

AGENDA
WATER RESOURCES COMMITTEE
Tuesday, November 3, 2020 at 9 a.m.
UNITED WATER CONSERVATION DISTRICT
Boardroom, 1701 N. Lombard Street, Oxnard CA 93030

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Meeting number: 126 762 5435

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Access code: 126 762 5435

OPEN SESSION:

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 October 6, 2020 Water Resources Committee meeting.

3. Update on Groundwater Flow Model (20 minutes; Sun)

The Committee will be updated on the status of United's groundwater flow model development effort, including model validation, and review.

4. Future Hydrology and Climate Change Factors; Considerations for Future Modeling Efforts (20 minutes; Sercu)

The Committee will be briefed on staff's recent progress on activities related to applying climate change factors to historic streamflow records, assessing the influence of urbanization within the watershed of the Santa Clara River, and modeling releases from Castaic Lake.



5. **Santa Felicia Dam Release and Diversions Update for Fall 2020** (10 minutes; McEachron)
The Committee will be briefed on the ongoing release from the Santa Felicia Dam, recharge to the upper basins, and diversions at the Freeman and the recent tours of the Freeman Diversion provided to the Public.
6. **Water Resources Department Update** (5 minutes; Detmer)
Staff is available to provide updates to the Committee on the Department's recent activities and projects.
7. **Groundwater Sustainability Agencies Update** (10 minutes; Detmer)
The Committee will be briefed on recent activities of the Groundwater Sustainability Agencies (GSAs) within or adjacent to the District's service area.

FUTURE AGENDA ITEMS

ADJOURNMENT

Committee Members:

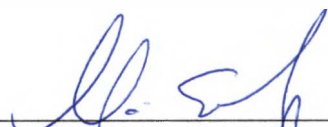
Edwin T. McFadden III, Chair
Patrick J. Kelley
Daniel C. Naumann

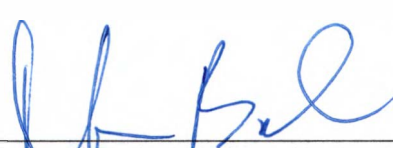
Staff:

Mauricio E. Guardado, Jr., General Manager
Maryam Bral, Chief Engineer
Dan Detmer, Supervising Hydrogeologist
Dr. Jason Sun, Senior Hydrogeologist/Modeler
John Lindquist, Senior Hydrogeologist
Dr. Zachary Hanson, Hydrogeologist
Kathleen Kuepper, Hydrogeologist
Eric Elliott, Associate Hydrogeologist
Murray McEachron, Principal Hydrologist
Dr. Bram Sercu, Senior Hydrologist

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Approved:


Mauricio E. Guardado, General Manager


Dr. Maryam Bral, Chief Engineer

Posted (Date): October 29, 2020

(time) 4:45p.m.

(attest) Eva Ibarra

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

Posted (Date): October 29, 2020

(time) 5:15p.m.

(attest) Eva Ibarra

At: www.unitedwater.org



Board of Directors
Michael W. Mobley, President
Bruce E. Dandy, Vice President
Sheldon G. Berger, Secretary/Treasurer
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Edwin T. McFadden III
Daniel C. Naumann

General Manager
Mauricio E. Guardado, Jr.

Legal Counsel
David D. Boyer

MINUTES
WATER RESOURCES COMMITTEE
Wednesday, October 6, 2020 at 1p.m.
UNITED WATER CONSERVATION DISTRICT
Boardroom, 1701 N. Lombard Street, Oxnard CA 93030

Committee Members Present:

Chair McFadden
Director Kelley
Director Naumann

Staff Present:

Mauricio E. Guardado, Jr., General Manager
Dr. Maryam Bral, Chief Engineer
Tony Emmert, Assistant General Manager
Brian Collins, Operations and Maintenance Manager
Dan Detmer, Supervising Hydrogeologist
Dr. Zachary Hanson, Hydrogeologist
Kathleen Kuepper, Hydrogeologist
Kris Sofley, Executive Administrative Coordinator/Clerk of the Board
Eva Ibarra, Administrative Assistant II
Kathleen Kuepper, Hydrogeologist
John Lindquist, Senior Hydrogeologist
Murray McEachron, Principal Hydrologist
Zachary Plummer, IT Administrator
Dr. Bram Sercu, Senior Hydrologist
Dr. Jason Sun, Senior Hydrogeologist/Modeler
Robert Richardson, Senior Engineer
Josh Perez, Human Resources Manager

Public Present:

Burt Handy
Jennifer Tribo
Kim Loeb
Curtis Hopkins

OPEN SESSION: 9:07am

Chair McFadden
Director Kelley
Director Naumann

Committee Members roll call

Chair McFadden and Director Kelley (participated virtually), Director Naumann (was in attendance in the Boardroom) Chair McFadden called roll call and confirmed all present.



1. Public Comment

Chair McFadden asked if there were any public comments for the Water Resources Committee; none were offered.

2. Approval of Minutes - Motion

Motion to approve the September 2, 2020 Water Resources Committee meeting, Director Kelley; Second, Director Naumann. Roll call vote: two ayes (Kelley and Naumann); none opposed; one abstaining (McFadden). Motion carries 2/0/1.

3. Update on Groundwater Flow Model

Dr. Zachary Hanson presented slides on Model Validation (Slides 1-9, see attached).

Director Naumann asked Dr. Hanson if all the active precipitation gauges run into our watershed or different watersheds. Dr. Hanson then explained the various flows. Dr. Sun added that the precipitation data is important to include in the model, Director Naumann requested that the data be colored differently in slide presentations to distinguish the different stream flows. Dr. Hanson noted his request and said the District has good information on surface flow coming into the Santa Clara River.

Chair McFadden asked if all the diversions shown were active. Dr. Hanson stated the ones shown were active for the validation period, although a couple have gone offline in the early 2000's and are reporting zero diversion to the state. Chair McFadden said staff have some infrastructure challenges and he isn't sure how they can continue to divert without some major work in the stream.

Director Naumann stated the slides shows 10 diversions for the Santa Clara Watershed and asked if they can be color coded in future presentations. Dr. Hanson stated he will color code the diversions for the model documentation and future presentations. Chair McFadden added mentioned the only ones that need to be color coded would be from Fillmore Piru Basin as those are the significant diversions and only for Piru Creek and Santa Clara River as there is not much going on elsewhere. Director McFadden said, "The only water in the river is what United is releasing down Piru Creek."

Director Kelley asked if it were possible to demonstrate the magnitude of the diversions or distinguish between the small and large ones, citing the difference between Freeman and Rancho Temescal as an example. Dr. Hanson agreed and said he would add it to the slides in future.

Chair McFadden mentioned that there is a concern about the diversions among the GSAs as they develop the GSPs. Chair McFadden also agreed with Director Kelly that the magnitude of the diversions would be useful. He added that the information may be significant for groundwater dependent eco-systems. Dr. Hanson said he is confident that all major diversions have been included.

Director Naumann mentioned that Camrosa's water, although outside of the District, is coming into the Oxnard and Camarillo area and that type of information would be good to include as well. Dr. Hanson said that staff has that information but did not show it in these slides.



Director Kelley asked about typical discrepancies in groundwater pumping reporting. Dr. Hanson said he did not have the numbers in front of him, but that most discrepancies are the result of reporting errors and added that the District is working with Fox Canyon GMA to correct some current discrepancies.

Chair McFadden asked Dr. Sun if staff were able to track pumping from the west end of the Fillmore Basin into the Santa Paula Basin and to the farm irrigation wells. Dr. Sun stated that all the wells are properly implemented into the model and that the model is not limited to the basin boundaries but aligns more to the watershed boundaries, when possible.

Director Kelley asked Dr. Hanson if neighboring agencies and municipalities are sharing information that can be useful for water resource management and Dr. Hanson said other agencies are sharing information.

Mr. Detmer explained the model's validation documentation will include a quantitative assessment of how well the calibration polls turned out for the validation period, not just a visual comparison as shown in slides today, and there will be numbers associated with that information. Director Naumann asked how long the process would be and Mr. Detmer replied that, as part of the model update and validation, staff needs to finish within the next month and then will move on to do the forward forecasting for the GSAs, which Dr. Sun is currently working on. Mr. Detmer said staff still has a data gap that needs to be filled and will come back to the committee to present again when that work is completed.

Director Naumann asked if staff were still getting requests for different model runs or scenarios. Mr. Detmer said that he didn't believe the GSAs were ready just wait and are still working on land use changes and water supply scenarios. As staff is finishing the model, the GSAs are doing the "homework," and there is still data gathering needed, and staff is relying on the GSAs to do their part. He added that staff will keep the committee posted on modeling requests in addition to the near term commitments for the model application including in support of Fillmore and Piru Basins GSA, Mound Basin GSA and some sustainability projects for FCGMA and the Brackish Water project as well.

Chair McFadden stated the foundation of the GSAs' GSPs will be the District's model, and the more accurate the model the better as the GSAs try to figure out what their water use will be for the next 50 years.

4. Santa Felicia Dam Release and Diversions Update for Summer

Mr. Murray McEachron shared a presentation with the Committee (see slides)

Mr. McEachron provided a quick update on the continuing release from Santa Felicia Dam. At present, 6500 AF has been diverted at the Freeman Diversion and staff are still working on the end date for the release.

Chair McFadden said he observed that there is still have plenty of flow going through Fillmore and he expects the basin must be pretty topped off. Mr. McEachron replied that staff have not seen much percolation in the Fillmore Basin, but at the end of the release period, staff will collect the water levels and will be happy to report those numbers to the Committee, which should be in about another month and a half.



Director Naumann asked if the release could go past the November 6 date, extended possibly to November 13 or later. Mr. McEachron stated staff is looking to end the release earlier than that, but the release may need to be increased, once it is determined if the Freeman Diversion can handle the volume. There are several things pushing the deadline in an effort to keep Dr. Bral's goals for the Santa Felicia Dam drilling project. Director Naumann asked how long the drilling process will last and Dr. Bral said five to seven days.

Dr. Bral then mentioned that there is a boring at the nose of the rock in the lake and the contractor is trying to find stable ground to be able to start drilling. She added that the contractor has requested lowering the lake level by another seven feet, as it will be safer for conducting that boring. Staff is working with the contractor and with Department of Water Resources to determine if more water can be released and, if so, that will allow some flexibility in determining the release end date. General Manager Mauricio Guardado stated the magic time frame is the first or second week in November, due to different variables and to be safe.

Chair McFadden asked if anyone had any further questions, none were offered.

5. Coastal Brackish Treatment Project Update

Mr. Dan Detmer presented (see slides)

Director Naumann asked about the depth of wells and Mr. Detmer showed a slide that displayed a diagram of the ideal project flow. Director Naumann also asked if there is a base redline model that shows what is needed for the type of barrier being used and Mr. Detmer said staff have not yet reached that point.

Director Kelley asked if there were any concerns regarding contaminants. Mr. Detmer stated staff do not know how many sites would be major issues as the contaminants are not mobile or may have been fully remediated so it may be something that the District does not necessarily need to react to. Other sites with more mobile contaminants or areas where we do see more potential for vertical flow may be an issue. Mr. Detmer explained how the gradients change between the Oxnard aquifer and the semi perches zones in wet cycles, and that most of the time, the downward vertical gradient because the aquifers are below sea level and that's why there is seawater intrusion. If production wells in the Mugu area have a stronger vertical gradient analysis, that may need to be assessed. Most of the flow will be lateral, so that works in our favor, but it is the vertical flow that staff have concerns about.

Mr. Guardado mentioned that in reviewing the various meetings and the people involved in those meetings, it is very refreshing to see the collaborative efforts. Dr. Bral and staff have been working diligently with the various representatives from the Navy on moving towards making this project happen rather than finding ways that will prevent it from going forward, even so far as providing assistance with grant applications, all of which is very encouraging.

Dr. Bral presented slides on Navy-United Partnership Updates (slide 13-14)

Chair McFadden asked if there were any questions or comments for Dr. Bral and none were offered.



6. Water Resources Department Update

Mr. Dan Detmer provided an update on Groundwater Flow Model – Model Validation (no slides).

Mr. Detmer mentioned Hydrogeologist Dr. Bram Sercu has been working with Ventura County Watershed Protection District along with Dr. Hanson and Dr. Sun and they will likely be applying the flood flow model that was developed in coordination between Los Angeles County, Ventura County and Bureau of Reclamation. He explained that the common software is used to simulate flood flows and has the ability to change land use run off characteristics. This model can be used to determine if run off in the watershed is sensitive to development in Santa Clarita and elsewhere in the model domain. Staff are also looking forward to using this existing tool and not having to start from scratch.

Mr. Detmer mentioned Mr. McEachron continues to do a lot of work with the District's Environmental Services Department related to the fish passage structure regarding flow requirements and sediment management. Dr. Sercu is also working on sediment management and will be presenting at the Bi-annual Symposium for Management Aquifer Recharge. He also mentioned that last month, at the GRAC meeting, Kathleen Kuepper presented on Optimizing Sustainable Yield and that last week Mr. McEachron and Dr. Sercu gave a presentation at AWA Educational Luncheon Program about the District's conservation release and sediment management activities.

Chair McFadden asked if there were any questions or comments for Dr. Bral and none were offered.

7. Groundwater Sustainability Agencies Update

Mr. Dan Detmer shared updates (no slides).

Mr. Detmer mentioned they are involved in all the local GSAs. The Fox Canyon GMA has convened a core stakeholder process with a specific goal on avoiding adjudication on the Oxnard Plane. That group has been meeting with pumpers, water district and others, and have discussed sustainability and ways to achieve that. Staff have been talking about the District's projects. There is also a projects subcommittee that Dr. Bral and Mr. Lindquist are part of and will be supporting with some modeling once the group decides on a few projects. Mr. Detmer also mentioned that the group have a legal ad hoc subcommittee. The core stakeholders group reported to the Fox Canyon Board that they have an administrative interest in managing the basins collectively instead of individually.

Director Naumann and Mr. Detmer had a discussion regarding the Del Norte pumping on the Oxnard Plain, and that the basin boundary adjustment which recently took place was the change of the administrative boundary. General Manager Mauricio Guardado asked if they knew the rate structure or infrastructure of those wells.

Fillmore Piru Basin GSA held its second Stakeholders Workshop last Thursday, which largely focused on Sustainability Management Criteria. Staff need to set management objectives and minimum thresholds within the target that was set for achieving those. The Agency's ad hoc work committee is tackling some of those and it will come back to the full board in the near future, but this is the core of the SGMA guidelines identifying what water levels, water quality, surface water and groundwater interactions or lack thereof are acceptable to the community.



Chair Ed McFadden stated while the basins decide what their sustainable management criteria is, the Agency will need to rely on the model to see what might be possible. Mr. Detmer stated staff will be responding to report requests.

Mound Basin held a workshop in September regarding setting basin sustainable management criteria, sea water intrusion criteria, which is an issue for the Mound Basin, and the Agency is getting under way with defining its MTs and MOs for the basin. The Agency is waiting for the completion of the model and will also have another workshop planned for December or January.

The annual reporting for Santa Paula Basin is done and was submitted to DWR (Mr. Lindquist clarified that the report has not been submitted to DWR until April but has been sent to the Technical Advisory Committee, who will forward the report to the Court as part of the normal process or new SGMA process). The model covers this basin, and there is some interest in assessing what kind of projects can be done to optimize the basin.

Director Kelley stated the flow model is extremely important and if there is any issue with the validation, we need to get right on it, as so many agencies are relying on it. Mr. Detmer stated that is correct.

Director Naumann stated great staff and committee. This group does fantastic work.

Chair McFadden asked if there were any additional comments or questions. None were offered.

FUTURE AGENDA ITEMS

Director Kelley stated validation

ADJOURNMENT

Adjourned the meeting at 10:57 am.

I certify that the above is a true and correct copy of the Minutes of the UWCD Water Resources Committee Meeting of October 6, 2020.

Chair Edwin T. McFadden, III



Update on Groundwater Flow Model – Model Validation

Data Collection Zachary Hanson, PhD

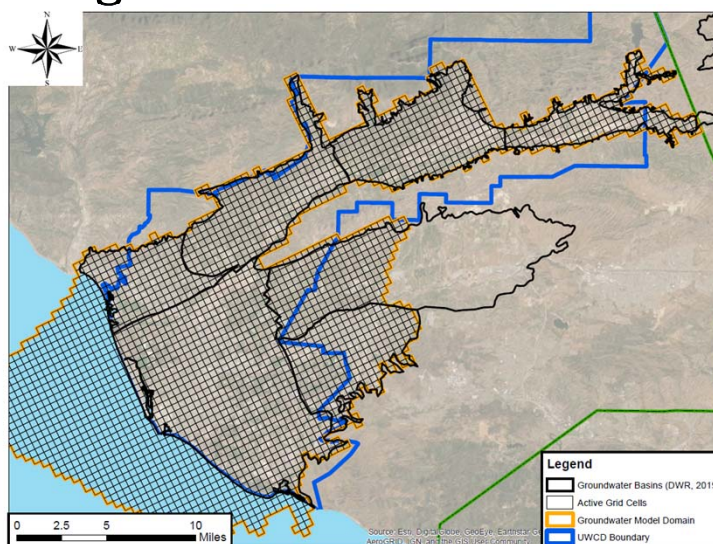
Model Simulation Jason Sun, PhD, PE

Tuesday, October 6, 2020

1

Data Collection Background

- Model Extension up Santa Clara River
- Transition to daily surface flows
- Calibration 1985-2015
- **Validation 2016-2019**
 - Precipitation
 - Streamflow and Diversions
 - Imports/Exports
 - Groundwater Pumping
 - Groundwater Level data



2

(2016-2019)

-
- Map of the San Joaquin River Delta showing groundwater basins, active grid cells, and precipitation gauges. The map includes a north arrow, a scale bar (0 to 10 miles), and a legend.
- Legend**
- Active Precipitation Gauge
 - Groundwater Basins (DWR, 2019)
 - Active Grid Cells
 - Groundwater Model Domain
 - UWCD Boundary
- Source: Esri, DigitalGlobe, GeoEye, Earthstar, AeroGRID, IGN, and the GIS User Community

3

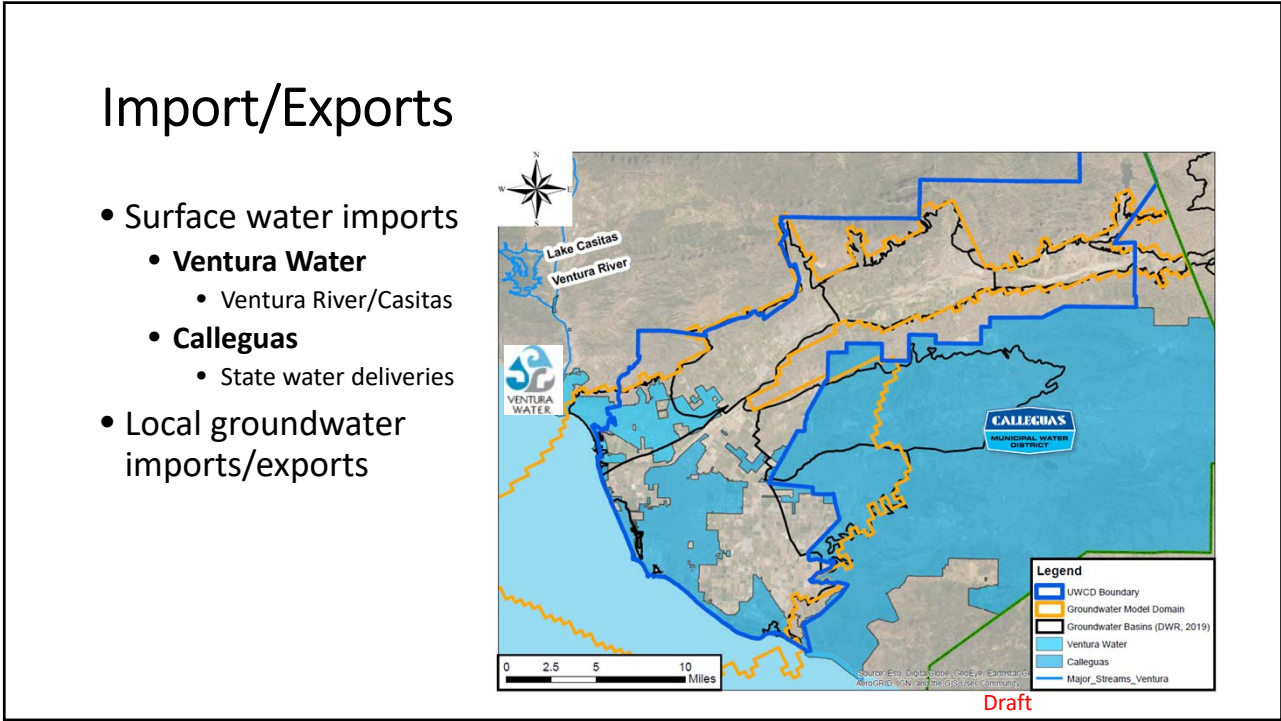
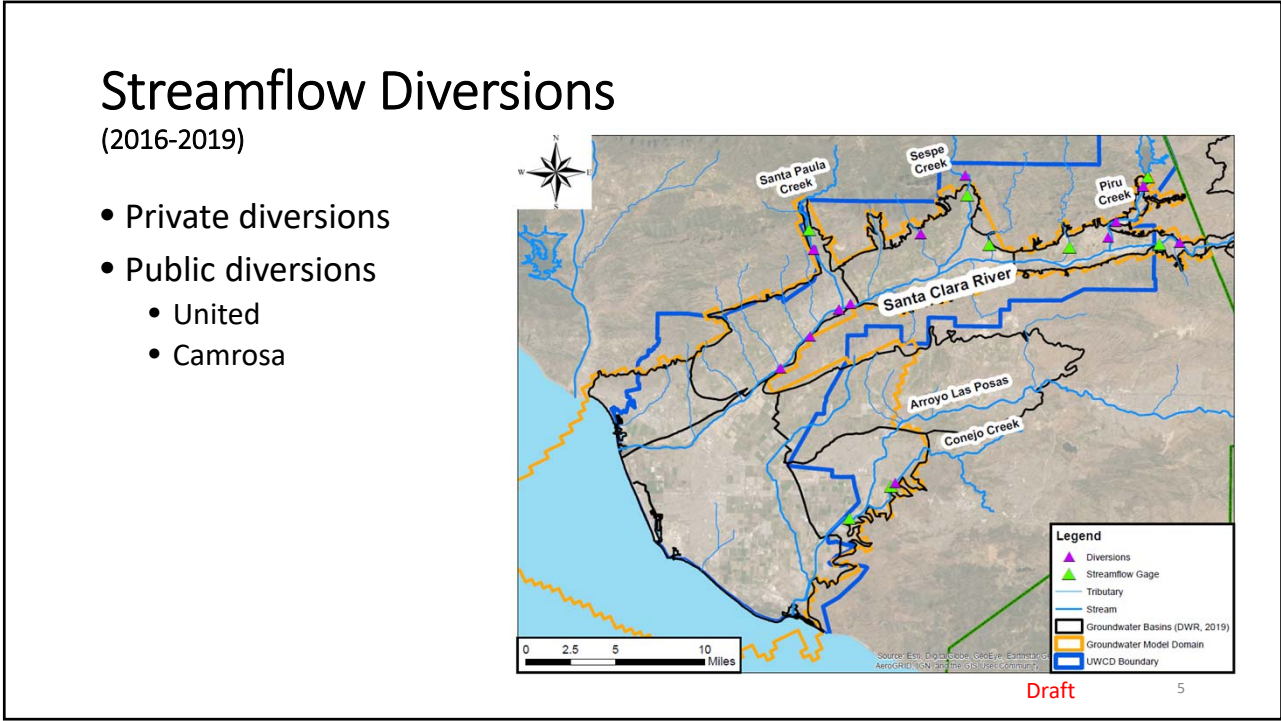
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(2016-2019)

-
- A map of the Santa Clara River Watershed in California. The map shows the Santa Clara River flowing from the north towards the ocean. Several creeks are shown: Santa Paula Creek, Sespe Creek, Piru Creek, Arroyo Las Posas, and Conejo Creek. The map includes a compass rose in the top left corner and a scale bar in miles (0, 2.5, 5, 10) in the bottom left corner. A legend in the bottom right corner identifies the symbols used: green triangles for Streamflow Gage, yellow triangles for Wastewater, blue lines for Tributary, black lines for Stream, black outlines for Groundwater Basins (DWR, 2019), orange outlines for Groundwater Model Domain, and blue outlines for UWCD Boundary. The map also shows the coastline of California to the west.

4

4



Groundwater Pumping

(2016-2019)

- Gathered all United pumping records
- Acquired FCGMA records for cross comparison and inclusion for extension within model domain
 - Discrepancies represent less than 1% of pumping over the validation period
 - Working with FCGMA to further compare and resolve
 - Note: FCGMA Ordinance E agricultural reporting period (Jan – July)
 - Typical discrepancies found in both records include:
 - Reporting to incorrect well number
 - Input issues (e.g. decimal)
 - Missing pumping
 - Unreported pumping
 - Differences in total annual pumping

This map displays the geographic distribution of groundwater pumping wells in the United Water Conservancy District (UWCD) from 2016 to 2019. The map includes a north arrow and a scale bar from 0 to 10 miles. The legend identifies several key features: VCWPD wells from the FCGMA Pumping DB (green dots), VCWPD wells from the United Pumping DB (blue dots), Groundwater Basins as defined by the DWR in 2019 (black outline), Active Grid Cells (light blue grid), the Groundwater Model Domain (orange outline), the UWCD Boundary (thick blue line), and the Fox Canyon GMA (light green area). The map shows a high density of wells in the central and northern portions of the district, particularly within the active grid cells.

Draft7

7

Groundwater Levels

(2016-2019)

- Used for model comparison
- >570 monitoring sites
- >24,000 records
- Ongoing effort within district to continue acquiring and maintaining this rich dataset
 - United
 - VCWPD

This map illustrates the locations of groundwater level monitoring sites within the UWCD from 2016 to 2019. It features a north arrow and a 0 to 10 mile scale bar. The legend specifies: Wells with 2016-2019 Water Level Records (orange dots), VCWPD well file status as active (green dots), Groundwater Basins (DWR, 2019) (black outline), Active Grid Cells (light blue grid), Groundwater Model Domain (orange outline), UWCD Boundary (thick blue line), and Fox Canyon GMA (light green area). The monitoring sites are distributed across the model domain, with a notable concentration in the northern and central regions.

Draft8

8

Dataset was team effort

- ALL WR staff played a hand in this process
- Many neighboring agencies, private parties were very willing and helpful in this effort
- Best introduction project to acquire detail/wholistic understanding of the District

9

9

UWCD Model Simulation from 2016 to 2019

- All the 2016-2019 data from precipitation, stream flows, pumping records, and water level data are implemented into the UWCD model except **a small number of data yet to collect/verify**
- Use the parameters from the 1985-2015 calibrated model to simulate the 2016 to 2019 water level
- **Preliminary result is prepared**

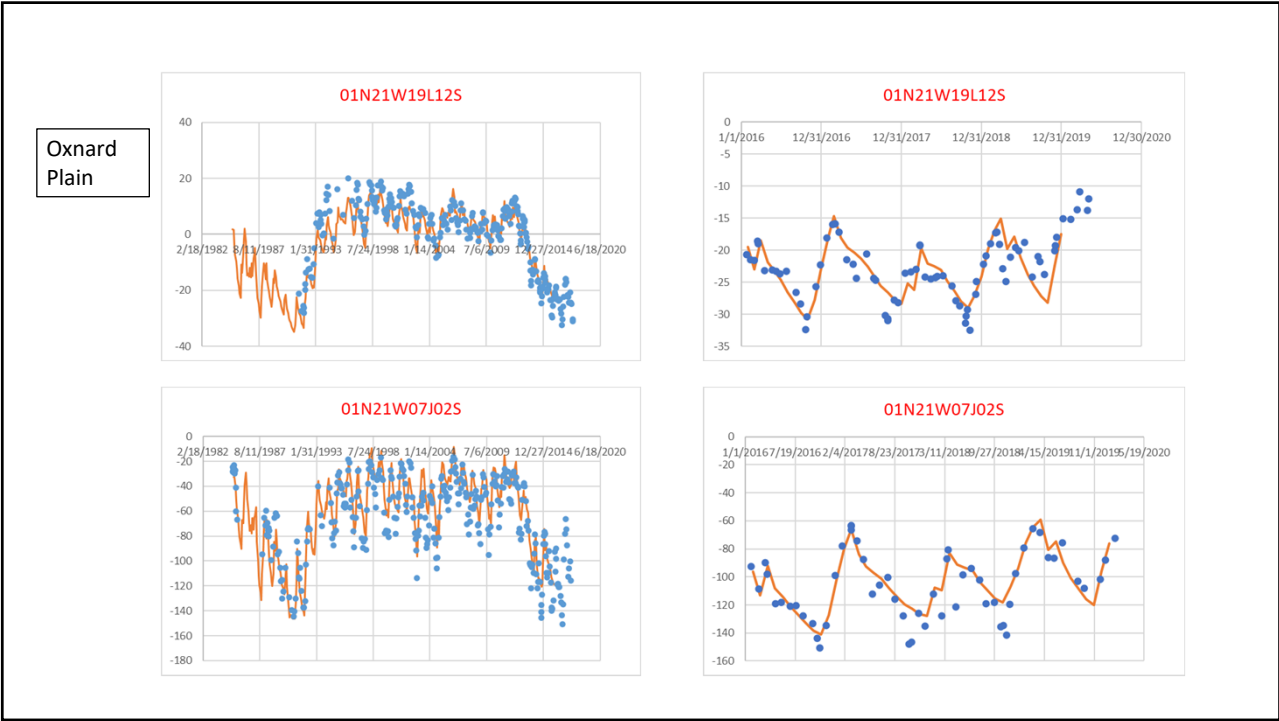
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Model Validation

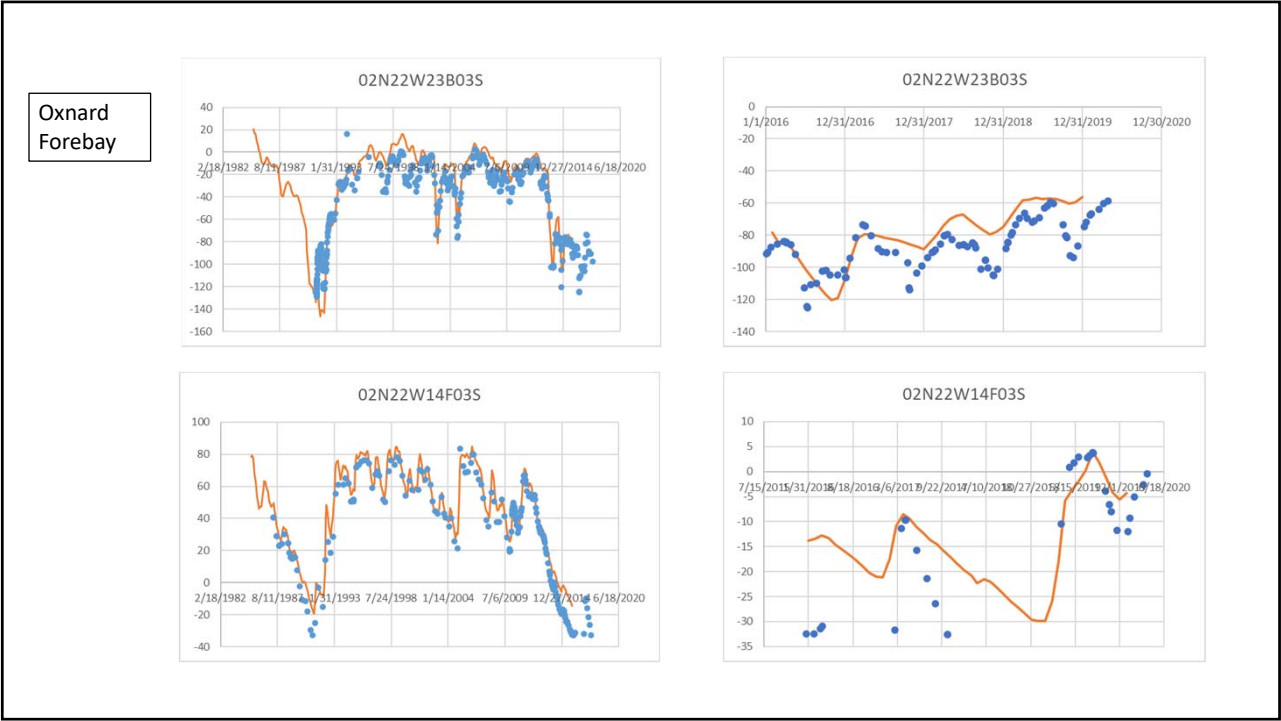
- Good model validation re-enforces the confidence in the calibrated model
- Poor model validation leads to the improvement of the model
- The 2016-2019 model validation provides a good verification on the severe drought and the WL rebound.
- It is expected that there will be a few local areas in need of improvement while the overall GW model remains robust

11

11



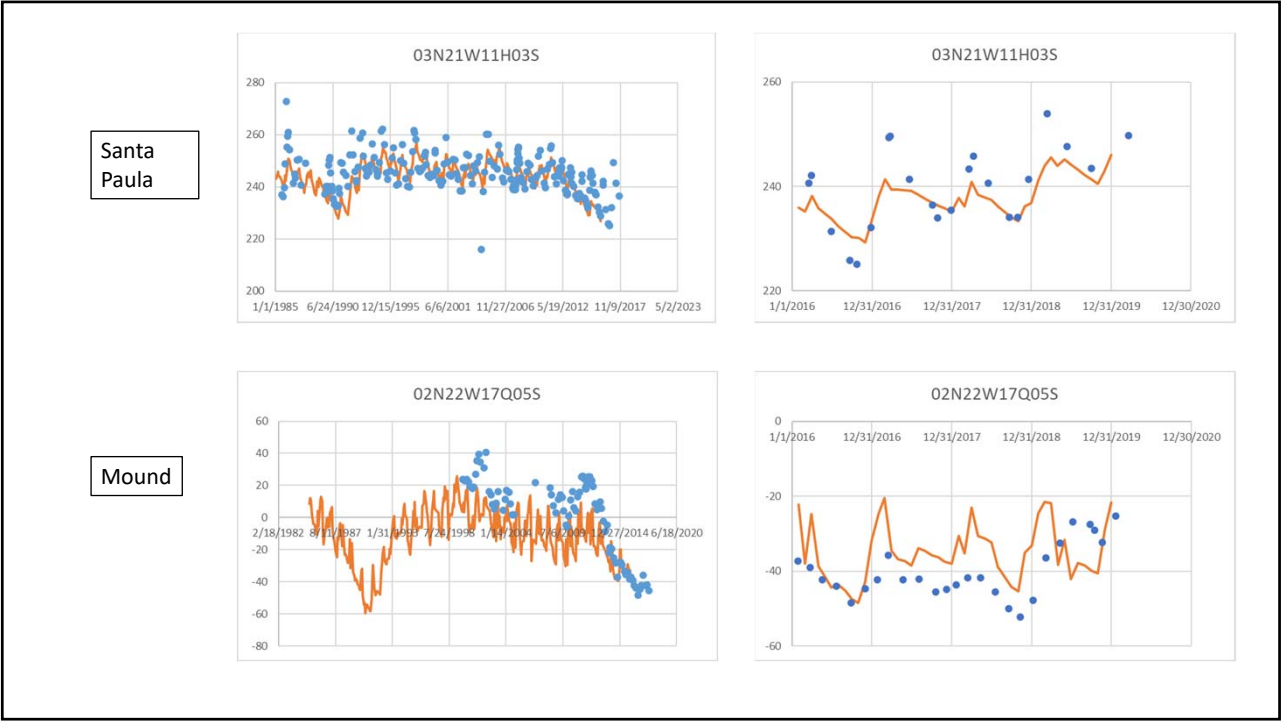
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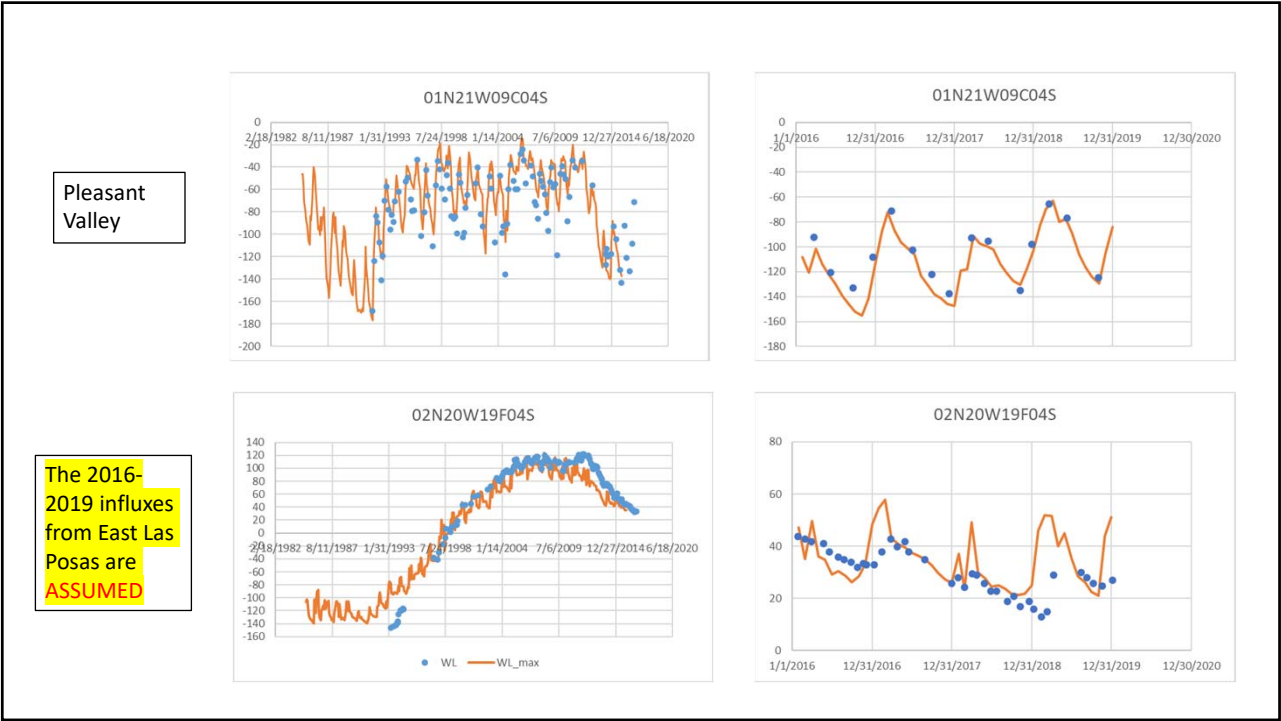
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14



15



16

Ongoing Work

- Model documentation
- GSP model simulations for Fillmore, Piru, and Mound GSA
- Brackish water model simulation

17

17

Thank you

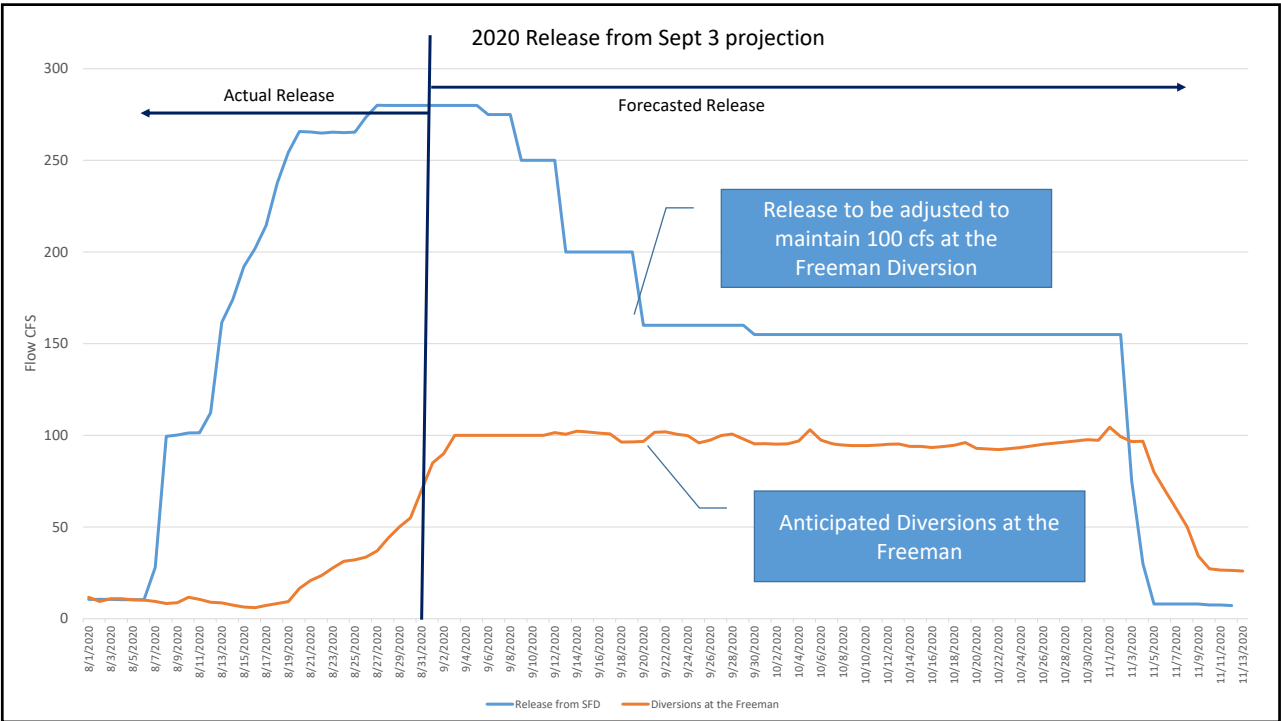
- Questions/Comments/Discussion?

18

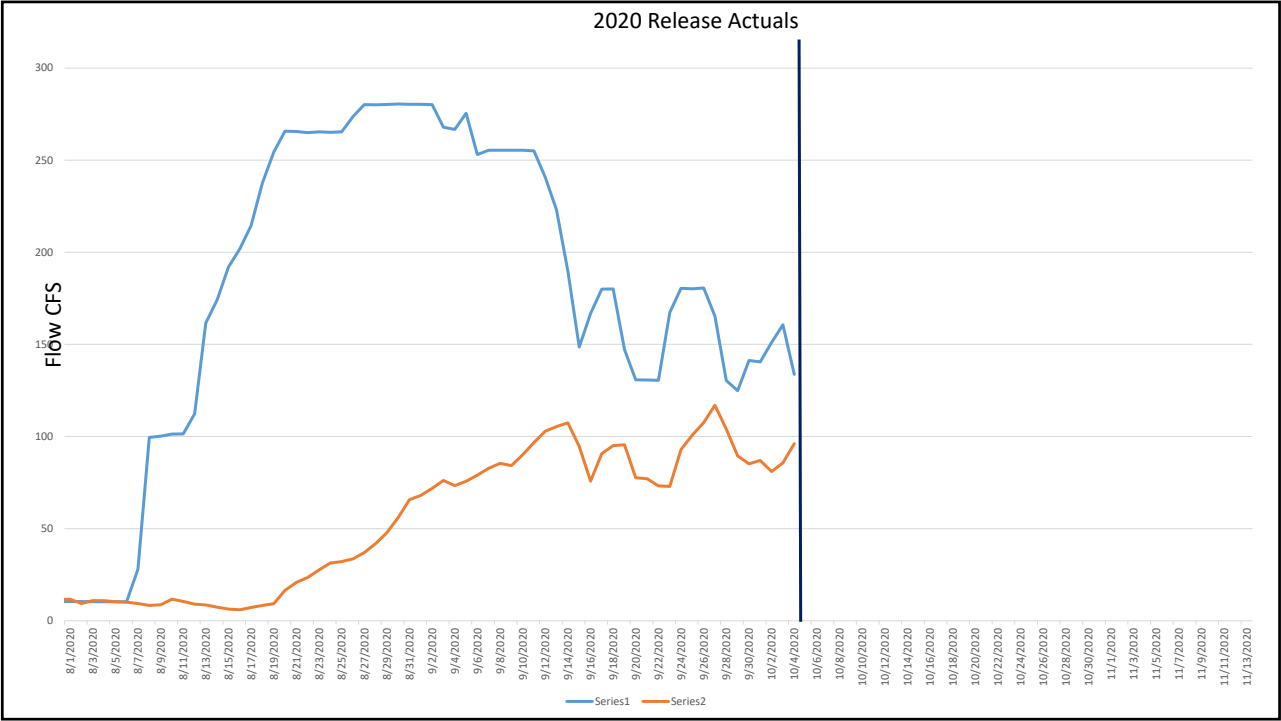
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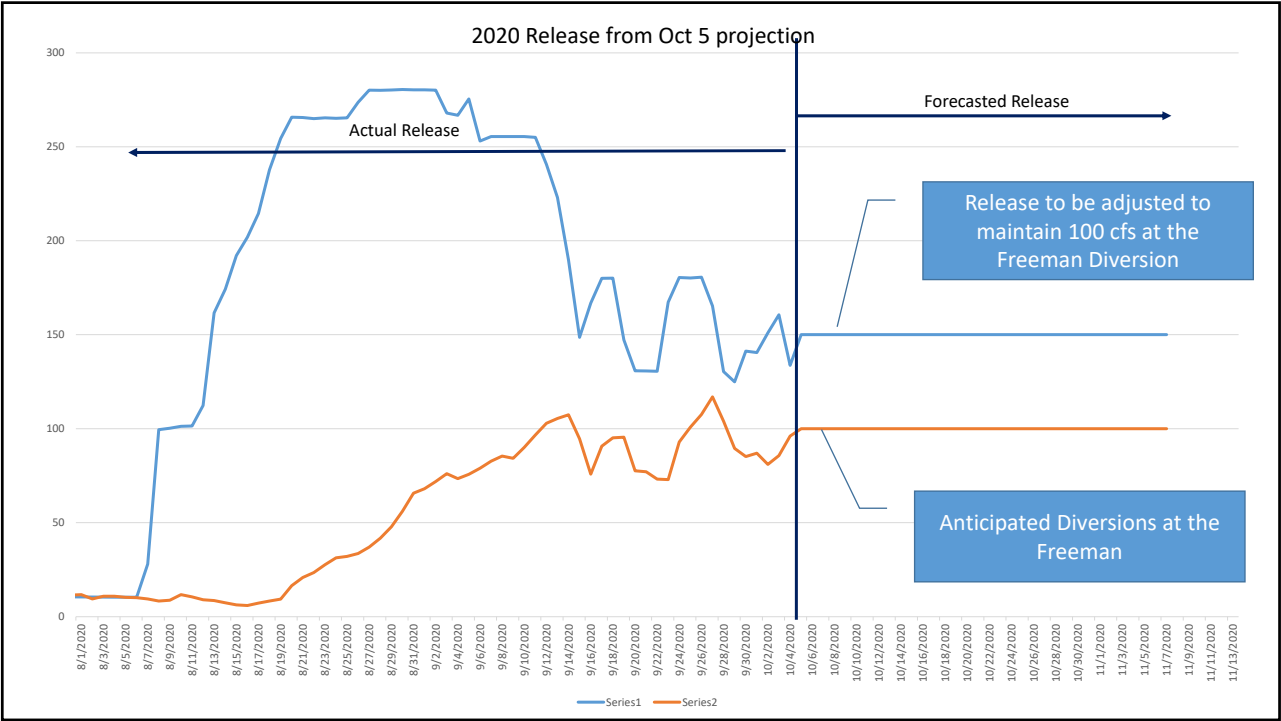
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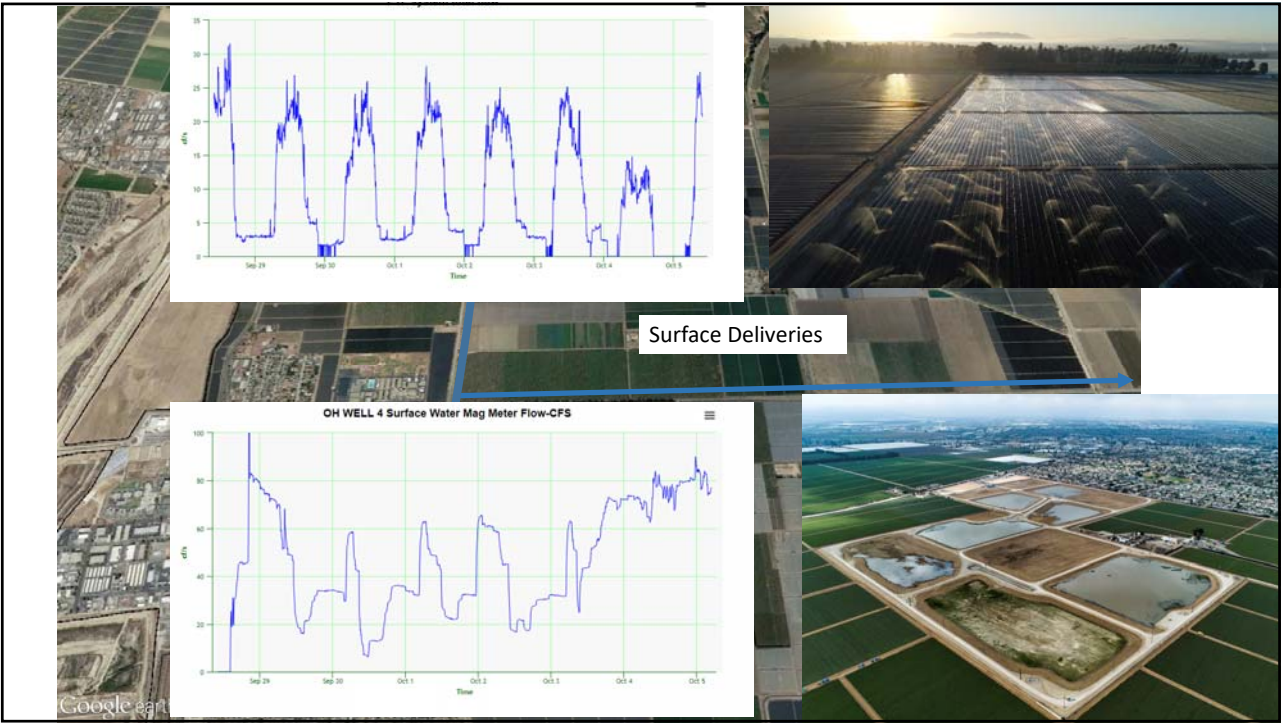
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4



Item 5

COASTAL BRACKISH TREATMENT PROJECT UPDATE

October 6, 2020

Dr. Maryam Bral, PE
Dan Detmer, PG, CHG



1

1

Feedback from review panel for United's grant proposal was that particular attention should be paid to potential for promoting vertical flow from the shallow Semi-perched aquifer to the underlying Oxnard aquifer

2

2

Prop 1 Grant, TAC Meeting #1

Mugu Area Confinement of the Oxnard Aquifer

September 24, 2020



3

3

Water Boards requested that a Technical Advisory Committee be included as part of the grant

TAC Members include:

Robert Reeves, SWRCB, Department of Financial Assistance

Jeff Densmore, CA Division of Drinking Water

Angelica Castaneda, Los Angeles Regional Water Quality Control Board

Kathleen Riedel, Fox Canyon GMA

Steve Granade, NAVFAC

Dan Detmer, UWCD

Additional staff from United, US Navy and CA Water Boards also participated



4

4

US Navy has sponsored/conducted significant Investigations related to degree of confinement:

- Tetra Tech Remedial Investigation (2003)

“Data on water level, minerals, and stable isotopes collected from these four wells during the RI for groundwater confirm that the Oxnard Aquifer is present at NBVC Point Mugu Site and is chemically and hydraulically distinct from the Semi-Perched Aquifer”

- Record of Decision (2008, for eight restoration sites)

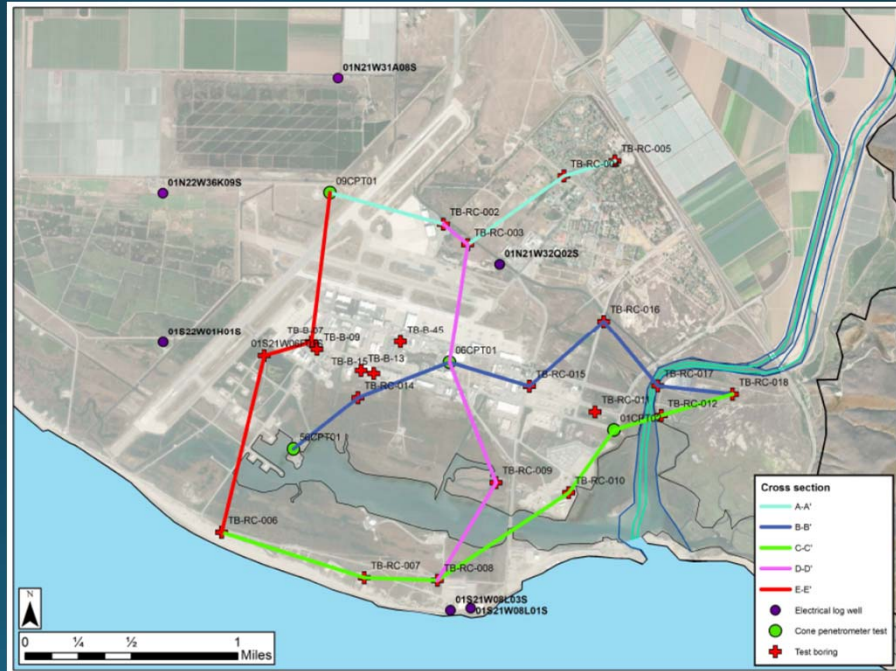
“The aquitard that separates the unconfined aquifer from the Oxnard aquifer is likely to be both laterally and vertically discontinuous in some areas. Therefore, the unconfined and the Oxnard aquifers may be in hydraulic communication. However, data on water level, geochemistry, and stable isotopes, as well as hydraulic conductivity, collected during the RI for GW (Tt EM I 2004) showed reasonable separation between the aquifers.

Additional relevant investigations related to degree of confinement:

- USGS publications, various geochemical and groundwater flow studies
- Halaco Superfund Site Investigation (CH2M Hill, 2012)
- UWCD groundwater flow model (2018)

US Navy provided boring and cone penetrometer records.

Additional sections were generated.



7

East-west section near the proposed well locations.

Aquifer is predominantly sand.

Confining unit comprised of clay, silt and clay, sand and clay.

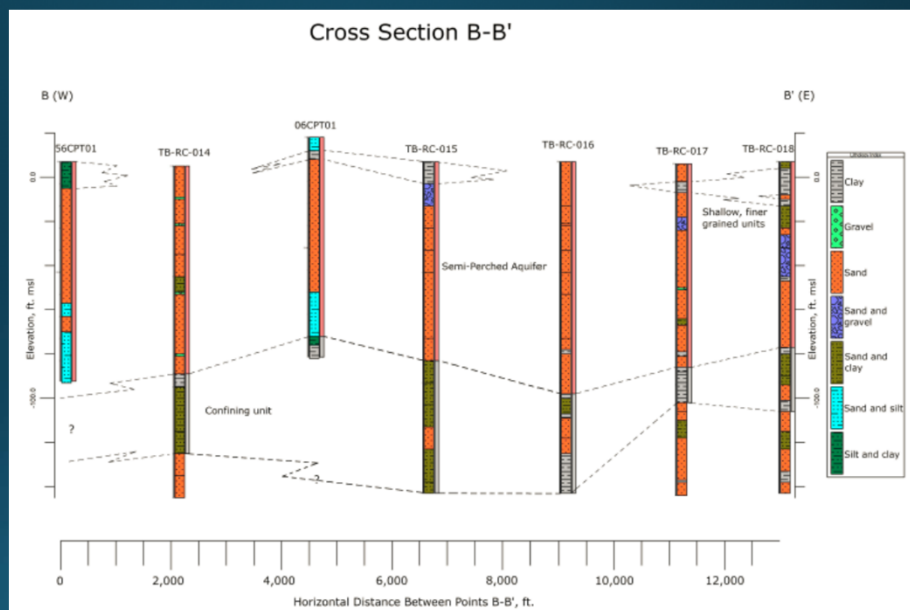


Figure 6. Cross section B-B' (cont.).

8

Central north-south section.

Deeper zones of aquifer has more silt to the south.

Shallow zones of aquifer have more fines to the north.

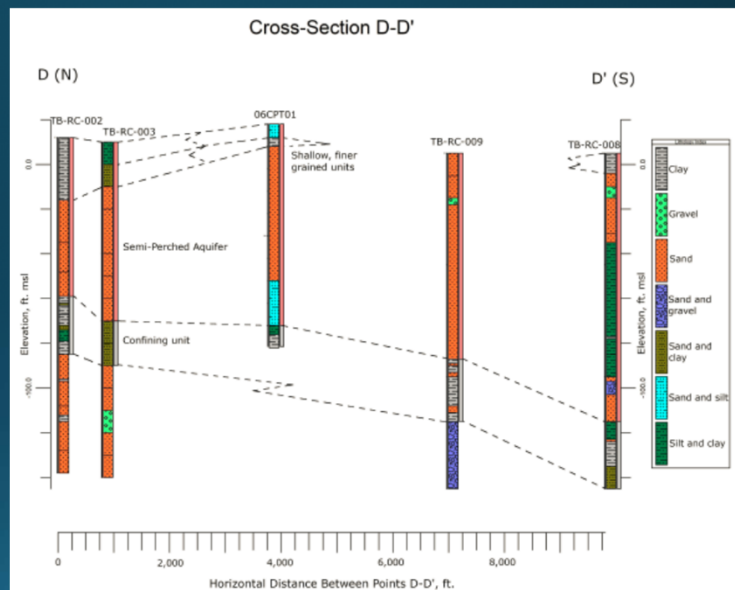


Figure 8. Cross section D-D' (central north-south section).

9

9

DDW commented that use of product water for drinking water will increase the permitting/regulatory burden.

FCGMA questioned the reliability of well destruction records in the greater project area.

DFA offered that grant funds may be available to destroy old wells in the Mugu area and to install monitoring wells to further assess the degree of Oxnard aquifer confinement.

10

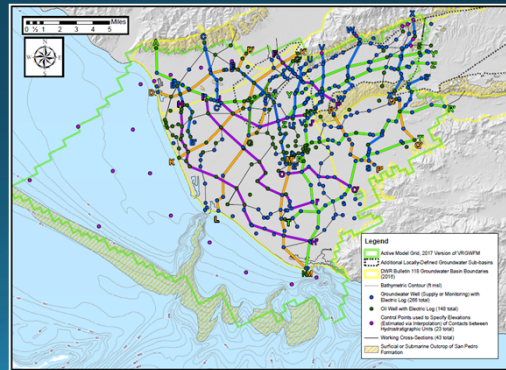
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Next steps:

The more detailed lithologic information from investigations on base will be incorporated into the hydrostratigraphic model for the groundwater flow model.

Lithologic information for the Oxnard and Mugu aquifers will be reviewed, may partition into zones.

Review the nature (solubility, degradation potential) of contaminants at closed and active sites on base.

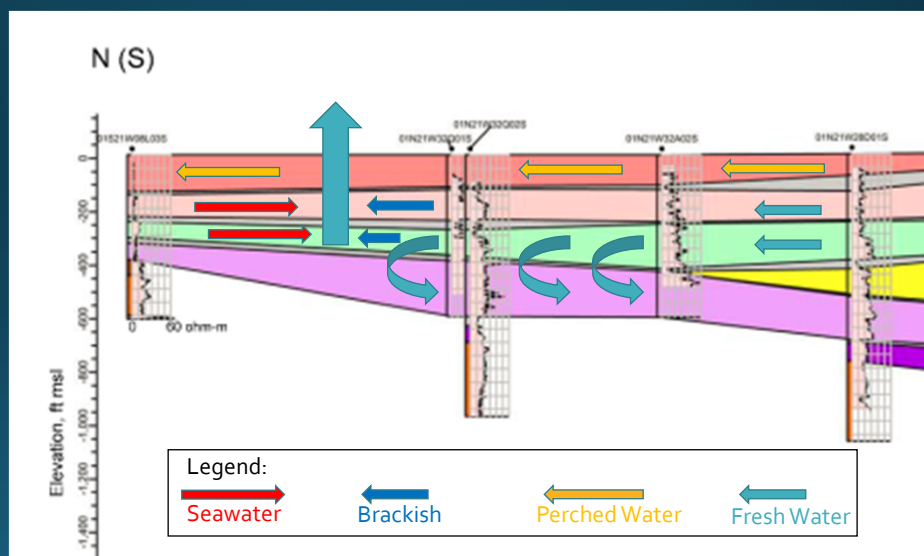


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Model next steps- local refinements to groundwater flow model: simulate seawater density and incorporated local improvements to the hydrostratigraphic model.

Ideal Project Flow Diagram



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Navy-United Coordination Updates

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- ❑ Programmatic EIR workshop on Sept 28
 - Catalyst presented options for streamlining of Environmental Permitting Compliance in September.
 - The Navy, Engineering, and ESD attended the educational session.
- ❑ The Navy is taking a phased-approach.
 - Review of Draft Letter of Intent (LOI) will be resumed after completion of Feasibility Study
 - Continue to support the District during Feasibility Study
 - Plan to issue a Letter of Support
- ❑ United and the Navy's collaboration is critical for a successful completion of Feasibility Study
- ❑ Engineering continues to monitor water quality data in Oxnard and Mugu aquifers to identify treatment processes.

14

14

Staff Report

To: UWCD Water Resources Committee

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

From: Maryam Bral, Chief Engineer
Dan Detmer, Supervising Hydrogeologist

Date: September 30, 2020 (prepared for October 6, 2020, meeting)

Agenda Item: 6. **Monthly Water Resources Department Report**
Information Item

Staff Recommendation:

Receive a summary report on various Water Resources departmental activities.

Discussion:

(In accordance with County and State guidance during the Covid-19 pandemic, a majority of staff worked from home. To facilitate communications and coordination, a daily conference call was held each Monday and Thursday morning using Microsoft Teams; this has proven to be an effective way of coordinating departmental activities and moving all projects and programs forward. In instances where work in the field or office was required, County guidance for social distancing and safety procedures were followed. Also, staff maximized the use of teleconferencing using Microsoft Teams and other teleconferencing products)

Staff Activities

In addition to the Department's routine, ongoing groundwater monitoring and reporting program and its support of groundwater sustainability agencies (summarized in a separate staff report), notable efforts and activities conducted by staff during the past month included the following:

- Groundwater modeling:
 - Staff has expanded the active domain of United's numerical groundwater flow model to incorporate the Piru, Fillmore and Santa Paula basins. The model is now calibrated to observed groundwater elevations and surface water flows in the basins within District boundaries. Staff has nearly completed compiling and processing pumping, water level, stream flow and diversion records for the years 2016-2019 and are preparing to update the model and confirm calibration holds for these recent years.
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Agenda Item: 6. Monthly Water Resources Department Report
Information Item

- Staff is working Ventura County Watershed Protection District staff to use their existing surface water flow model to simulate runoff from the upper Santa Clara River watershed for future model runs in support of area Groundwater Sustainability Agencies.
 - Staff has received additional boring information for the Mugu area from the US Navy and has generated additional geologic cross sections in the area of the proposed brackish water treatment project. Staff hosted the first Technical Advisory Committee for the Prop 1 Grant, providing an overview of the proposed project and a summary of what is known about the degree of Oxnard aquifer confinement in the Mugu area. Following revisions to the geologic mapping the flow model will be revised as well.
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 - Staff continue to help the Environmental Services Department (ESD) evaluate effects of existing and potential future surface-water flow conditions at the Freeman Diversion.
 - Staff are assisting ESD in evaluating fish passage modifications under consideration for United's Habitat Conservation Plan (HCP).
 - The District's Principal Hydrologist prepared a summary of CA Department of Fish and Wildlife involvement in the permitting and operation of the Freeman Diversion, which demonstrated continuous engagement between United and that agency since the time the facility was designed and constructed.
 - Staff continues to assist with planning and coordination for release of Table A water and supplemental State Water Project water acquired from the Santa Clarita Valley Water Agency and the City of San Buenaventura.
 - Staff coordinated efforts with the Engineering Department and United's consultant (Kennedy-Jenks) to evaluate opportunities for recharging recycled water from the City of Ventura in the Forebay.
 - Staff are analyzing sediment load at the Freeman Diversion and removal options for accumulated sediment from the desilting basin.
 - Staff led or participated in the following public outreach activities:
 - Staff engaged in several phone conversations related to groundwater sustainability, FCGMA allocation ordinance, and conjunctive use strategies and operations.
 - Staff participated in the following educational activities:
 - Several staff attended portions of the Groundwater Resources Association of California's (GRAC) 2020 Western Groundwater Congress (conference), which was held online this year in a virtual format. Staff found presentations on groundwater-dependent ecosystems, geophysical methods for estimating subsidence, and modeling methods to estimate basin sustainable yields to be particularly informative. In addition, United's Kathleen Kuepper gave a presentation on alternatives for
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**Agenda Item: 6. Monthly Water Resources Department Report
Information Item**

optimizing yield from groundwater basins, using the Oxnard basin as an example, at the Congress.

- On September 30 Murray McEachron and Dr. Bram Sercu presented “United Water Conservation District’s Water Releases, and Sediment Management Activities” for the monthly AWA/CCWUC Educational Program.



Staff Report

To: UWCD Water Resources Committee

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

From: Maryam Bral, Chief Engineer
Dan Detmer, Supervising Hydrogeologist

Date: September 30, 2020 (prepared for October 6, 2020, meeting)

Agenda Item: 7. **Update on Groundwater Sustainability Agencies (GSAs) and Sustainable Groundwater Management Act (SGMA) Information Item**

Staff Recommendation:

Receive a summary report of Water Resources Department activities related to the Sustainable Groundwater Management Act (SGMA) and Groundwater Sustainability Agencies (GSAs) for the groundwater basins within District boundaries.

Discussion:

Fox Canyon Groundwater Management Agency (FCGMA)

Staff continue to monitor and, where appropriate, participate in the FCGMA's groundwater sustainability planning and implementation efforts, as follows:

Board of Directors meetings –

The FCGMA Board held a special meeting online on September 11. The sole regular agenda topic for this meeting was "Consideration of Modification of Surcharge Assessment during the First Year of the New Allocation Ordinance for the OPV Basins." The Board considered a staff proposal to not assess planned surcharges under the new allocation ordinance in water year 2021 for pumpers that do not exceed their previous year's pumping allocation. The Board directed staff to return with modifications to the allocation ordinance relaxing the assessment of surcharges for water year 2021 as recommended by staff.

The FCGMA Board held a regular meeting on September 23. Notable topics included:

- The Board received a presentation from Gina Bartlett of the Consensus Building Institute (CBI) summarizing progress and status of the facilitated process for the Oxnard and

Agenda Item: 7. Update on Groundwater Sustainability Agencies (GSAs) and Sustainable Groundwater Management Act (SGMA)
Information Item

Pleasant Valley basins. She reported that the Core Stakeholder group wishes to manage the basins within the FCGMA boundaries collectively, rather than individually.

- The Board was scheduled to receive information from staff regarding the process for increasing the FCGMA's sustainability fees (extraction charges). Staff informed the Board at the meeting that the State had not yet provided feedback that would help determine the process. No further discussion occurred.

The next regular FCGMA Board meeting is scheduled for October 28 at 1:30 pm.

Core Stakeholder Group meetings –

The OPV Core Stakeholder Group held virtual meetings (#5, #6, and #7) on September 1, 15, and 29. United staff gave presentations to the group on the regional groundwater flow model and potential basin-yield-optimization scenarios. The group planned to focus in the coming months on developing potential water-supply projects, with support of the Projects Committee. The group also agreed that the Oxnard, Pleasant Valley, and West Las Posas basins were interconnected and should be managed collectively to the extent possible, although details regarding the meaning of “collective management” have yet to be worked out, considering that each basin has a distinct GSP and adjudication of the Las Posas Basin is in progress.

The Projects Committee of the OPV Core Stakeholder Group held virtual meetings (#1 and #2) on September 10 and 24. To date, the Project Committee has reviewed projects proposed by United and other stakeholders in the FCGMA's GSP develop process for the Oxnard and Pleasant Valley basins. In the coming weeks, the Projects Committee will explore any new project ideas proposed by members, then shift to preliminary analysis of which projects are worth advancing to the next phase of evaluation, which would likely include modeling of their effects on basin yield.

United has elected to participate in the Legal Ad Hoc Committee, and participated in the September 30 meeting.

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 September 17. Notable topics included:

- Board discussion related to unpaid pump charges as required by the GSA. It was suggested that large unpaid balances can potentially be referred to the county tax collector, and FPBSA counsel will explore that possibility.
 - Agenda planning for Stakeholder Workshop #2, including agenda to focus on Sustainable Management Criteria (SMCs) and if mailings will be used to provide notice of the October 1 meeting.
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Agenda Item: 7. Update on Groundwater Sustainability Agencies (GSAs) and Sustainable Groundwater Management Act (SGMA)
Information Item

- An update from the SMC ad hoc committee and general discussion of undesirable results related to declining groundwater elevations, water quality (chloride sourcing from Los Angeles County), and land subsidence (differential vs. uniform, potential impacts to gravity drainage systems, various causes for land subsidence).

The next FPBGSA Board meeting is scheduled for October 15 at 5:00 pm.

Communication and Outreach – A Stakeholder Workshop is scheduled for October 1. The meeting will be conducted via teleconference and will discuss potential sustainable management criteria for the Fillmore and Piru Basins.

GSP preparation – Consultant DBS&A reported progress on various work products in support of GSP development and noted the availability of 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.

Modeling – Staff have completed the hydrostratigraphic conceptual model for the Santa Paula, Fillmore, and Piru basins, and have completed calibration of the active domain of United's numerical groundwater flow model for the base period 1985-2015. Staff has compiled records to update and validate the model for the years 2016-2019 and that work is now underway.

Mound Basin Groundwater Sustainability Agency (MBGSA)

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

Board of Directors meetings –

The MBGSA held GSP Stakeholder Workshop No. 1 on September 3. The focus of the workshop was to inform stakeholders of the conceptual model for groundwater flow being developed for the basin, and to share available information on historical and present-day groundwater conditions in the basin.

The MBGSA held a regular Board meeting on September 17. Notable topics included:

- MBGSA continues to pursue installation of monitoring wells through DWR's Technical Support Services (TSS) grant program for GSP development and Implementation. Executive Director, Bryan Bondy provided an update on the progress, stating he had received an application from the City of Ventura Planning Department for MBGSA to complete for the monitoring well Coastal Development Permit. Time remaining to submit a complete grant application is limited, and the MBGSA is working with the City on the coastal development permit for the preferred monitoring-well location.
- Executive Director Bondy summarized the level of participation and what was learned from poll results taken during the September 3 Stakeholder Workshop No. 1. He further

Agenda Item: 7. Update on Groundwater Sustainability Agencies (GSAs) and Sustainable Groundwater Management Act (SGMA)
Information Item

discussed participation of each interest group and recommendations to increase public engagement.

- MBGSA staff is working with UWCD and Fillmore-Piru GSA staff and consultants on developing consistent input for modeling future conditions. Mr. Bondy introduced some of the assumptions, including hydrologic time period, climate change, trends in agricultural and municipal pumping, and land use.
- The draft Sustainability Goal for Mound Basin was reviewed and adopted by the Board with minor edits.

GSP preparation – United staff continue to compile and review data to support preparation of the Mound basin GSP, in general accordance with United’s agreement with the MBGSA. United staff continue to meet or correspond periodically with the MBGSA Executive Director Bondy and GSP consultant (Intera) to coordinate GSP planning and preparation efforts.

The next regular MBGSA Board meeting is scheduled for October 15 at 1:00 pm.

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:

- The Santa Paula Basin Annual Report for 2019 was finalized for submittal.
- The TAC meeting scheduled for June 2020 has been postponed for later in the year; a specific date and time have not been selected yet. It is anticipated that the Technical Working Group of the TAC will meet prior to the next TAC meeting, to discuss the current status of United’s groundwater flow model expansion and how the effectiveness of the proposed yield-enhancement measures might be forecasted using the model. The Technical Working Group is also expected to discuss the “Triggers” proposal/memorandum at an upcoming meeting.