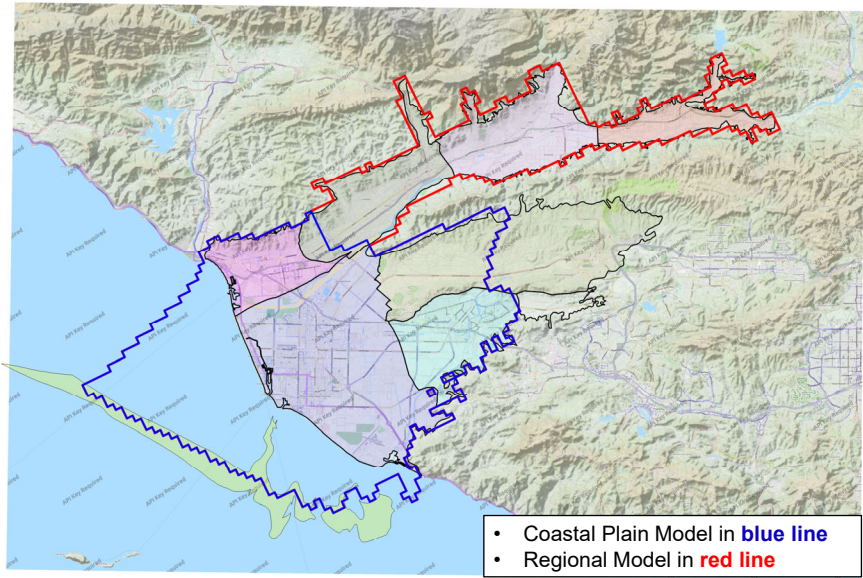


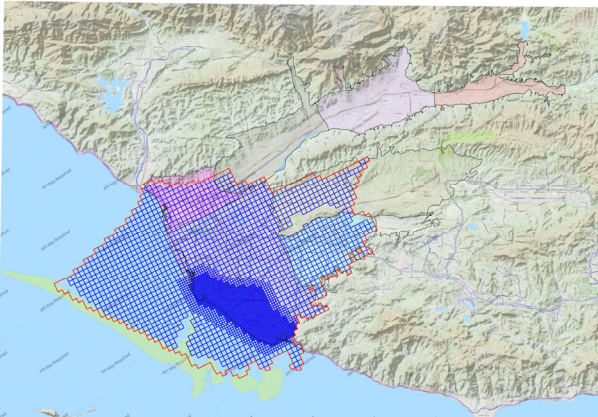
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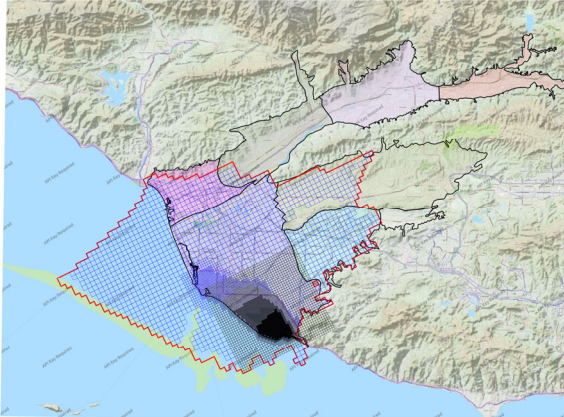
UWCD GROUNDWATER MODELS

Coastal Plain Model	Regional Model	Unstructured Grid Model
Flow (MODFLOW-NWT)	Flow (MODFLOW-NWT)	Flow + Density Dependent Transport (MODFLOW-USG-Transport)
GSPs for FCGMA	GSPs for Fillmore, Piru and Mound	Brackish water
Monthly	Daily	Monthly
1985-2019	1985-2019	1985-2019






USG Model (in **blue**) is an **unstructured grid** (**2000, 1000, 500 ft**) model based on the Coastal Plain Model to simulate seawater intrusion and the EBB water project



Perched Aquifer Model (PAM) in **black** is a locally refined (**125, 250, 500, and 1000 ft**) **unstructured grid** model focused on southern Oxnard plain




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EBB Water Simulation Assumptions

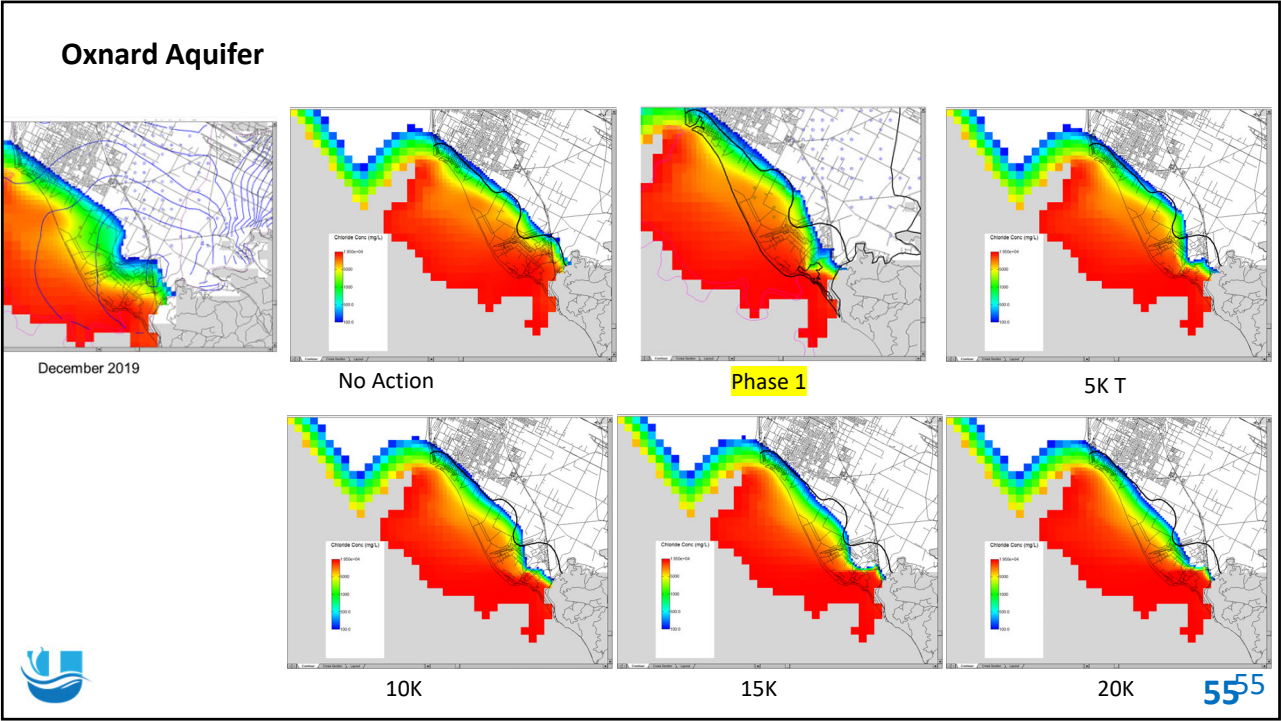
- The extraction barrier wells are assumed to operate for 50 years
- The product water from the treatment plant is assumed to be 50% of the extracted water
- Project extraction rates from 3,500 to 20,000 AFY
- FCGMA GSP simulation run based on **no pumping cutback (base case)** is used for simulations
- **1930-1969 hydrology with 2070 climate factor adjustment** is used

Scenario	Extraction rate (AFY)	Treated water for usage (AFY)	Treated water usage (AFY)			Oxnard well number	Mugu well number	Oxnard Extraction (AFY)	Mugu Extraction (AFY)
			Navy	PTP	PV				
No Action	0	0	0	0	0	0	0	0	0
Phase 1	3500	0	0	0	0	5	2	2500	1000
5K W	5000	0	0	0	0	6	4	3000	2000
5K T	5000	2500	1500	500	500	6	4	3000	2000
10K	10000	5000	1500	1750	1750	12	10	6000	4000
15K	15000	7500	1500	3000	3000	16	12	10000	5000
20K	20000	10000	1500	4250	4250	20	20	14000	6000

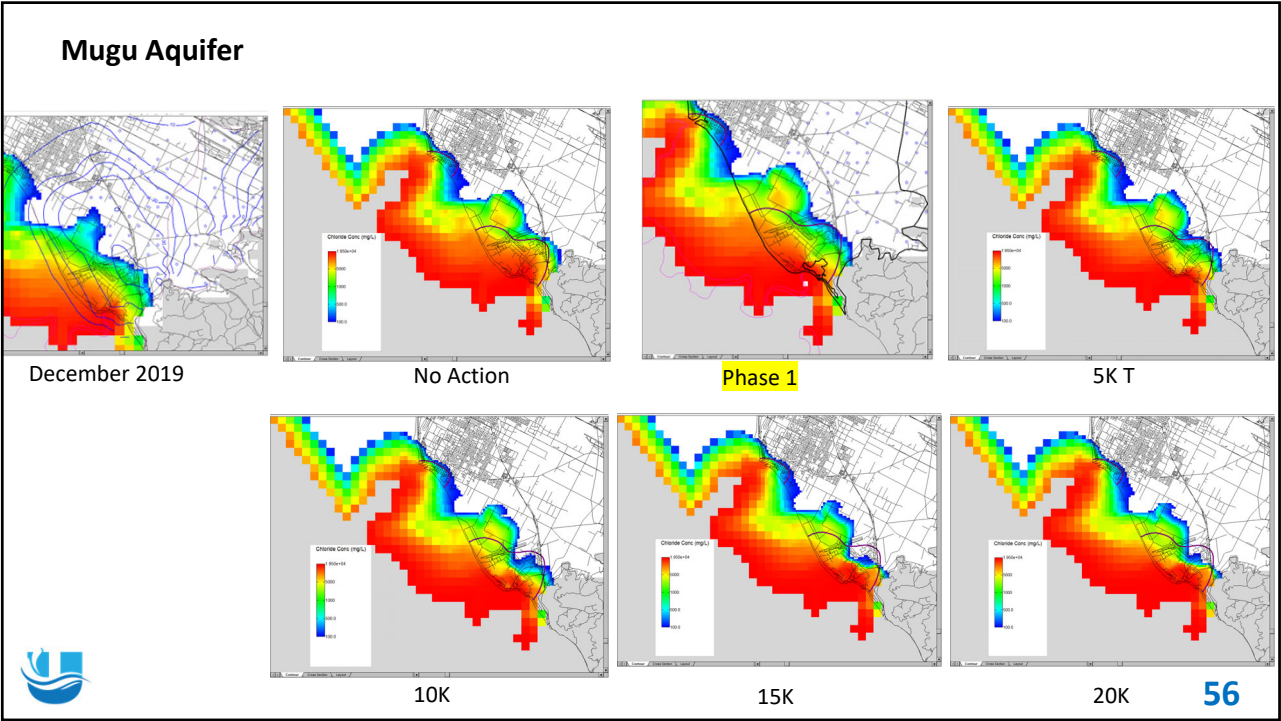


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EBB Water Impact / Benefits

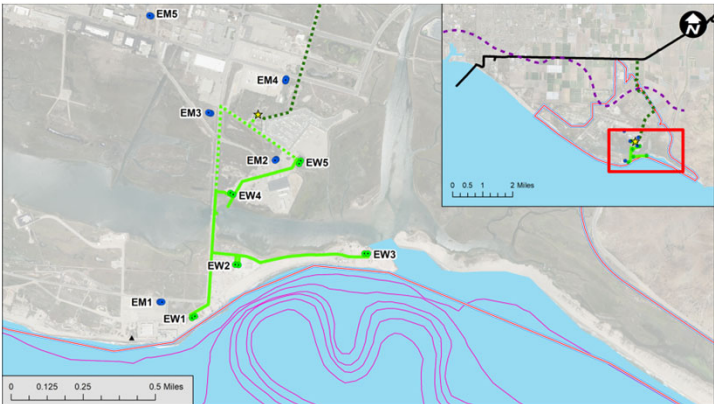
- The brackish water may be remediated/contained
- 2019 FCGMA GSPs with pumping reduction 35% in Oxnard basin, 20% in PV, West LP, were based on the balance of seawater intrusion flux
- Barriers (injection or extraction) will change the balance of seawater intrusion



EBB Water Project Current Layout


Implementation Phase 1 Scope

- ☐ 5 Monitoring Well Clusters
- ☐ 7 Groundwater Extraction Well and Piping
- ☐ Final Discharge Location for Extracted Water




PAM Site Characterization

- Semi-Perched aquifer is **unconfined**
- High chloride concentration - **Seawater intrusion**
- Overlies aquitard (10-30 ft) and Oxnard aquifer (100-130 ft)
- Varying layer thickness from **60 to 120 ft**
- Lagoons and Calleguas Creek
- The Coastal Plain model simulation shows **strong horizontal flow**



Aquifer System	Hydrostratigraphic Unit	Model Layer
Shallow	Ground Surface to the bottom of Semi-Perched Aquifer	1
	Semi Perched-Oxnard Aquitard	2
	Oxnard Aquifer	3
	Oxnard-Mugu Aquitard	4
	Mugu Aquifer	5
UAS	Mugu-Hueneme Aquitard	6
	Hueneme Aquifer	7
	Hueneme-Fox Canyon Aquitard	8
	Fox Canyon Aquifer - upper	9
	Fox Canyon upper - basal Aquitard	10
	Fox Canyon Aquifer - basal	11
	Santa Barbara and/or other Formation - upper	12
	Grimes Canyon Aquifer	13
Deep	Older sedimentary rocks and Conejo Volcanics	Boundary

EBB Water



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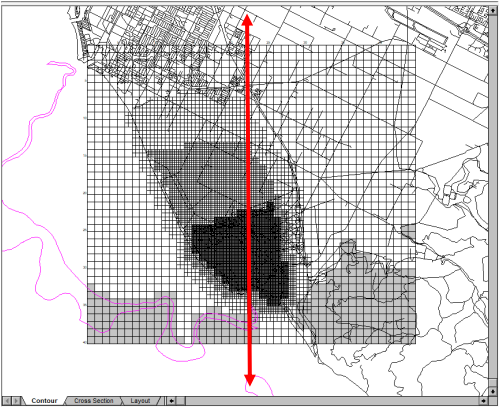
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Perched Aquifer Model (PAM)


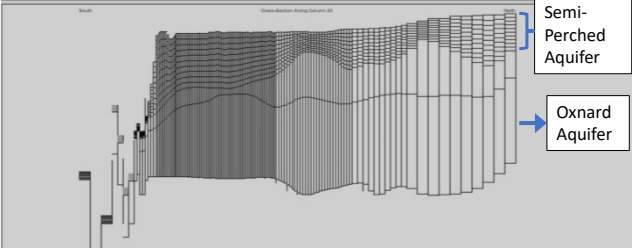
Goal:

- Capture saltwater wedge in Semi-Perched aquifer
- Evaluate the potential for **vertical migration of contaminants** from the shallow Semi-perched aquifer to Oxnard aquifer due to EBB Water project pumping

- MODFLOW-USG
- 12 model layers:
 - Semi-perched aquifer: Layers 1 to 10**
 - Aquitard : Layer 11
 - Oxnard aquifer: Layer 12
- Small Grid sizes: **125, 250, 500, and 1000 ft**
- Monthly time step




Cross section below along the red line



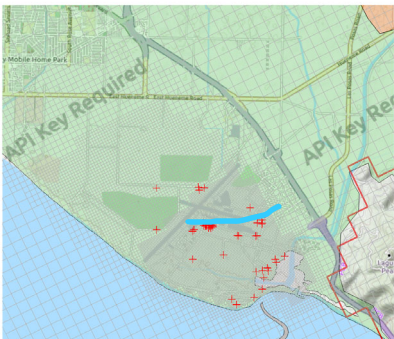
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PAM Calibration Result


- Staff (Eric Elliot) pored through the reports provided by the Navy
- The 2014-2018 water level residuals from 143 wells range from -2.3 to 4 ft with average 1.0 ft
- The simulated seawater wedge in 1998 is consistent with the 1998-1999 data



2014-2018 Water Level Data

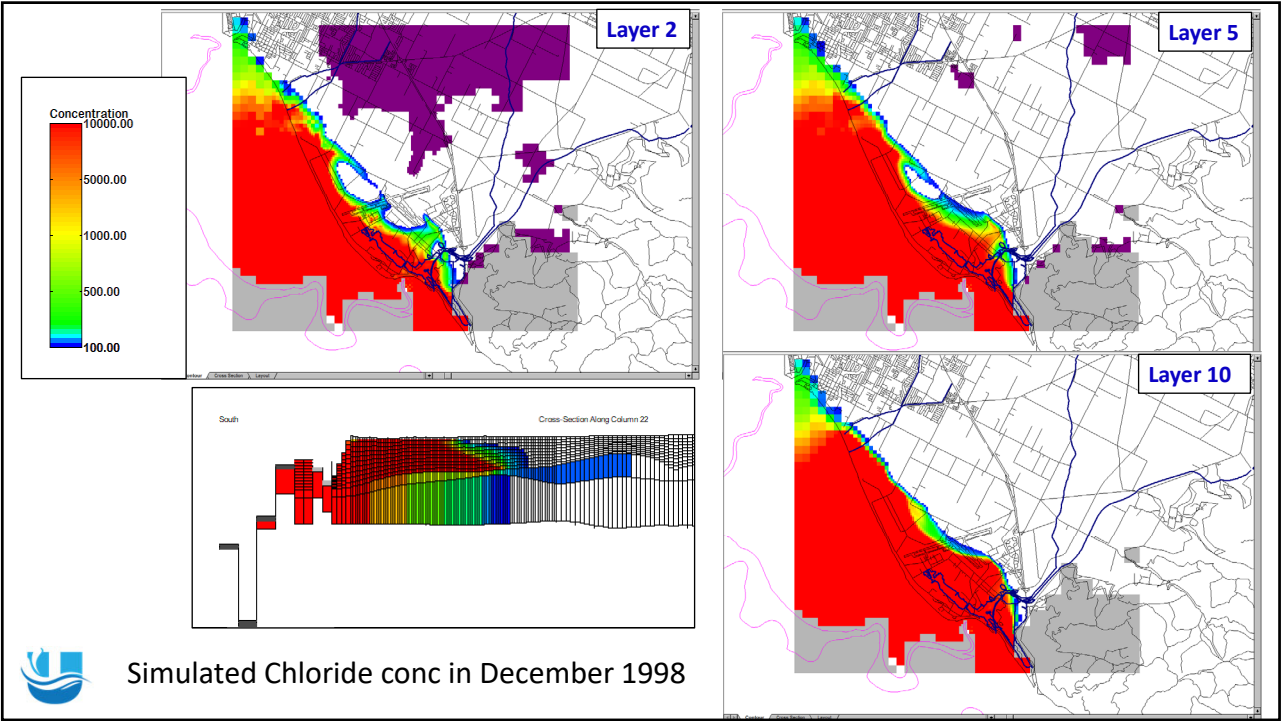


1998-1999 Salinity Data
Suggesting the extent of saltwater wedge in blue line



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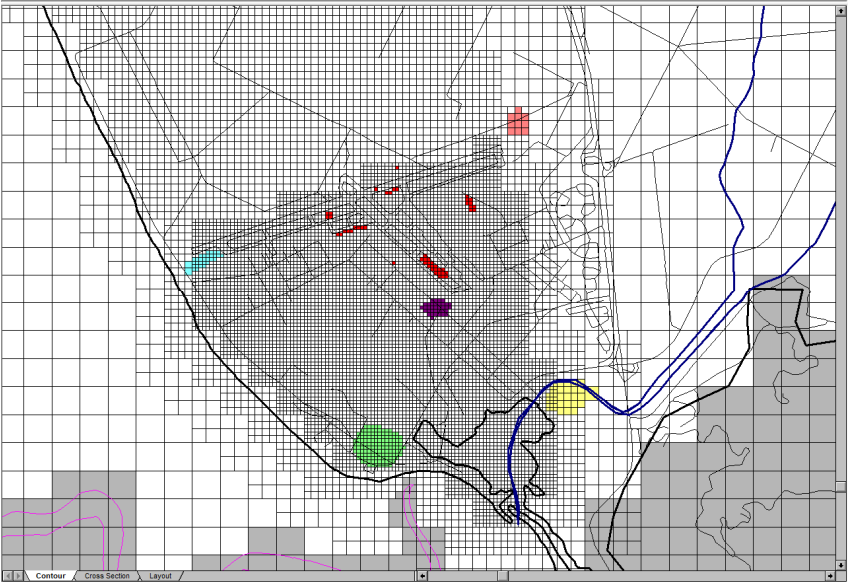
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Simulate 50 years of
Phase 1 pumping

Numerical tracer tests at
different depth to
evaluate the vertical
migration due to the EBB
Water Phase 1 pumping





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Initial Tracers
in Layer 2

Layer 2
50 years

Layer 3
50 years

Assume the tracers are released in
Layer 2

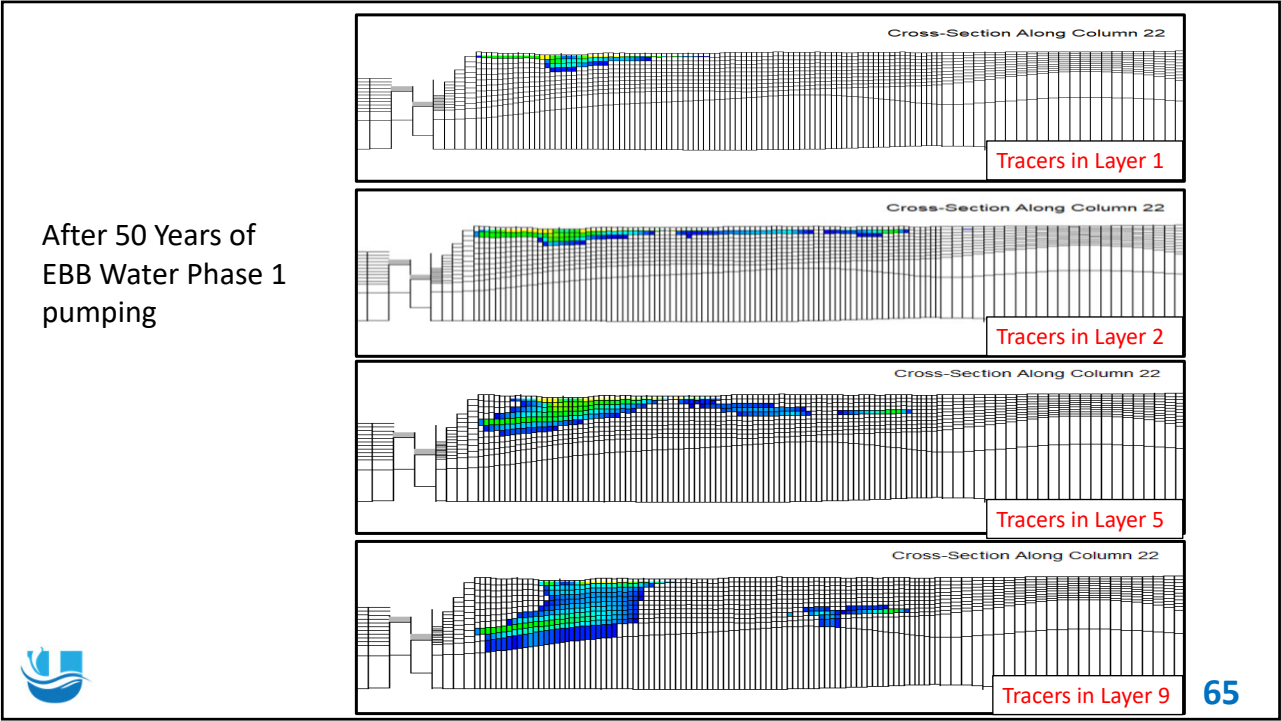
Layer 4
50 years

Layer 5
50 years

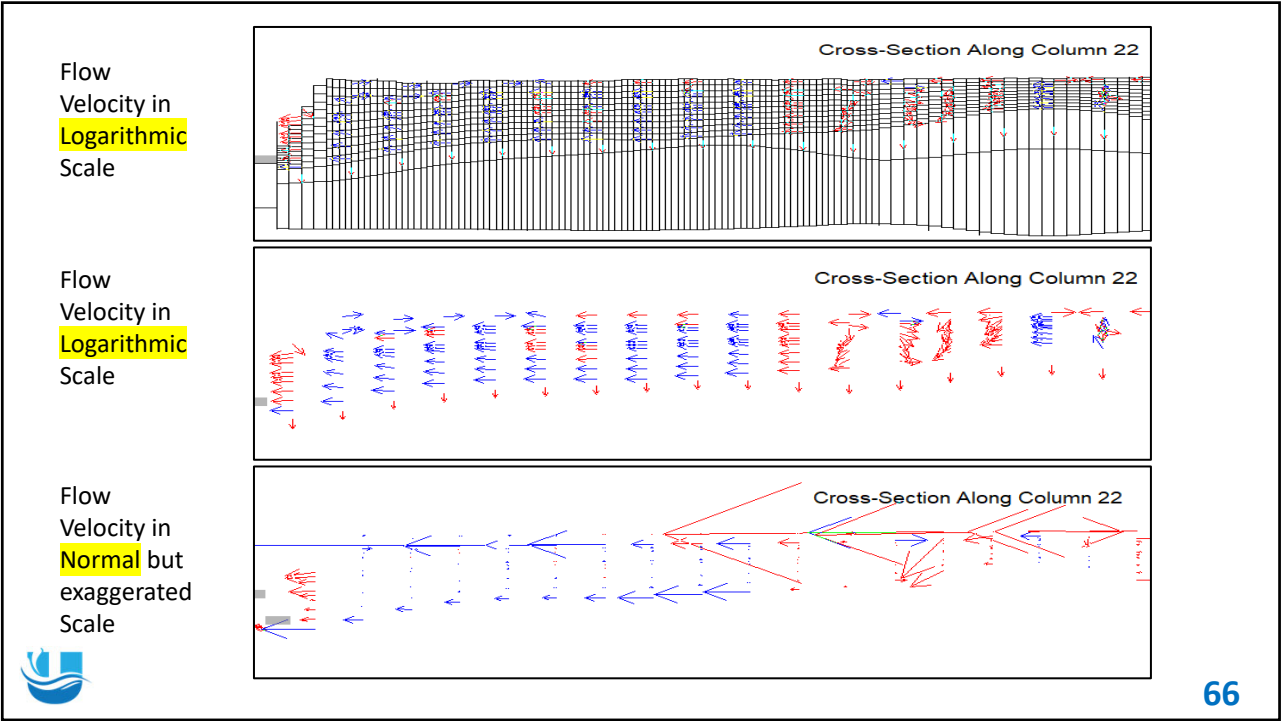


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EBB Water Treatment Project

- Phase 1 will demonstrate the concept and address the concern raised by regulators
- Game changer on basin groundwater sustainability



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Questions / Comments



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ENVIRONMENTAL SERVICES DEPARTMENT MONTHLY UPDATE

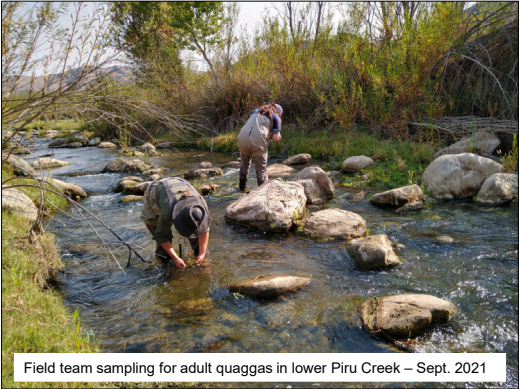
February 8, 2023




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Department Summary Updates

- Submittal of revised Quagga Mussel Monitoring and Control Plan
 - Updates to Quagga Monitoring Program
- Santa Felicia Dam water releases
- January 9th/10th storm response



Field team sampling for adult quaggas in lower Piru Creek – Sept. 2021



Rotary screw trap transported from Piru Creek into Lake Piru – Jan. 2023

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January Storm Updates

- Estimated 115,000 cfs at Freeman Diversion (est. 35,000 pictured)
- Numerous operational and maintenance challenges
- **No** catastrophic failures




January 10, 2023, 8:45 am, estimated ~35,000 cfs

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Freeman Diversion

January 10, 2023, 8:45 a.m.

- Flows estimated at ~35,000 cfs



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Freeman Diversion

Other Activities

- Discharge measurements
- Critical riffle measurements
- Sediment management project site remains inundated

A photograph showing two people in waders standing in a river, using a surveying instrument (tripod and level) to measure water levels or discharge. The water is turbulent and brown, indicating sediment. The background shows a wide river valley under a clear blue sky.

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A wide-angle photograph of a river flowing through a valley. In the foreground, there is a large, curved concrete structure, likely a dam or a spillway. The river is filled with brown sediment. In the background, there are steep, green mountains. The sky is overcast.

January 12, 2023

Santa Felicia Project

- Debris
- Landslides
- Lost and damaged equipment and infrastructure

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Santa Felicia Project

- Fish passage study equipment lost
- No access to study sites
- Quagga monitoring activities suspended



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Santa Felicia Project



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QUESTIONS



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Motion 5.1

California Environmental Quality Act Support for the Increased Importation of State Water Project Water – Amendment to Professional Consulting Services Agreement with Stantec Consulting, Inc.

- The Board will consider approving the motion authorizing the General Manager to execute an amendment to the professional consulting services agreement with Stantec
- Contract is directly related to the District's efforts to secure additional State Water Project water delivered to Lake Piru via Pyramid Lake
- Amendment amount: \$286,288



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Motion 5.2

Freeman Diversion Multiple Species Habitat Conservation Plan – Amendment to Professional Consulting Services Agreement with Stillwater Sciences

- Committee will consider recommending approval of the motion to the full Board to authorize the General Manager to execute an amendment to the professional consulting services agreements with Stillwater Sciences
- Additional consultant reporting for the completion of the Freeman Diversion MSHCP
- Amendment amount: \$230,000



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Motion 5.3

Freeman Diversion Multiple Species Habitat Conservation Plan – Amendment to Professional Consulting Services Agreement with Rincon Consultants

- Committee will consider recommending approval of the motion to the full Board to authorize the General Manager to execute an amendment to the professional consulting services agreements with Rincon Consultants
- Additional consultant reporting for the completion of the Freeman Diversion MSHCP
- Amendment amount: \$215,381



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Motion 5.4

Freeman Diversion Multiple Species Habitat Conservation Plan –
Amendment to Professional Consulting Services Agreement with
ICF Jones & Stokes

• Committee will consider recommending approval of the motion to the full Board to authorize the General Manager to execute an amendment to the professional consulting services agreements with ICF Jones & Stokes


• Additional consultant reporting for the completion of the Freeman Diversion MSHCP

• Amendment amount: \$124,721



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