

AGENDA
WATER RESOURCES COMMITTEE
Tuesday, October 3, 2023 at 9:00 a.m.
UNITED WATER CONSERVATION DISTRICT
Boardroom, 1701 N. Lombard Street, Oxnard, CA 93030

CALL TO ORDER – OPEN SESSION 9:00 a.m.

Committee Members Roll Call

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 July 5, 2023.

3. Update on Reservoir Releases and Diversions (20 minutes: Dr. Bram Sercu)

Information Item

Staff will present an update on hydrological conditions within the watershed of the Santa Clara River, releases from Lake Piru, and conditions at the Freeman Diversion.

4. Update on Groundwater Conditions (15 minutes: Kathleen Kuepper)

Information Item

Staff will present an update on key indicators of groundwater conditions with the District at the end of this extraordinarily “wet” water year.

5. Summary of the Updated Recycled Water Pumping Allocation (RWPA) Impact Analysis Conducted by United Staff in Response to a Request from the City of Oxnard (20 minutes: Dr. Jason Sun)

Information Item

Staff will present a summary of the updated Recycled Water Pumping Allocation (RWPA) Impact Analysis recently conducted in response to a request from the City of Oxnard. The analysis was conducted by Water Resources Department staff using United’s groundwater flow model. The analysis quantified the benefits of reducing seawater intrusion by supplying the City’s recycled water to agricultural users and the impact of the City’s proposed RWPA extraction.

6. Water Resources Department and GSA Activities Update (5 minutes, Dr. Jason Sun)

Information Item

Staff will answer questions and respond to comments on the most recent Water Resources Department staff report.

FUTURE AGENDA ITEMS

ADJOURNMENT

Directors:

Daniel C. Naumann, Chair
Mohammed Hasan
Gordon Kimball

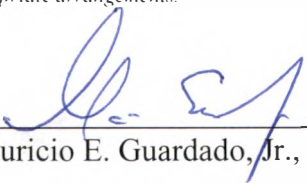
Staff:

Mauricio E. Guardado, Jr.
Dr. Jason Sun
Dr. Zachary Hanson
Christofer Coppinger
Patrick O'Connell
Robert Marshall

Dr. Maryam Bral
Dr. Bram Sercu
Murray McEachron
Kathleen Kuepper
Luke Bryden
John Lindquist

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) September, 28, 2023

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

(time) 3:00 p.m.

(attest) Kris Sofley

Posted: (date) September 28, 2023

At: www.unitedwater.com

(time) 3:00 p.m.

(attest) Kris Sofley

MINUTES
WATER RESOURCES COMMITTEE
Wednesday, July 5, 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

Staff Present:

Mauricio Guardado, general manager
Anthony Emmert, assistant general manager
Dr. Maryam Bral, chief engineer
Dr. Zachary Hanson, hydrogeologist
John Carman, operation and maintenance manager
Christopher Coppinger, senior hydrogeologist
John Lindquist, water resources supervisor
Murray McEachron, principal hydrologist
Josh Perez, chief human resources officer
Patrick O'Connell, senior hydrogeologist
Zachary Plummer, technology systems manager
Ed Reese, technology systems specialist
Vanessa Vasquez, clerk of the committee
Brian Zahn, chief financial officer

Public Present:

Monica Noery, Ventura Water

Call to Order – Open Session

Chair Naumann called the committee meeting to order at 9:00 a.m. The clerk of the committee called roll. Two committee members were present (Naumann and Hasan), Director Kimball was absent.

1. Public Comment

Directors asked if there were any public comments. There were none offered.

2. Approval of Minutes

Motion to approve the Minutes from May 2, 2023, Water Resources Committee meeting. Chair Naumann; second, Director Hasan. Voice vote: two ayes (Naumann and Hasan); none opposed; one absent (Kimball). Motion carries unanimously 2/0/1.

3. Update on optimization of groundwater recharge at the Saticoy Facility

Senior Hydrologist Dr. Bram Sercu presented an Update of Optimization of Groundwater Recharge at the Saticoy Facility, which covered 2023 diversions, optimization efforts, pipeline deliveries, recharge at noble basins, recharge at Saticoy (Pond O), Freeman Diversion flushing, Saticoy wells, forebay monitoring wells, and lower forebay/Oxnard plain monitoring wells (presentation attached).



During Dr. Sercu's presentation (slide four, Pipeline Deliveries) Chair Naumann asked for clarification on the maximum pipeline delivery chart. Dr. Sercu explained there were fluctuations in the pipeline deliveries for the month of May (also represented on slide 6, Pipeline Deliveries continued). Chair Naumann requested Dr. Sercu to include more information and data regarding the District's ponds, including the rotation process, in order to provide more background for the public. General Manager, Mauricio Guardado recommended including a photo of the ponds provided by Operations and Maintenance Program Supervisor John Carman.

As Dr. Sercu continued with his presentation, Director Hasan asked whether the data being shown for recharge at Saticoy (Pond O) was being shown in real time. Dr. Sercu explained that operators don't have access during real time and to understand hourly trends, bi-weekly evaluations are done. Dr. Sercu further explained that the data collected is the result of collaborative efforts between the Water Resources and Operations and Maintenance staff. Together they decide on the best plan of action based on the data collected. Assistant General Manager Anthony Emmert offered some insight into an upcoming project that could help District staff operate the basins more efficiently. The District is looking to utilize electronic meters to detect water levels, which would send operators automated notifications. Dr. Sercu added that this would be beneficial in saving staff time and ensuring that water levels are adjusted automatically. Mr. Guardado then emphasized that staff did their due diligence in ensuring water optimization. He referred to their combined efforts as science at its best with hydrologists and operators working together. Director Hasan commended staff for their efforts and stated that it's important to have thorough information coming through so that the public can fully understand the District's process. Chair Naumann added that including the pond locations and up to date information on pipeline deliveries should be highlighted.

During Dr. Sercu's presentation (slide 14, Freeman Diversion (flushing)) the Committee discussed sand diversions and how that sand replenishes beaches downstream. Chair Naumann suggested putting a dotted line showing the contours in the water (referencing photo from slide 14, Freeman Diversion (flushing)) to demonstrate movement despite mounding. Principal Hydrologist Murray McEachron stated that this could be demonstrated through an animation. Chair Naumann added he would like to see the animation along with comments on current and projected diversions specifically referencing the upcoming 4-million-acre foot milestone the District will reach in August. This led to discussing Article 21 water projections. Chair Naumann stated that water will be available for Pleasant Valley County Water District's (PVCWD) recharge gravity flow addressing a member of the public. The member of the public, from PVCWD, responded absolutely. Chair Naumann would like the public to be aware of overall operations and suggested adding another slide regarding Saticoy and El Rio Ponds. He concluded that this was great news all around.

No additional questions or comments offered.

4. Status of draft Extraction Barrier and Brackish Water Treatment (EBB) Water Phase 1 Monitoring and Contingency Plan

Water Resources Supervisor John Lindquist presented on the status of draft EBB Water Phase 1 Monitoring and Contingency Plan covering seawater intrusion near Naval Base Ventura County (NBVC) in Point Mugu, the purpose of the contingency plan, what's being monitored (including planned wells, existing and new), whether EBB Extractions are causing inelastic land subsidence, where monitoring will take place, what contingencies to prepare for and how often results will be reported.



During Mr. Lindquist's presentation (slide twenty-two, Groundwater Elevation Data), Chair Naumann asked about the placement of wells and whether they would be elevated to accommodate potential future sea level rise. Chief Engineer Dr. Maryam Bral responded that staff are considering sea level rise and the placement of the wellheads. Director Hasan then asked for baseline information on the well installation. Mr. Lindquist began explaining that the design started with gathering data for the area of installation for the 18 monitoring wells. In advance to the extraction wells, there is still outstanding data that needs to be reviewed a year prior to installation. Dr. Bral and Mr. Lindquist both stated that there is more data required for the semi-perched aquifers. Director Hasan asked for this baseline information to be provided and to simplify the information for overall public understanding.

Mr. Lindquist continued with his presentation.

At the end of the presentation, Chair Naumann asked Mr. Lindquist to include phase completion dates for both phases of the EBB Water Treatment project along with a footnote regarding grant awards.

No additional questions or comments offered.

5. Water Resources Department and GSA Activities Update

Due to the meeting running late Mr. Lindquist asked the Committee directors if department updates would be necessary and mentioned that staff activities were all included in this month's staff report. Committee members acknowledged they read the staff report and agreed to continue the meeting without the department updates. Mr. Lindquist then moved on to staff updates. He stated that the District is in the process of hiring a hydrologist and recently hired water resources staff that start on Monday, July 10. Mr. Lindquist then welcomed two recently hired senior hydrogeologists that were in attendance.

The committee then redirected to suggestions for staff presentations. Director Hasan would like staff to focus on presenting findings but overall shared his enthusiasm for their excellent work. Chair Naumann agreed and stated he would like current and future achievements to be the focus.

No additional questions or comments offered.

FUTURE AGENDA ITEMS

No future agenda items. No questions or comments offered.

ADJOURNMENT 10:29 a.m.

Chair Naumann adjourned the meeting at 10:29 a.m.

I certify that the above is a true and correct copy of the Minutes of the Water Resources Committee Meeting of July 5, 2023.

ATTEST:

Daniel Naumann, Chair



Legal Counsel
David D. Boyer


MEETING DATE: Wednesday, July 5, 2023

The signing or registering of your name on this sign-up form is not required but is voluntary. All persons may attend the meetings of the Board of Directors of United Water Conservation District without signing or registering their names on this form.

Representing


Monica Noery
Patrice C. ~~Connell~~

Ventura water
self

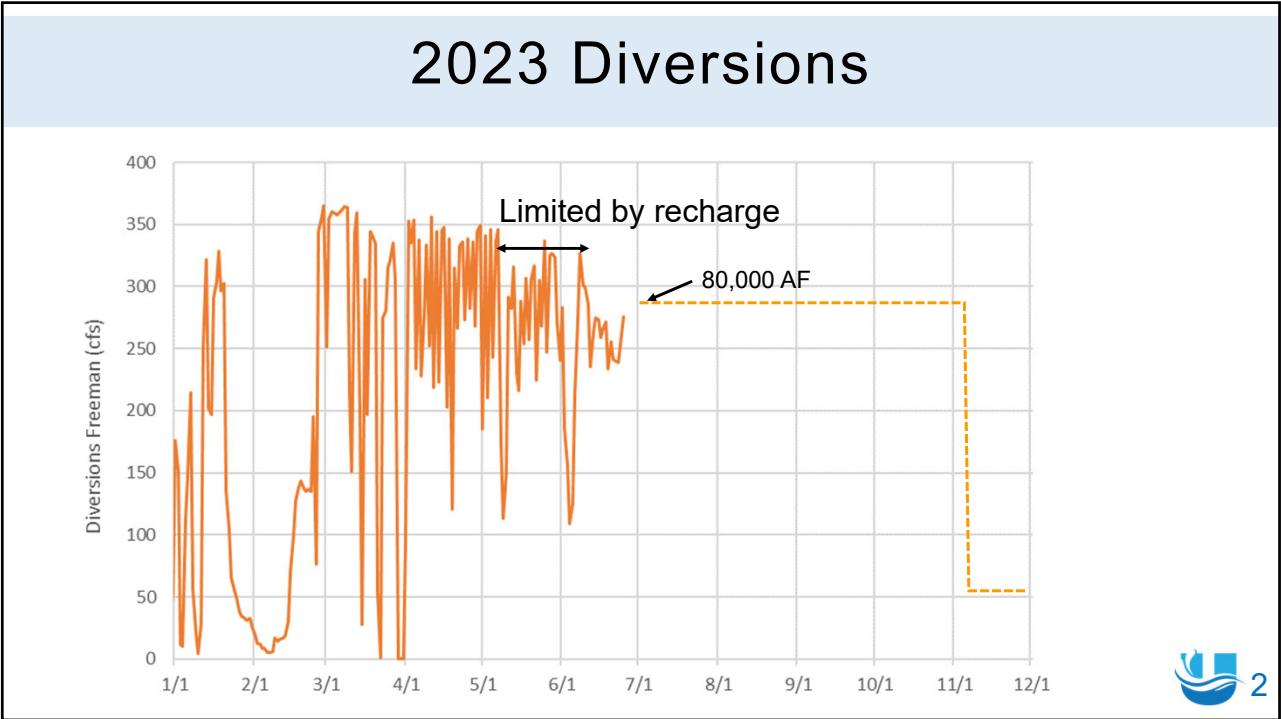


4. Update on Optimization of Groundwater Recharge at the Saticoy Facility

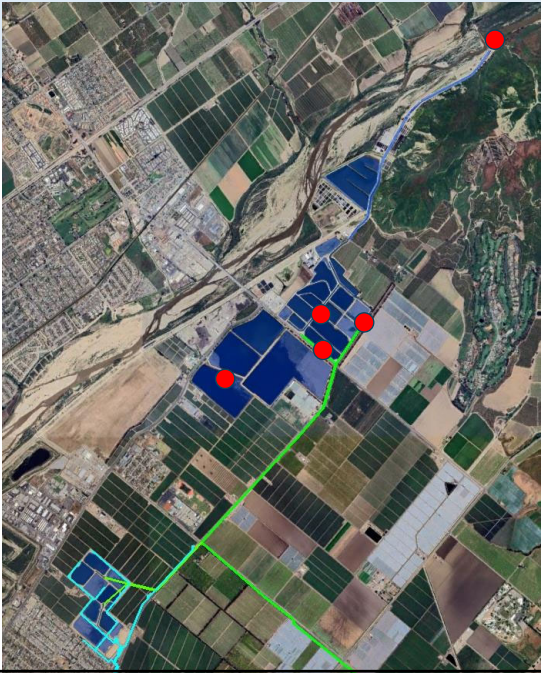
Presented by Dr. Bram Sercu
Water Resources Committee Meeting
July 5, 2023



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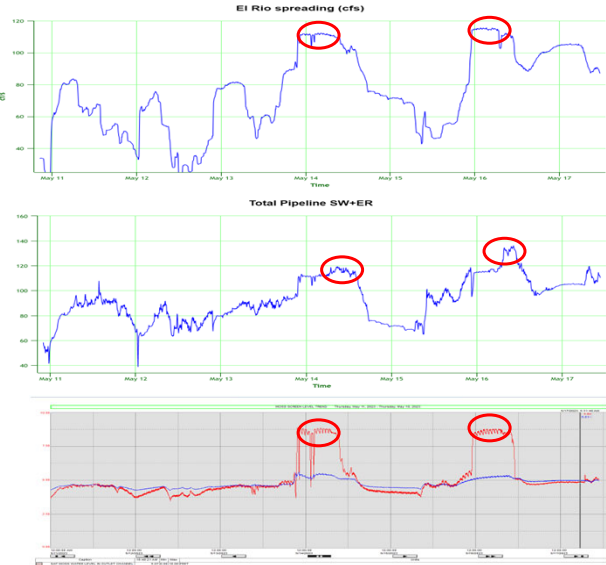
Optimization Efforts

1. Pipeline deliveries
2. Noble recharge
3. Saticoy recharge
4. Freeman flushing
5. Saticoy well field



3

1. Pipeline Deliveries




Maximum El Rio deliveries

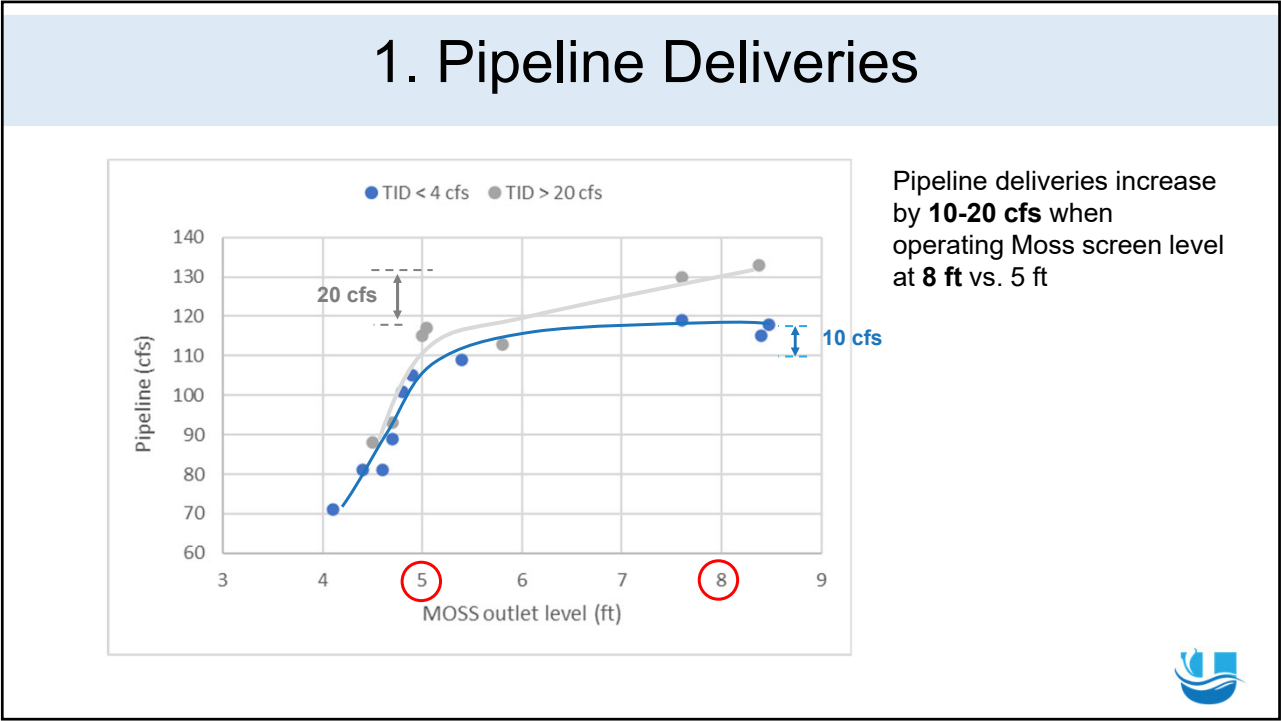
Maximum Pipeline deliveries

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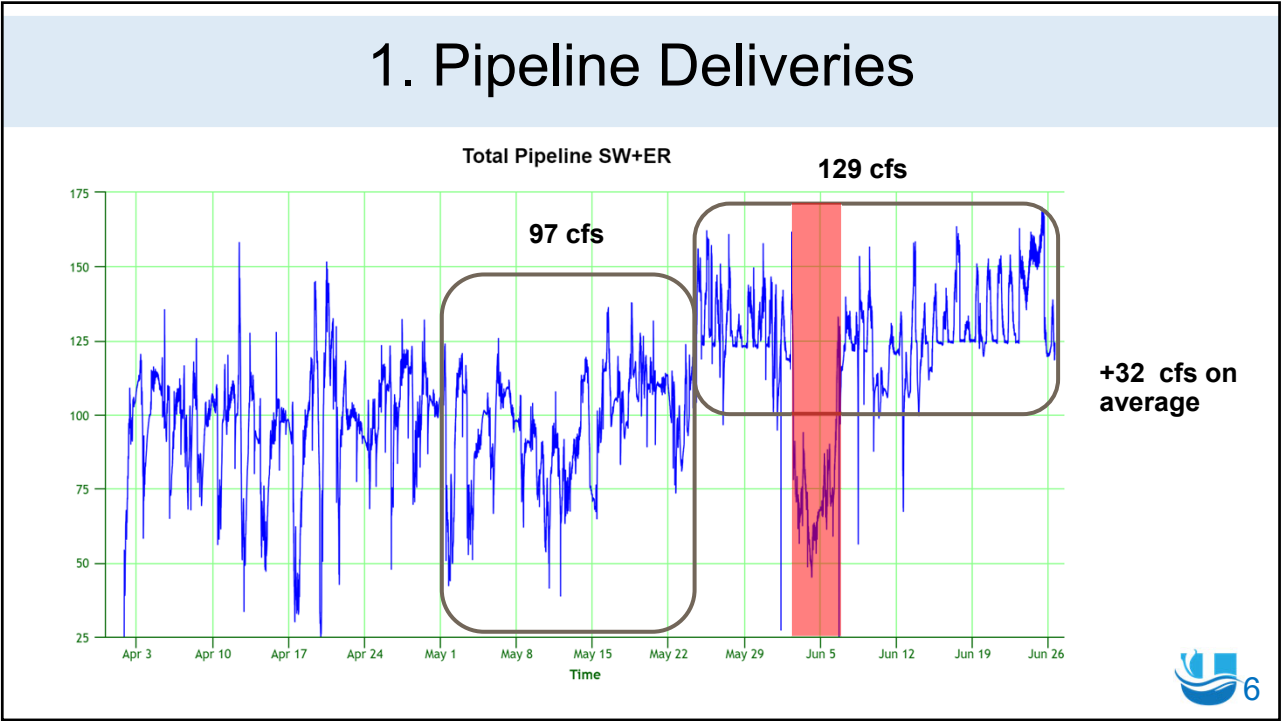
High water levels Moss screen outlet



4

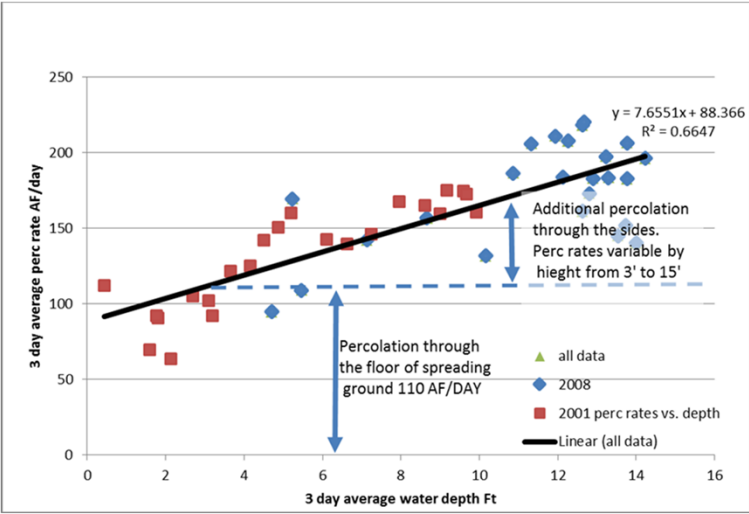


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2. Recharge Noble Basins

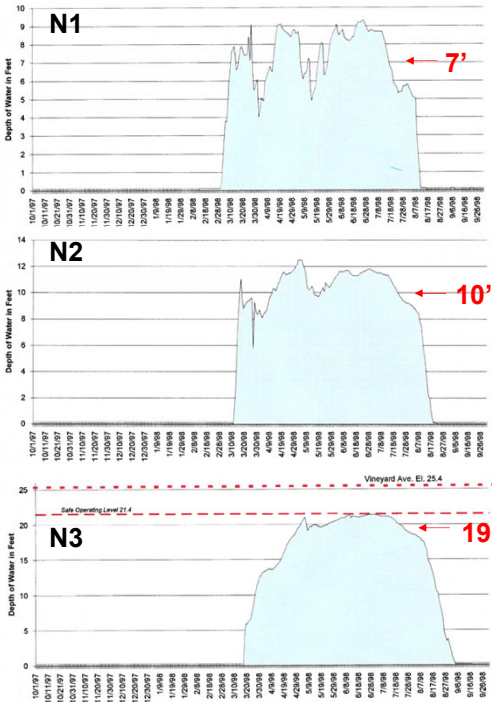


- Significant recharge through side berms in Noble 3
- Operate basins high for maximum recharge



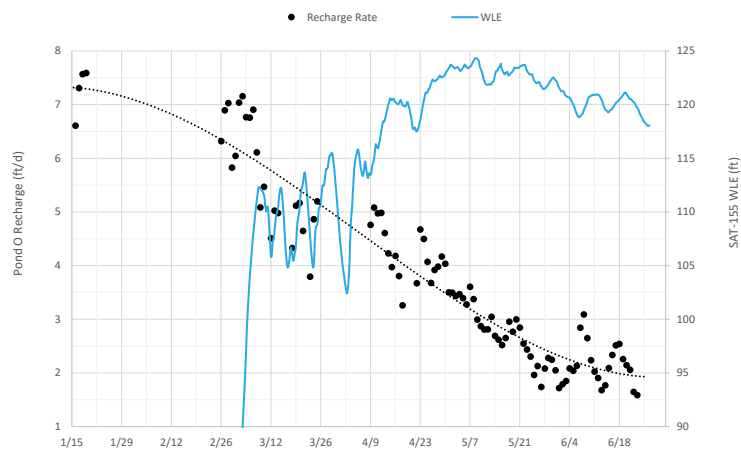
7

NOBLE BASINS LEVELS



8

3. Recharge Saticoy (Pond O)

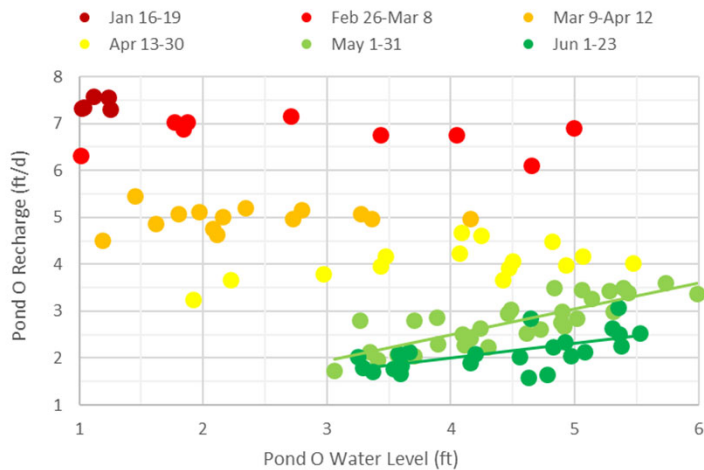


- Recharge significantly reduced due to mounding
 - Recharge continues to decline as mound relaxes somewhat
 - Basin clogging also a factor?
- Disk basins in July



9

3. Recharge Saticoy (Pond O)

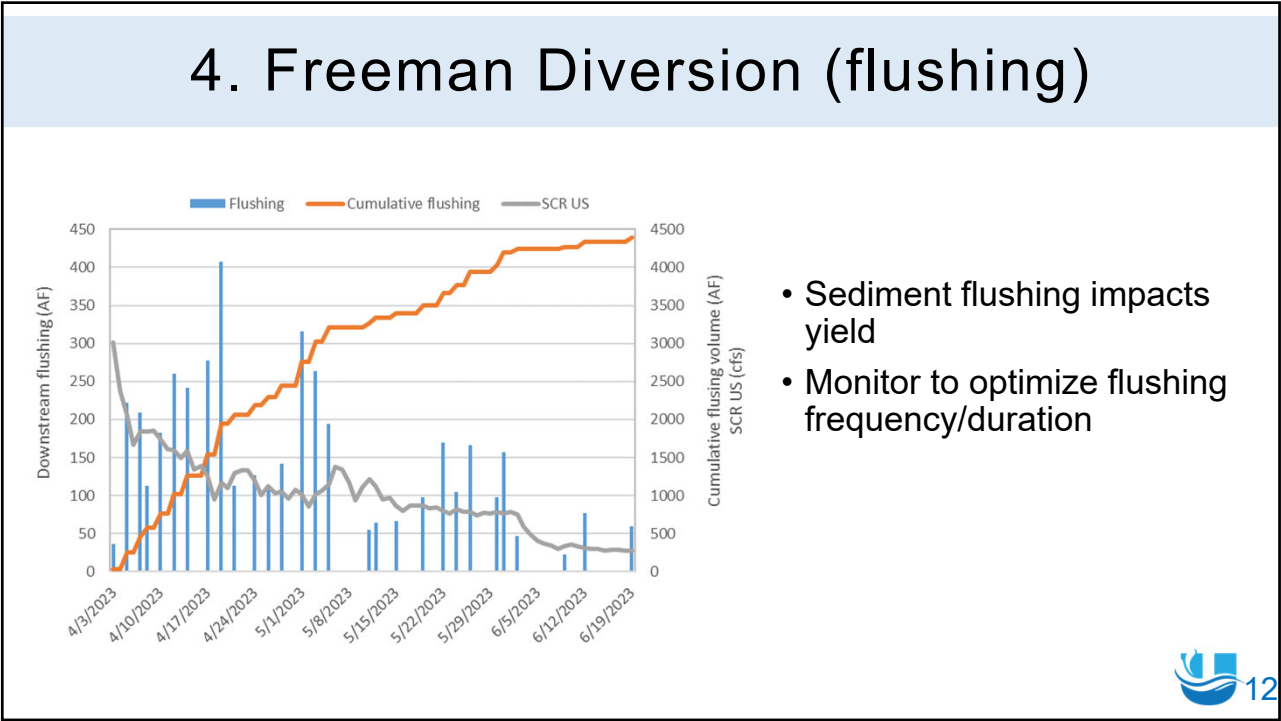
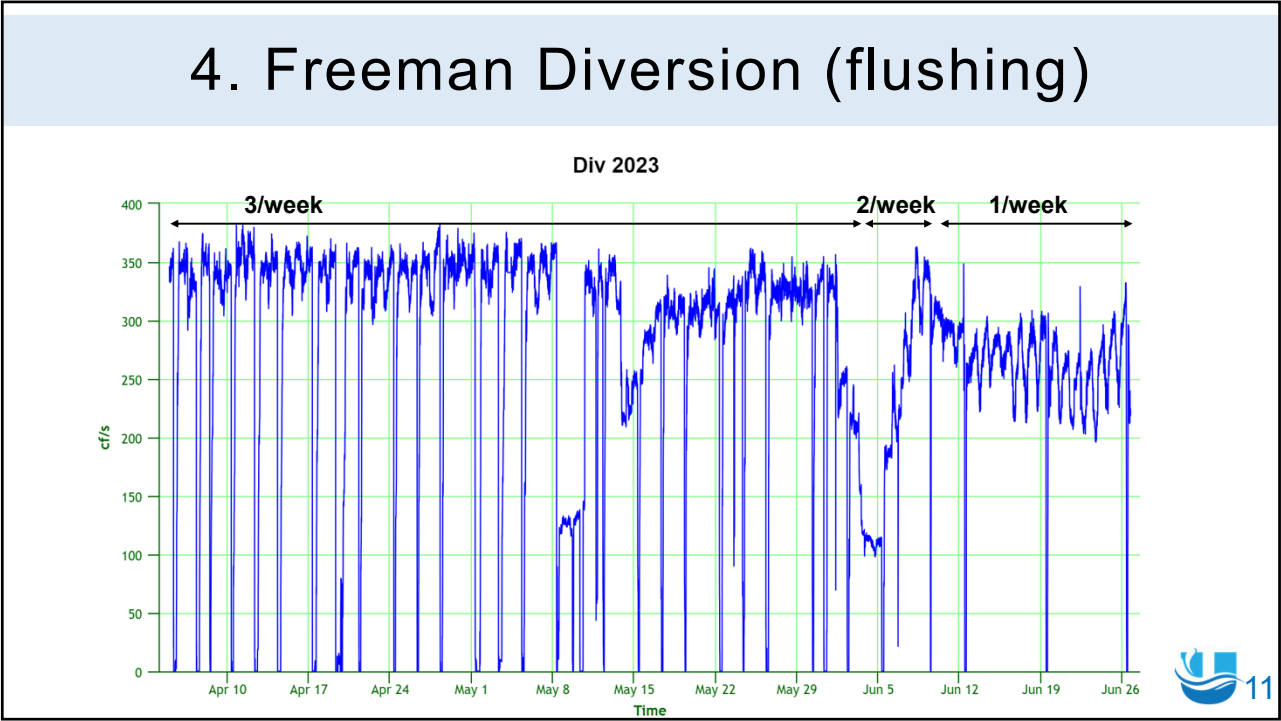


**Increasing operating level
increases recharge after May 1**
E.g., increase 0.5 ft/d

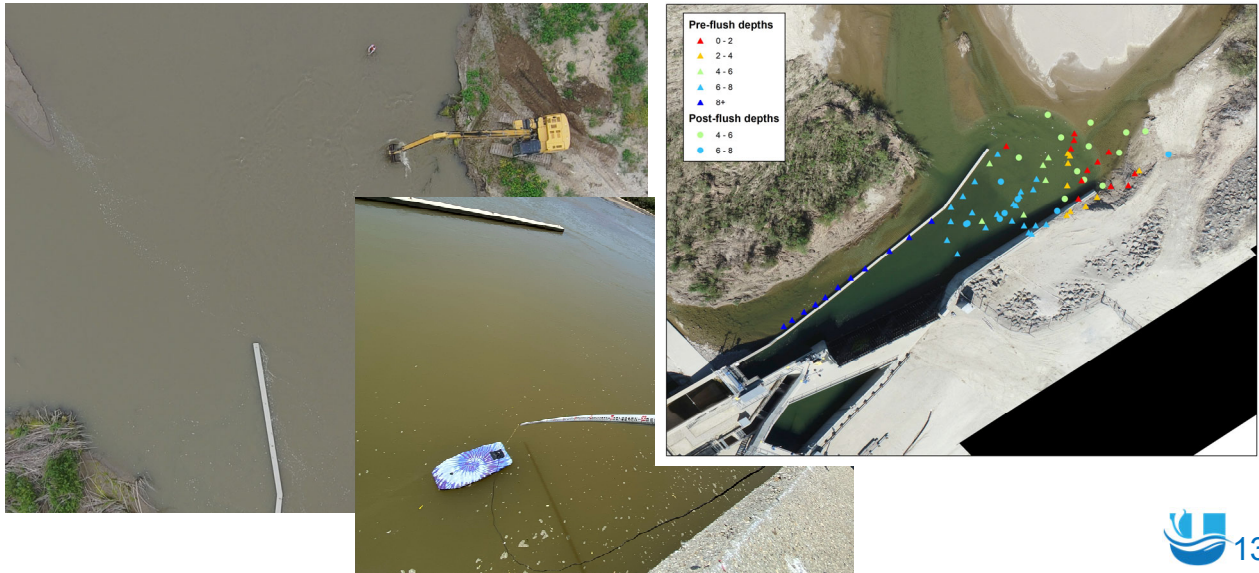
	Pond O	All Saticoy
Area (acres)	10	85
Rate (AF/d)	+5	+43
Rate (cfs)	+2.5	+21



10



4. Freeman Diversion (flushing)



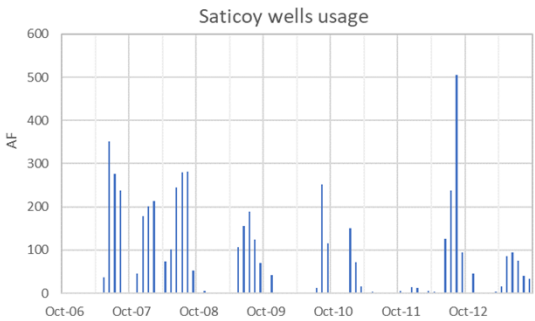
13

4. Freeman Diversion (flushing)



14

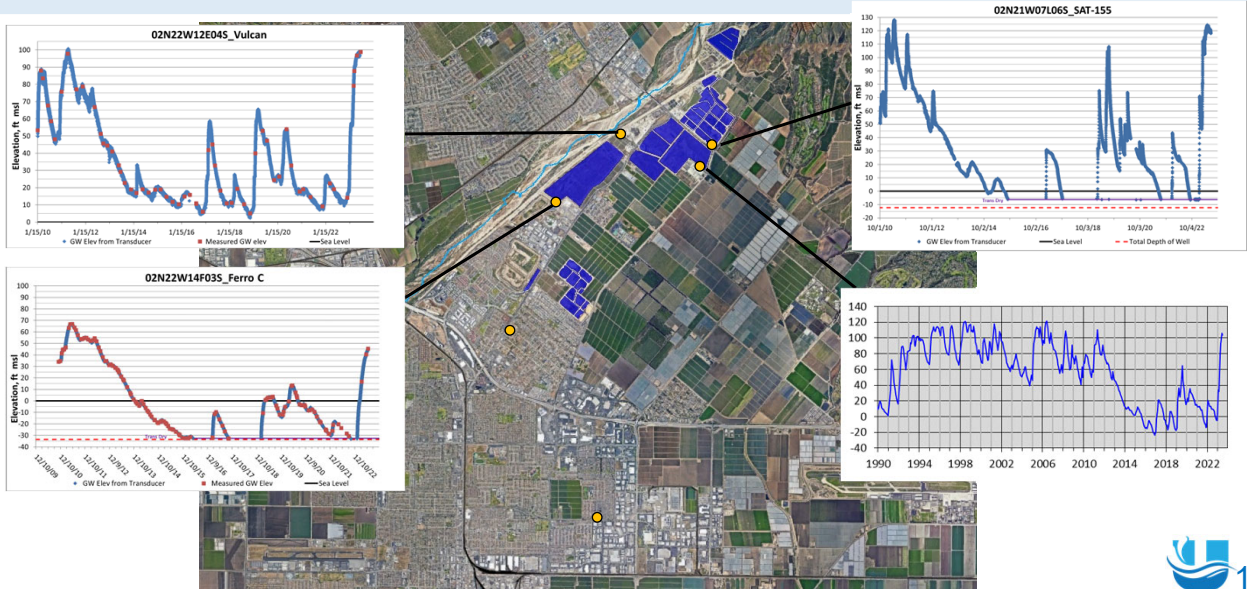
5. Saticoy Wells

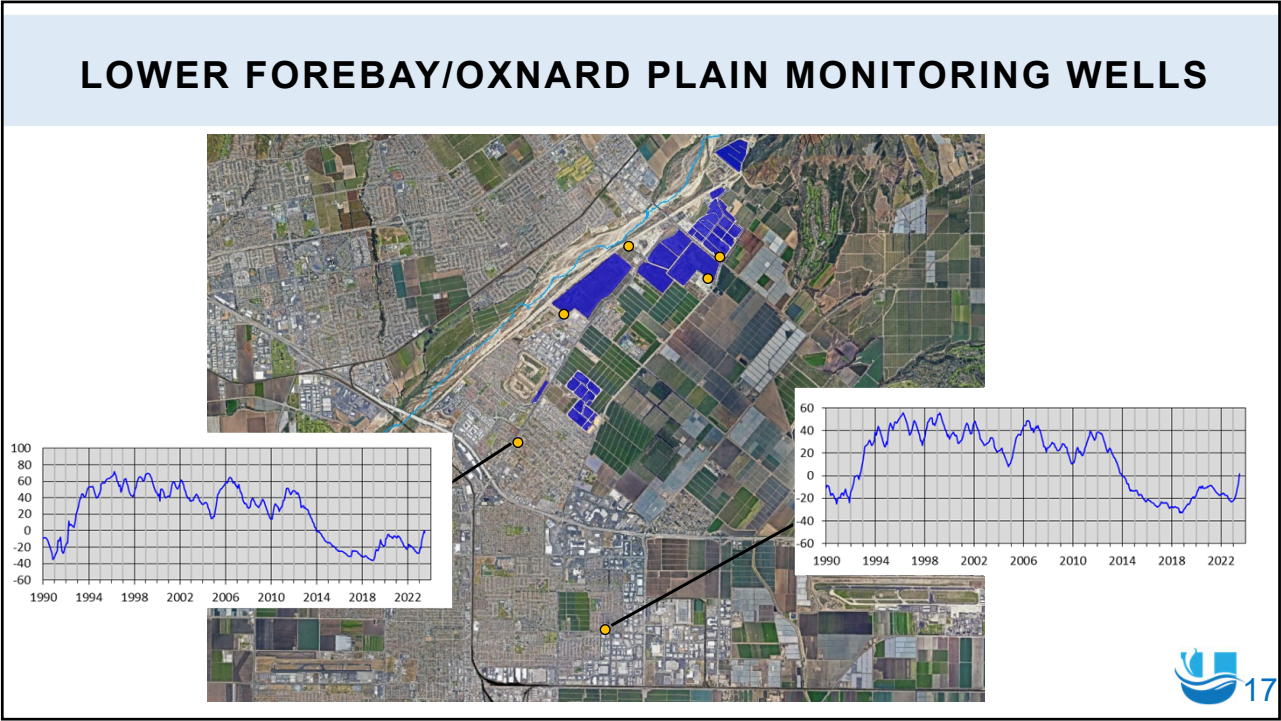



- Wells are currently operational
- May be used in Nov-Dec (if diversions < ~125 cfs)



FOREBAY MONITORING WELLS






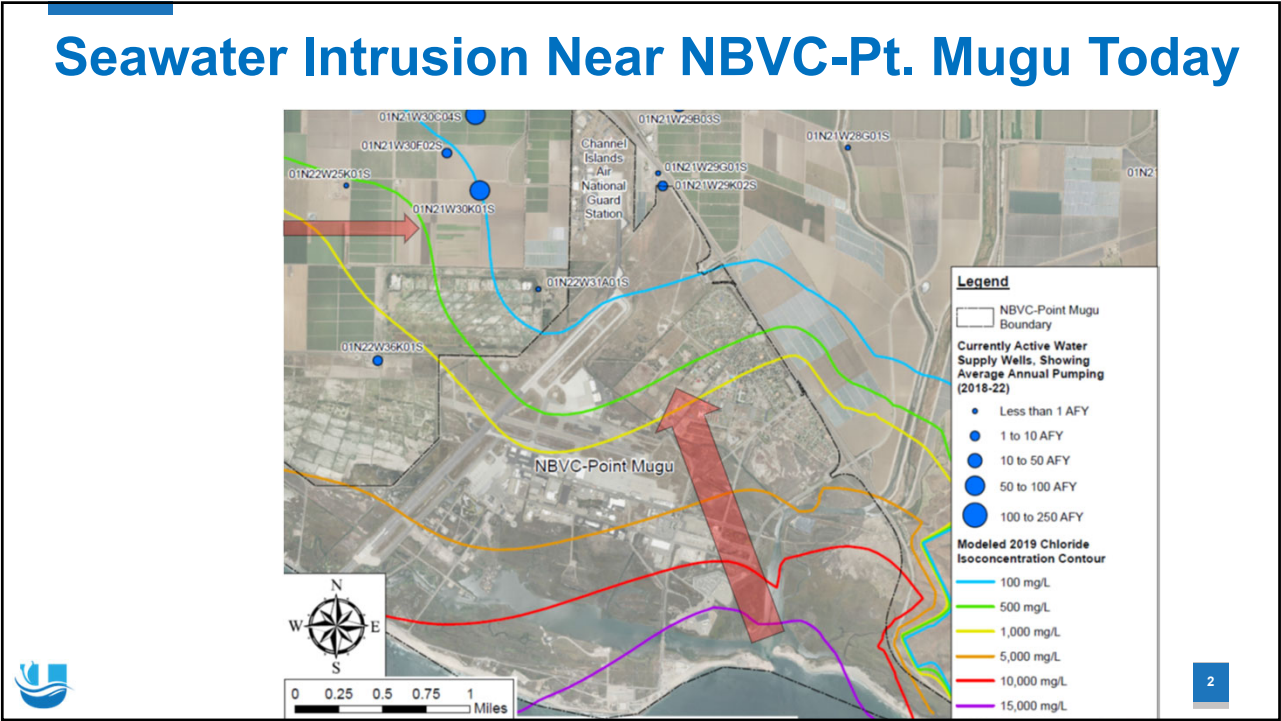


5. STATUS OF DRAFT EBB WATER PHASE 1 MONITORING AND CONTINGENCY PLAN

Presented by: John Lindquist, Water Resources Supervisor
Water Resources Committee Meeting
July 5, 2023



1



2

What is the Purpose of This Plan?

1. State what we intend to accomplish with this project.
 - a) Capture intruding seawater
 - b) Begin removing seawater that has already intruded
 - c) Increase sustainable yield of the OPV basins
2. Describe how we will measure progress
and recognize if anything happens that we weren't expecting
3. Specify potential contingency actions we will take if something unexpected happens.



3

What Will We Monitor?

1. Groundwater elevations (and gradients)
 - a) Extent of capture
 - b) Effects on existing water-supply wells north of Base
 - c) Drawdown relative to historical lows
 - d) Vertical gradients near extraction wellfield
2. Groundwater quality
 - a) Only targeting brackish to saline water during Phase 1
 - b) Unexpected groundwater quality or geochemical changes
 - c) Vertical migration from Semi-perched Aquifer to Oxnard Aquifer
3. Land-surface elevation changes (subsidence)



4

Where will we monitor?

- Wells at margins of NBVC-Pt. Mugu (less frequently)
 - Groundwater levels
 - Salinity and major ions (same as in past)
- Wells near extraction wellfield (more frequently)
 - Groundwater levels, with special attention to vertical gradients
 - Salinity and major ions
 - Broader suite of organic and inorganic constituents



9

What contingencies will we be prepared for?

1. Fresh groundwater reaching extraction wells
2. Groundwater levels dropping below historical lows
3. Downward migration of water from the Semi-perched Aquifer
4. Other unexpected changes in groundwater quality or geochemistry
5. Inelastic (permanent) land subsidence
6. Unexpected changes in groundwater levels or hydraulic gradients



10

How often will we report results?

- Annually for routine reporting
- Within 14 to 30 days if a contingency action is triggered



11

11

| Questions?



12

12



Staff Report

To: Water Resources Committee Members

Through: Mauricio E. Guardado, Jr., General Manager
Maryam Bral, Chief Engineer

From: John Lindquist, Water Resources Supervisor
Dr. Jason Sun, Supervisory Water Resources Engineer
Murray McEachron, Hydrologist Supervisor

Date: September 27, 2023 (October 3, 2023, meeting)

Agenda Item: 6. Monthly Water Resources Department Report and Update on Activities of local Groundwater Sustainability Agencies (GSAs)
Information Item

Staff Recommendation:

The Committee will receive a report on Water Resources Department activities for the month of September 2023, including a summary of the activities of the three local Groundwater Sustainability Agencies (Fox Canyon Groundwater Management Agency, Fillmore and Piru Basins GSA, and Mound Basin GSA and the Santa Paula Basin (adjudicated) Technical Advisory Committee.

Discussion:

Staff Activities

Notable efforts and activities conducted by staff during September included the following:

- Hydrology:
 - Staff continued 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 will continue seeking opportunities to secure additional Article 21 and other SWP water in the coming months.
 - Staff continued to provide input on operational decisions at Freeman Diversion to manage sediment accumulation near the intake structure, maximize diversions, and comply with regulatory requirements.
-

Agenda Item: 6. Monthly Water Resources Department Report and Update on Activities of local Groundwater Sustainability Agencies (GSAs)
Information Item

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- Staff continued to assist 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 and interpretation of physical modeling efforts at the Bureau of Reclamation's facility in Denver and at the University of Iowa.
- Staff continued to provide input to support compliance with *O. mykiss* migration release requirements at Santa Felicia Dam.
- Staff continued to coordinate with recharge operators at Saticoy and El Rio to maintain optimum percolation rates for the facilities.
- Staff continued to assist the Engineering Department in developing a reservoir operations plan and hydrological risk assessment for Lake Piru prior and during the construction of the new outlet works as part of the Santa Felicia Dam Safety Improvement project. Additionally, Staff assisted the Engineering Department to identify alternative elevations for the proposed new intakes of the new sloping intake as part of the new outlet works system.
- Staff participated in Freeman Diversion Operational Work Group meetings (which include the National Marine Fisheries Service [NMFS] and California Department of Fish and Wildlife [CDFW]) to discuss proposed operational parameters, including bypass flows, associated with a proposed higher instantaneous diversion rate at Freeman Diversion.
- Hydrogeology:
 - Staff continued routine groundwater monitoring and reporting activities within the District.
 - Staff participated in meetings of the Groundwater Sustainability Agencies (GSAs) within the District, as detailed in subsequent sections of this report.
 - Staff continued to assist the Engineering Department and their consultant with design of Phase 1 extraction wells for the EBB Water Project.
 - Staff are working with a consultant to plan installation of EBB Water Project Phase 1 groundwater monitoring wells and are managing the SGM Grant activities associated with this effort. Staff are also developing a sampling and analysis plan for the EBB monitoring wells to provide data on ambient groundwater conditions in the project area. The information collected will be used in support of design of Phase 1 of the EBB Water Project.
 - Staff updated a three-dimensional animation illustrating the initial development and subsequent expansion of the groundwater recharge mound formed this spring and summer below United's spreading basins in the Forebay.
 - Staff provided technical support to the Engineering Department for testing and planning for installation of a permanent pump at new El Rio replacement well #20.
 - Staff updated the "Maximum Extent Practicable" (MEP) analysis of the impacts on groundwater conditions of potential reductions of diversions and recharge in the

Agenda Item: 6. Monthly Water Resources Department Report and Update on Activities of local Groundwater Sustainability Agencies (GSAs) Information Item

Page 3

Oxnard and Pleasant Valley Basins associated with proposed bypass flows at Freeman Diversion.

- Staff revised a draft monitoring plan to support the updated “Recycled Water Pumping Allocation Impacts Analysis” (described below, under “Groundwater Modeling”) in response to comments from stakeholders.
- Staff continued working with the State Water Resources Control Board to develop an appropriate scope of work for the Prop 1, Round 3 grant in support of the EBB Water Project. The grant is expected to be finalized and signed late this year.
- Staff began updating analysis of trends in groundwater and surface-water use within the District through water year 2022.
- Staff began reviewing recent downscaled climate-model results for selected locations to update forecasts developed by the State for future rainfall amounts within the District’s service area.
- Staff continued reviewing data to evaluate the reasons for lower-than-expected surface-water deliveries to the Pumping Trough Pipeline (PTP) this summer.
- Groundwater Modeling:
 - The model review panel has completed the assessment of the updated Coastal Plain Model. Their preliminary review did not find any issues or concerns. Staff continue to refine and improve the Coastal Plain Model.
 - Staff held a meeting with FCGMA staff and its consultant, DUDEK, on the modeling support efforts using the updated Coastal Plain Model. Several action items were identified including extending the simulation period of the Coastal Plain Model from 1985-2019 to 1985-2022.
 - Staff have completed a new Recycled Water Pumping Allocation (RWPA) Impact Analysis report, submitted to FCGMA and the City of Oxnard. The report is part of the District’s effort to assist the City of Oxnard in assessing the benefits and impact of its RWPA based on supplying the advanced treated recycled water (RW) from the City of Oxnard’s Groundwater Recovery Enhancement and Treatment Program (GREAT Program) to agricultural users in the southern Oxnard Basin.
 - Staff prepared more modeling analysis for legal counsel for litigation support related to the OPV adjudication.
 - Staff are working on the subsidence model calibration.
- Outreach and Education
 - Staff began planning presentations for United’s Water Sustainability Summit #4, scheduled for October 26.
 - Several staff attended the Groundwater Resources Association of California’s (GRAC) Western Groundwater Congress in Burbank, California. Dr. Bram Sercu presented “Up to the challenge: Operational strategies to maximize groundwater recharge on the Oxnard Plain during the drought buster year of 2023” to Congress attendees.

Agenda Item: 6. Monthly Water Resources Department Report and Update on Activities of local Groundwater Sustainability Agencies (GSAs) Information Item

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- Murray McEachron gave several tours of Freeman Diversion and Saticoy Spreading Grounds to stakeholders from Ventura County.
- Murray McEachron gave a presentation on the recent (post-1950) history of United Water Conservation District at a lunchtime educational meeting open to all United staff on September 19.

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 continued to meet periodically with FCGMA staff and other stakeholders to analyze benefits and impacts of water-supply 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 FCGMA held a regular Board meeting on September 27. Notable agenda items for the September 27 meeting included:

- Receive and file an addendum to United's 2022 Recycled Water Management Impact Analysis Annual Report regarding the City of Oxnard's Groundwater Recovery Enhancement and Treatment (GREAT) program, documenting that the Oxnard Subbasin and Forebay area groundwater conditions meet the conditions in Resolution No. 2013-02 for Oxnard to pump its recycled water pumping allocation (RWPA).
- An update from FCGMA staff on preparation of an updated impact analysis and resolution for proposed modifications to the City of Oxnard's GREAT program.
- An update from FCGMA staff on Groundwater Sustainability Plan (GSP) 5-year evaluations for the Oxnard, Pleasant Valley, and Las Posas Valley Basins.
- An update on planning for implementation of the Las Posas Valley Basin Adjudication Judgment.
- An update on Las Posas Valley Basin extraction allocations for water year 2023-24
- An update regarding notice of commencement of groundwater adjudication in the Oxnard and Pleasant Valley Groundwater Basins.

The next regular Board meeting is scheduled for October 25 at 1:30 p.m.

GSP Implementation Support – United supported implementation of the GSPs for the Oxnard, Pleasant Valley, and Las Posas Valley Basins as follows:

- United staff coordinated with FCGMA's staff and its consultant, Dudek, to plan updated groundwater model scenarios for the 5-year updates required for the Oxnard, Pleasant Valley, and West Las Posas Valley Basins.
- United coordinated with FCGMA and City of Oxnard staff to develop and run model scenarios evaluating potential impacts of proposed changes to how Oxnard exercises its

Agenda Item: 6. Monthly Water Resources Department Report and Update on Activities of local Groundwater Sustainability Agencies (GSAs)
Information Item

Page 5

Recycled Water Pumping Allocation. United submitted draft and final RWPA Impact Analysis and Monitoring Plans to the FCGMA and City of Oxnard.

- United prepared and submitted “Project Evaluation Checklists” and related supporting materials to the FCGMA. These checklists provide updated information on United’s planned water-supply projects that were included in the 2022 GSP updates prepared by the FCGMA (covering water year 2021).

Fillmore and Piru Basins Groundwater Sustainability Agency (FPBGSA)

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

Board of Directors meetings – The FPBGSA cancelled its September 21 regular Board meeting.

The next FPBGSA Board meeting is scheduled for October 19, at 4:00 p.m.

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 FCGMA held a regular Board meeting on September 25. Notable agenda items for the September 25 meeting included:

- The Board reappointed the Agriculture and Environmental Stakeholder Directors for a new one-year term.
- The Board accepted the appointment of Jennifer Tribo as the City of San Buenaventura’s representative through June 2024.

The next MBGSA Board meeting is scheduled for October 23, at 1:00 p.m.

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 have prepared a draft version of the Santa Paula Basin Annual Report for water year and calendar year 2022.