



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

General Manager
Mauricio E. Guardado, Jr.

Legal Counsel
David D. Boyer

AGENDA

WATER RESOURCES COMMITTEE

Tuesday, May 5, 2020 at 9:00 a.m.

UNITED WATER CONSERVATION DISTRICT

Boardroom, 1701 Lombard Street, Oxnard CA 93030

Meeting attendees should be aware that the meetings of the Committee are, as required by law, open to the public and the District has very limited powers to regulate who attends Committee meetings. Therefore, attendees must exercise their own judgement with respect to protecting themselves from exposure to COVID-19, as the District cannot ensure that all attendees at public meetings will be free from COVID-19.

**In addition to its public Water Resources Committee Meeting,
people may choose to participate virtually
using the Webex video conferencing application.**

**To participate in the Water Resources Committee Meeting via Webex,
please click here:**

<https://meetingsamer9.webex.com/meetingsamer9/j.php?MTID=m59c5a9306bdcbec6824fedbe50a9546d>

Meeting number: 621 235 746

Password: H2O1 (4261 from phones)

Join by phone (audio only) call in on +1-408-418-9388 (toll rates apply)

Access code: 621 235 746

OPEN SESSION:

1. Public Comment

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

2. Approval of Minutes

The Committee will review the minutes from their November 26, 2019, meeting.

3. Update on Groundwater Flow Model Development (30 minutes; Sun)

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

4. Update on Groundwater Flow Model Application for Projects (20 minutes; Sun)

The Committee will be briefed on recent applications of United's groundwater flow model to support evaluation of groundwater for specific projects. The briefing will include discussion of how model uncertainty is distinct from inaccuracy or bias introduced through use of a model due to the assumptions relied upon when developing future scenarios. Interpretation of model results is another potential source of bias unrelated to the model itself.

UWCD Water Resources Committee Meeting Agenda

May 5, 2020

Page 2

5. Santa Clara River Flows and Diversions Update for Winter 2020 (20 minutes; McEachron)

The Committee will be briefed on the recent flows in, and diversions from, the Santa Clara River and key tributaries.

6. Groundwater Department Update

The Committee may discuss the Department's recent activities and projects.

7. Groundwater Sustainability Agency Update

The Committee may discuss recent activities of the Groundwater Sustainability Agencies (GSAs) within or adjacent to the District's service area.

8. FUTURE AGENDA ITEMS

ADJOURNMENT

Directors:

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

Staff:

Mauricio E. Guardado, Jr., General Manager
Robert C. Siemak, Assistant General Manager
Maryam Bral, Chief Engineer
Dan Detmer, Supervising Hydrogeologist
Dr. Jason Sun, Senior Hydrogeologist/Modeler
John Lindquist, Senior Hydrogeologist
Dr. Zachary Hanson, Assistant Hydrogeologist
Kathleen Kuepper, Assistant Hydrogeologist
Eric Elliott, Staff Hydrogeologist
Murray McEachron, Senior Hydrologist
Dr. Bram Sercu, Hydrologist
Robert Marshall, Water Resources Technician

The Americans with Disabilities Act provides that no qualified individual with a disability shall be excluded from participation 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: _____

Robert C. Siemak, Assistant General Manager

Dr. Maryam Bral, Chief Engineer

Posted (Date): April 30, 2020 (time) 10:00a.m.

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

(attest) Kris Sofley

Posted (Date): April 30, 2020 (time) 10:15a.m.

At: www.unitedwater.org

(attest) Kris Sofley



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Daniel C. Naumann

General Manager
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Legal Counsel
David D. Boyer

**UWCD Groundwater Committee Meeting
Tuesday, November 26, 2019**

MINUTES

Committee Members Participating

Mike Mobley, Chair
Robert Eranio
Ed McFadden

Staff Participating

Mauricio Guardado, General Manager
Maryam Bral, Chief Engineer
Dan Detmer, Supervising Hydrogeologist
John Lindquist, Senior Hydrogeologist
Dr. Zachary Hanson, Assistant Hydrogeologist
Dr. Jason Sun, Senior Hydrogeologist/Modeler
Kathleen Kuepper/Associate Hydrogeologist

Public Participating

Nathan Jacobson, US Navy
Jennifer Tribo, City of Ventura
Burt Handy
Martin Gramckow, Southland Sod
Jurgen Gramckow, Southland Sod

Open Session

Director Mobley called the meeting to order at 1:00 p.m.

1. Public Comment

Director Mobley asked if there were any comments from the public. Dan Detmer mentioned that a GRAC meeting addressing Sustainable Groundwater Management Act (SGMA) legal issues was planned in the near future, that may be of interest to Committee and audience members.

2. Approval of the Agenda

The agenda for today's Committee meeting was approved unanimously.

3. Approval of the Minutes

The minutes from the previous Committee meeting (October 22, 2019) were approved unanimously.



4. Fox Canyon Groundwater Management Agency (FCGMA) Agenda Review

John Lindquist, UWCD Senior Hydrogeologist, summarized key issues discussed at the November 2019 FCGMA Board meeting, focusing on public comments on the draft GSPs for the Oxnard, Pleasant Valley, and Las Posas Valley basins. Mr. Lindquist also noted that the October 31, 2019, Technical Advisory Group (TAG) meeting was closed due to lack of a quorum, and that United staff had assisted FCGMA staff with design of two new monitoring wells installed by the FCGMA. Director Eranio stated that FCGMA staff will be bringing back to the Board a plan for eliminating Emergency Ordinance E pumping cutbacks for municipal and industrial (M&I) groundwater users. Jurgen Gramckow noted that the Oxnard-Pleasant Valley (OPV) agricultural pumpers had negotiated a tolling agreement with the FCGMA to avoid a lawsuit.

5. Mound Basin Groundwater Sustainability Agency (MBGSA) Agenda Review

Mr. Lindquist reported that the November 2019 MBGSA Board meeting had been cancelled, but that United staff were working with MBGSA Executive Director Bryan Bondy and the MBGSA's consultant, Intera, to begin analyzing groundwater-level trends. There were no Board-member or public comments on this item.

6. Fillmore and Piru Basins Groundwater Sustainability Agency (FPBGSA) Agenda Review

Dan Detmer, UWCD Supervising Hydrogeologist, reported that the October 2019 FPBGSA Board meeting had been cancelled, and the November 2019 Board meeting focused on outreach and public engagement planning. Director McFadden noted that the Board is currently focused on developing guiding principles and a timeline for completion of the GSP. Mr. Detmer noted that the Board and staff are also working on development of a data portal for hydrogeologic information collected by the FPBGSA.

7. Santa Paula Basin Technical Advisory Committee (TAC) Update

Mr. Lindquist reported that the November 2019 TAC meeting was focused on the draft "triggers" document for evaluating changes in groundwater levels in the basin, and on review of the 2018 Santa Paula basin annual report. There were no Board-member or public comments on this item.

8. Update: Brackish Water Extraction and Treatment System Design Process

Mr. Detmer, Dr. Jason Sun, Senior Modeler, and Dr. Maryam Bral, Chief Engineer, provided an update on the groundwater evaluation and preliminary engineering design work conducted to date for the brackish-water extraction and treatment system being considered near the coastline at NBVC-Point Mugu. Committee members had several questions about the concept and some details of the system, which were answered by staff. Martin Gramckow noted that the brackish-water extraction barrier could solve the seawater intrusion problem in the Oxnard basin, and that basin yield could potentially be increased to meet average demand of 100,000 AF/yr if this system were installed, meaning this was a very cost effective project. Jurgen Gramckow stated that he felt more than the 5,000 AF/yr extraction and treatment rate proposed could be put to use on the Oxnard Plain, and he suggested targeting a larger capacity for the project.

9. Future Agenda Items

Committee members did not recommend any specific agenda items for the future.



10. Adjournment 2:32 p.m.

Director Mobley adjourned the UWCD Groundwater Committee meeting at 2:32 p.m.

I certify that the above is a true and correct copy of the Minutes of the UWCD Groundwater Committee Meeting of November 26, 2019.

Edwin T. McFadden III



Board of Directors
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General Manager
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Legal Counsel
David D. Boyer

AGENDA
GROUNDWATER COMMITTEE MEETING
Tuesday, November 26, 2019 – 1:00 p.m. to 2:30 p.m.
Boardroom, UWCD G.I. "Irv" Wilde Headquarters
106 North 8th Street, Santa Paula, California

OPEN SESSION:

1. PUBLIC COMMENT

The public may address the Groundwater 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 THE AGENDA

Motion

3. APPROVAL OF THE MINUTES

Motion

Approval of minutes from the October 22, 2019 Groundwater Committee Meeting.

4. FOX CANYON GROUNDWATER MANAGEMENT AGENCY (FCGMA) AGENDA REVIEW (LINDQUIST)

Informational

Staff will summarize recent and upcoming activities, planning efforts, and agenda items published by the FCGMA Board of Directors and Technical Advisory Group (TAG). Committee will review the FCGMA agenda and prepare positioning statements on behalf of the District for all agenda items, as appropriate.

5. MOUND BASIN GROUNDWATER SUSTAINABILITY AGENCY (MBGSA) AGENDA REVIEW (LINDQUIST)

Informational

Staff will summarize recent and upcoming activities, planning efforts, and agenda items published by the MBGSA Board of Directors. Committee will review the MBGSA agenda and prepare positioning statements on behalf of the District for all agenda items, as appropriate.

6. FILLMORE AND PIRU BASINS GROUNDWATER SUSTAINABILITY AGENCY (FPBGSA) AGENDA REVIEW (DETMER)

Informational

Staff will summarize recent and upcoming activities, planning efforts, and agenda items published by the FPBGSA Board of Directors. Committee will review the FPBGSA agenda and prepare positioning statements on behalf of the District for all agenda items, as appropriate.

7. SANTA PAULA BASIN TECHNICAL ADVISORY COMMITTEE (TAC) UPDATE (LINDQUIST)

Informational

Staff will summarize recent and upcoming activities, as well as planning efforts, published by the TAC that may affect the District's operations or overall mission.

**8. UPDATE: BRACKISH-WATER EXTRACTION AND TREATMENT SYSTEM DESIGN PROGRESS
(DETMER/ BRAL)**

Informational

Staff will present a summary of progress to date on design of the coastal brackish-water extraction and treatment system proposed by United. The presentation will include a summary of the preliminary design completed in 2015, as well as current and planned efforts to optimize extraction-well locations and pumping rates to provide the greatest benefit to the Oxnard and Pleasant Valley basins.

9. FUTURE AGENDA ITEMS (3 MINUTES)

10. ADJOURNMENT

Directors: Michael Mobley, Chair *MM*
Robert Eranio *RE*
Ed McFadden *EM*

Staff:	Mauricio E. Guardado, Jr.	Anthony Emmert	Bob Siemak
	Dr. Maryam Bral	Dan Detmer	John Lindquist
	Murray McEachron	Dr. Jason Sun	Dr. Bram Sercu
	Kathleen Kuepper	Dr. Zachary Hanson	Eric Elliott
	Robert Marshall		

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Approved: _____

Mauricio E. Guardado, Jr., General Manager

Posted: (date)11-21-2019 (time) 2:10p.m.

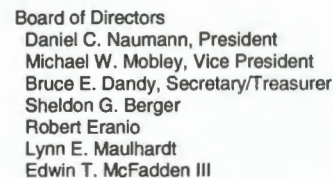
(attest) Kris Sofley

At: United Water Conservation District Headquarters, 106 No. 8th St., Santa Paula, CA

Posted: (date)11-21-2019 (time) 2:15p.m

(attest) Kris Sofley

At: www.unitedwater.org *11*



Legal Counsel
David D. Boyer

MEETING DATE: Tuesday, November 26, 2019

MEETING: UWCD Groundwater Committee Meeting

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.

J:\ADMIN\Forms\ATTENDANCE LIST.doc

Groundwater Committee Meeting

October 22, 2019



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Agenda Items 1 through 3

1. PUBLIC COMMENT
2. APPROVAL OF THE AGENDA
3. APPROVAL OF THE MINUTES

2

4. FCGMA Agenda Review

Oxnard sub-basin (Oxnard Plain)

Priority: High – **Critically Overdrafted**

Reason: Seawater intrusion, overdraft

GSA: Fox Canyon GMA

Las Posas basin

Priority: High

Reason: Water quality, overdraft

GSA: Fox Canyon GMA

Pleasant Valley basin

Priority: High – **Critically Overdrafted**

Reason: Saline intrusion, overdraft

GSA: Fox Canyon GMA

3

Last Month's FCGMA BoD Meeting (9/25):

- Sustainability fee increase approved
 - Total FCGMA pumping fees:

	<u>Current</u>	<u>2019-20</u>	<u>2020-21</u>
Ext. fee:	\$6.00	\$6.00	\$6.00
Sust. fee:	\$6.50	\$11.00	\$14.00
Totals:	\$12.50	\$17.00	\$20.00

- Information item: Article 21 deliveries and invoice
- Extend agreement with TNC & NRCS for water market and AMI system

4

Since the Last FCGMA Meeting...

- Oct. 1—FCGMA Executive Committee Meeting
 - FCGMA staff recommend “limits” approach for “SCR Flex Allocation” (applies to PTP and PV only)
- Oct. 3—“Working Draft” version of revised O-PV Pumping Allocation Ordinance shared with stakeholders
- Oct. 17—Revised O-PV Pumping Allocation Ordinance released with FCGMA agenda packet

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Key Agenda Items for Oct. 23 BoD Meeting:

2. Letter of Support for United’s Prop. 1 grant application
 - For implementing El Rio iron and manganese treatment facility
3. Periodic review of Emergency Ordinance E
 - Continue until new pumping allocation ordinance takes effect
 - FCGMA staff recommending that M&I allocations revert to TEA baseline
 - Reportedly consistent with proposed allocations under new ordinance
4. O-PV Pumping Allocation Ordinance
 - Proposed implementation on October 1, 2020
5. Consider resolution authorizing FCGMA staff to apply for Prop. 68 groundwater sustainability planning grant
 - For expenses incurred after June 5, 2018

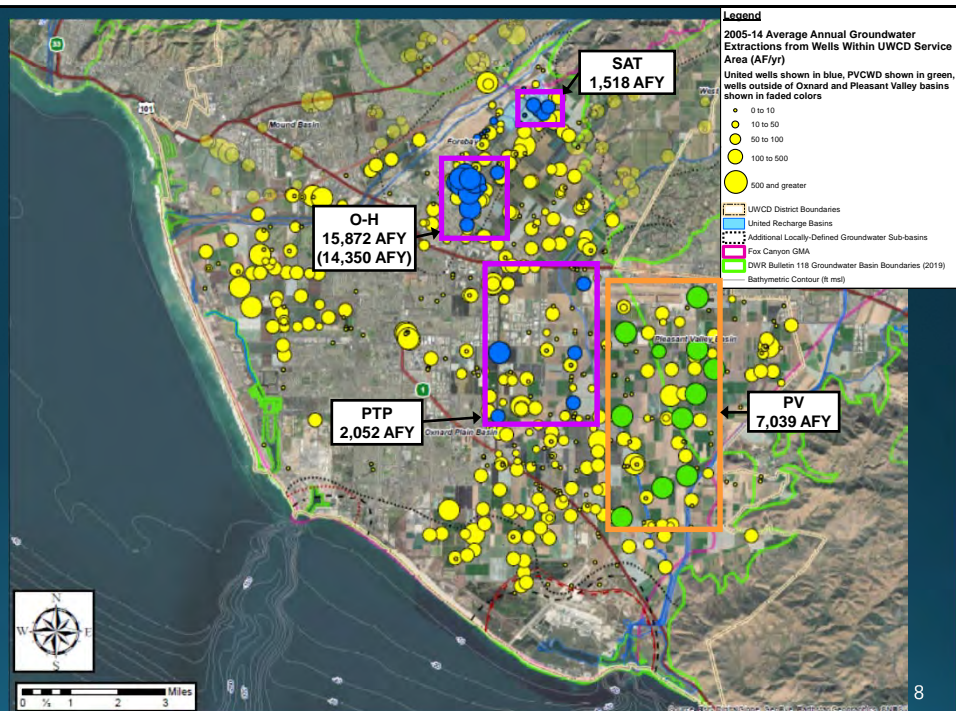
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Pumping Allocation Ordinance—Impacts on United

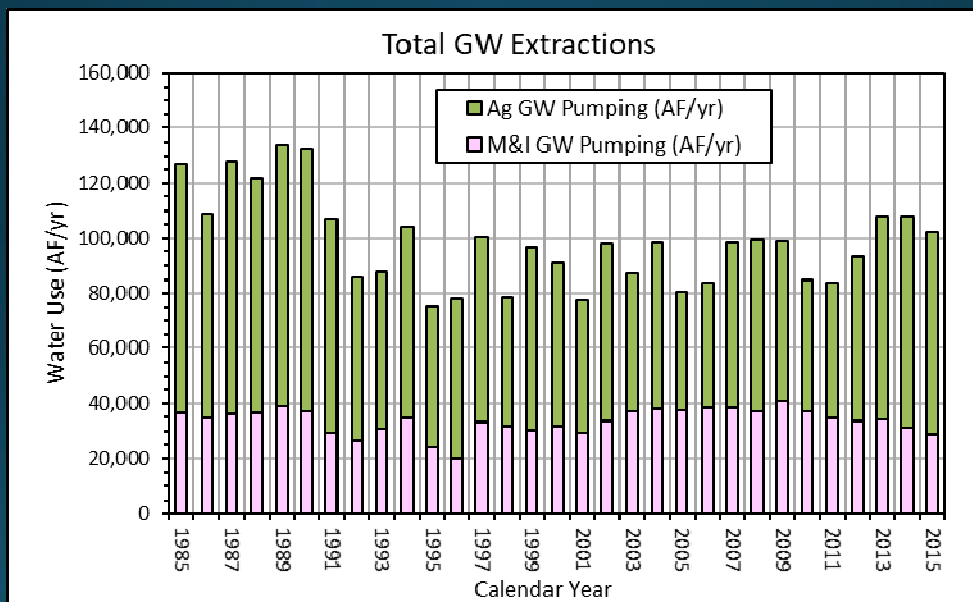
- Base period: CY 2005 through 2014 (10 years)
- Base period allocation: Reported extractions during CY 2005-14
 - Excluding any extractions that incurred surcharges
 - Supplemental M&I program pumping from O-H wells included
 - Most Saticoy-well pumping from late 2000's was not counted as groundwater
- Allocations can be shared among commonly owned extraction facilities within a basin
 - In future, sharing of allocations may be restricted to management areas
- "The Agency intends to move from a wellhead-based to a land-based allocation system"
- Extraction allocations may be reduced "according to a schedule and method to be determined by the Board"

7

"An operator's extraction allocation shall be the base-period (2005-14) extraction"

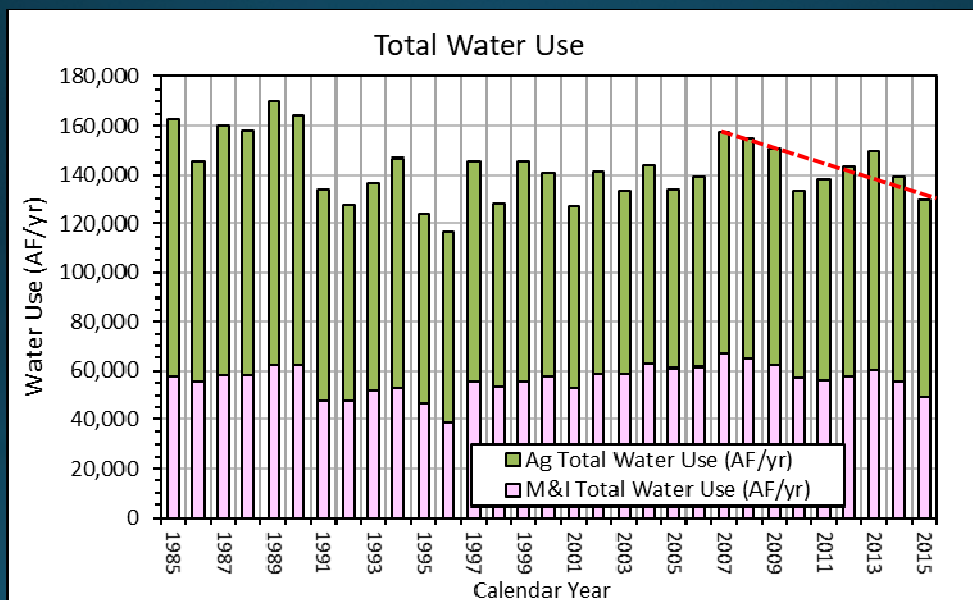


Historical O-PV Groundwater Extractions



9

Historical O-PV Total Water Use



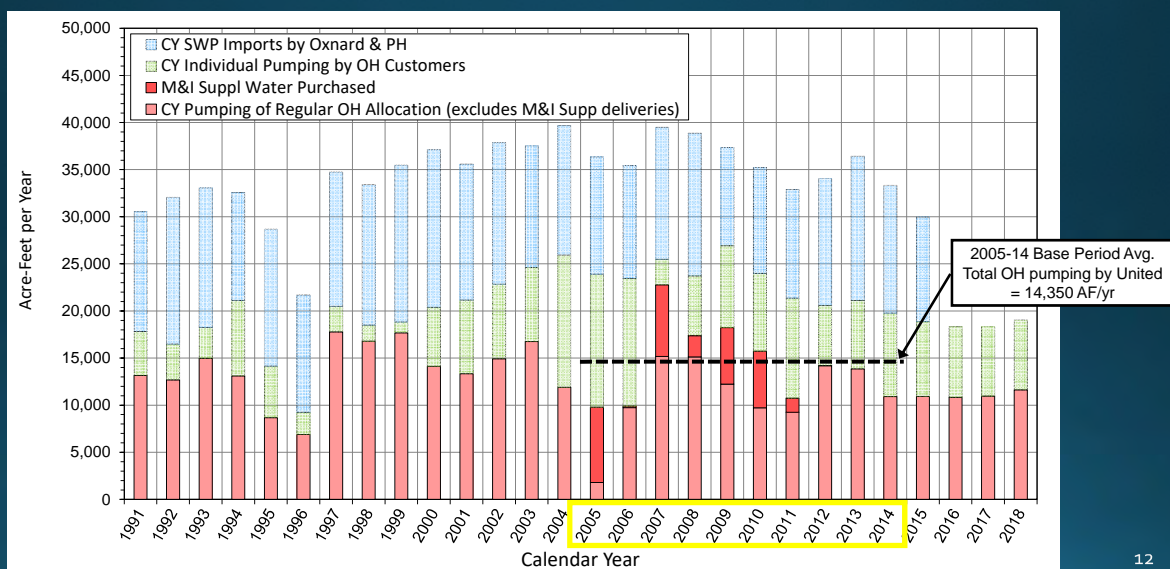
10

O-H Pipeline Allocation

- Extraction allocation assigned to O-H Pipeline is:
 - “Held in trust [by United] for any or all contractors” as a “suballocation” as defined in the O-H Pipeline Agreement.
- If a party withdraws from the O-H Pipeline Agreement, the distribution of the allocation will be decided by mutual agreement of “United and the affected parties or as determined by a court.”
- Surcharges and carryover apply to over-pumping and under-pumping each year

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O-H Groundwater Allocation Expected to be Sufficient to Meet Historical Demand



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PTP and PV Groundwater Allocations are Modified by the “SCR Flex Allocation”



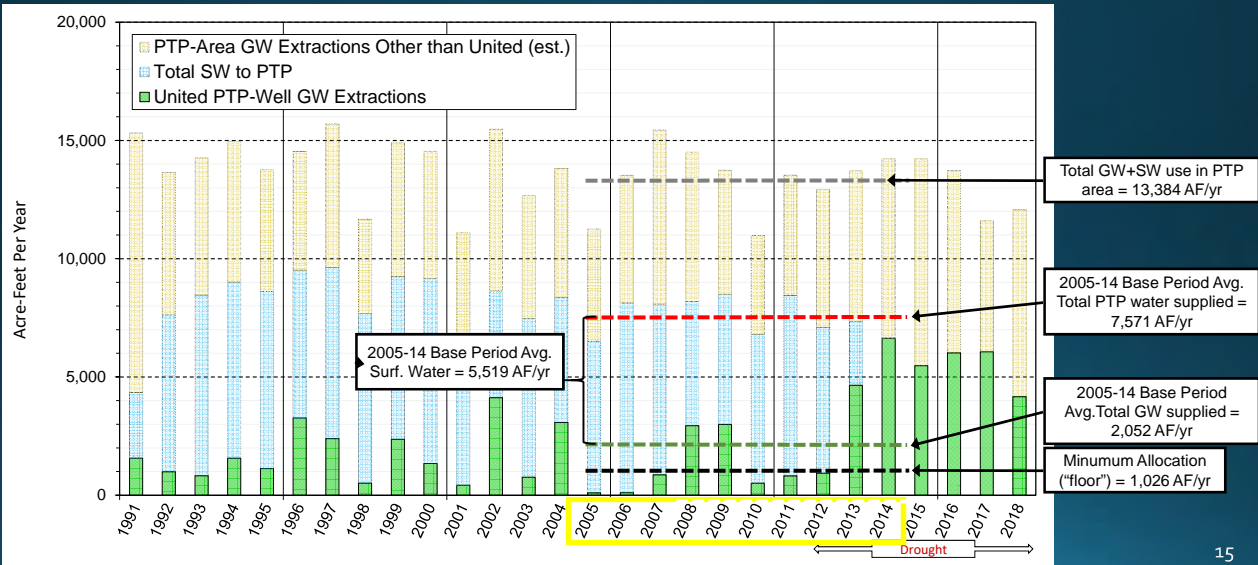
13

“SCR Flex Allocation”

- SCR surface water deliveries to PTP and PVP affect groundwater allocations:
 - Groundwater allocation adjusted up or down depending on how much surface water is available each year
 - A “floor” of ~1,000 AF is proposed as a minimum PTP extraction allocation
 - Will be adjusted downward if rampdown in pumping required by FCGMA
 - Not subject to carryover
 - If surface water not fully used, extraction allocation reduced accordingly
- Surcharges totaled every 5 years, rather than every year
- Carryover will be applied annually, apply to 5-year totals for over- or under-pumping

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Historical PTP Operation



Other Notable Points

- Allocation carryover:
 - 50% of unused extraction allocation can be carried over to the subsequent year
 - Carryover can be accumulated to a maximum of 100% of the normal extraction allocation
 - Carryover expires after 5 years (but this might never happen)
 - First extractions of subsequent year
- Minimum allocation for Ag operators:
 - To be established, assuming rampdowns necessary

Reporting Requirements

- For PTP:
 - Total volume of water supplied from each source (GW, SW)
 - Location of each turnout owned by United
 - Monthly deliveries and meter readings for each turnout owned by United
 - List of APNs served by each turnout
 - Customer name associated with each APN
- For OH:
 - Total volume of water supplied from each source (GW)
 - Monthly delivery volumes
 - List of APNs served by United(?)
- For deliveries of SCR surface water:
 - Total volumes of diversions, PTP deliveries, PVP deliveries, and other deliveries

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Known Concerns of Other Stakeholders

- PVCWD strongly advocating “one water” approach to conjunctive use
 - Justifiably concerned about potential for much deeper cuts for some farmers during drought years
- M&I wants to end Emergency Ordinance E, ASAP
- M&I concerned that SCR Flex Allocation and 5-year-averaging give Ag users an advantage

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5. Mound Basin Groundwater Sustainability Agency (MBGSA) Agenda Review

Mound basin

Priority: High

Reason: Water quality, dependence on groundwater, forecasted population growth

GSA type: JPA

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Recent Activities:

- Oct. 17 regular BoD meeting:
 - Routine administrative and budget issues
 - United and Intera (MBGSA's consultant) beginning to develop data management system and GSP
- Next BoD meeting likely to occur in December 2019

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6. Fillmore and Piru Basins Groundwater Sustainability Agency (FPBGSA) Agenda Review

Fillmore basin

Priority: High

Reason: Water quality, dependence on groundwater, forecasted population growth

GSA type: JPA (Fillmore + Piru)

Piru basin

Priority: High

Reason: Water quality, dependence on groundwater

GSA type: JPA (Fillmore + Piru)

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Recent activities:

- July 18 regular BoD meeting:
 - Encore presentation—roles & responsibilities of the GSA and its Board members (David Ceppos)
 - Comment on waiver of well permit prohibitions for 1307 Bardsdale Ave., Fillmore
 - Budget and extraction fees
- Conceptual modeling nearly done, numerical model construction beginning

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Recent agenda items:

- No meeting in August
- September:
 - Outreach and engagement planning results from ad hoc committee
 - Modeling progress
- October: Additional outreach and engagement planning by the ad hoc committee

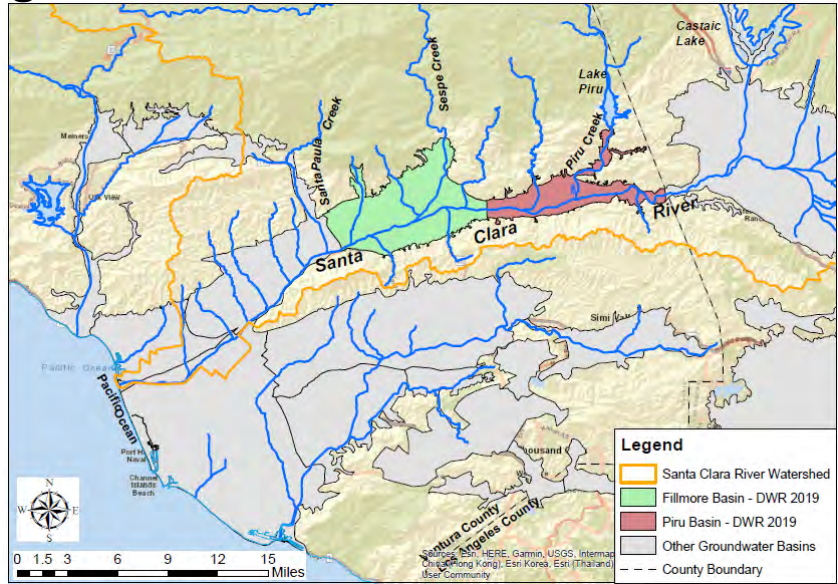
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Fillmore and Piru Basins: Groundwater Model Progress

Modified from:
Fillmore and Piru Basins GSA Board of Directors Meeting
Friday, September 27, 2019

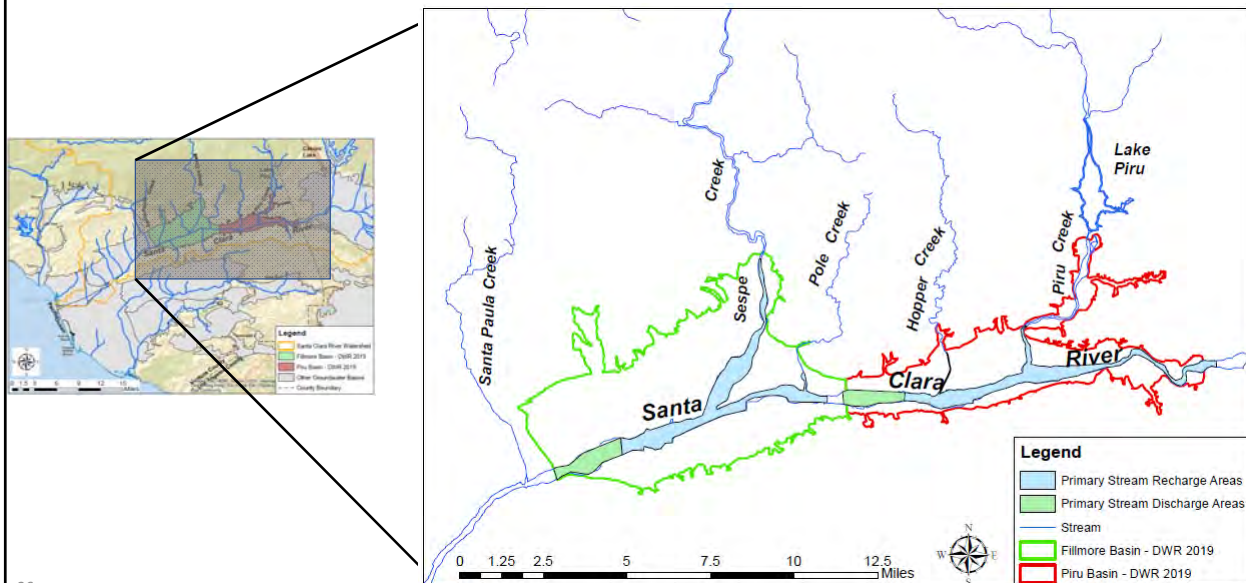
24

Regional Setting

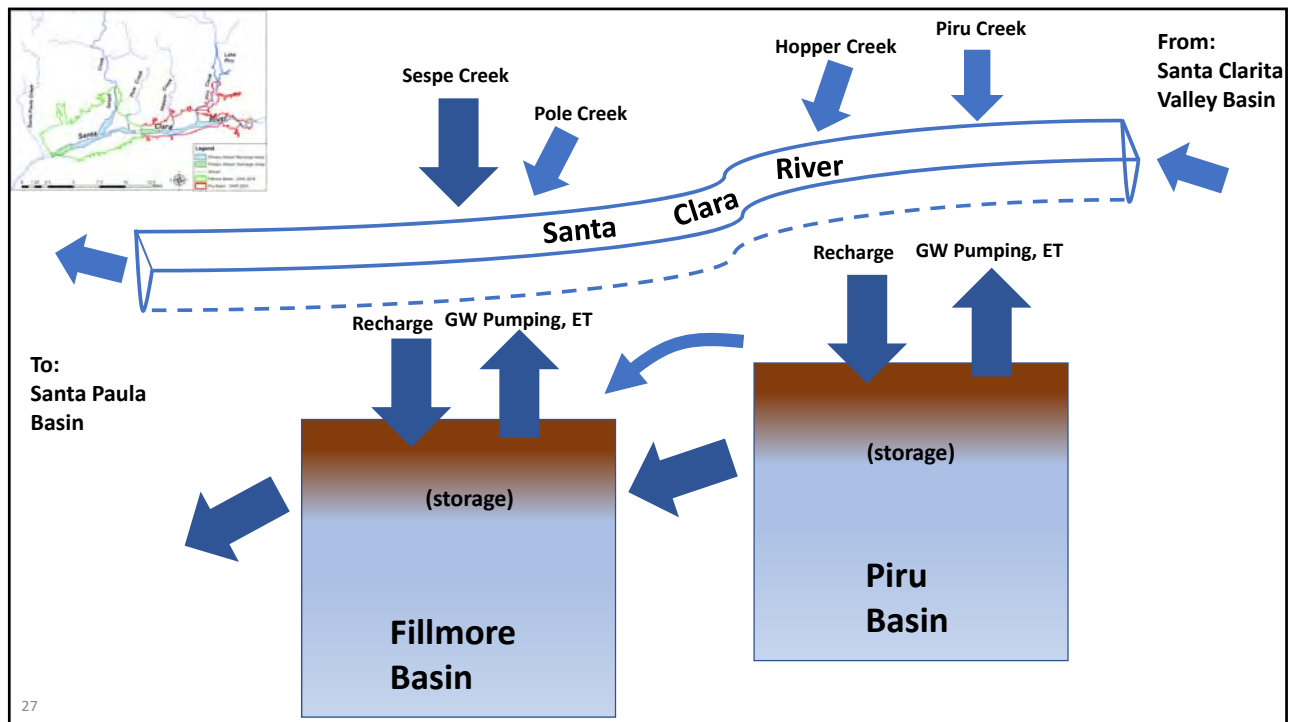


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Fillmore & Piru Basins



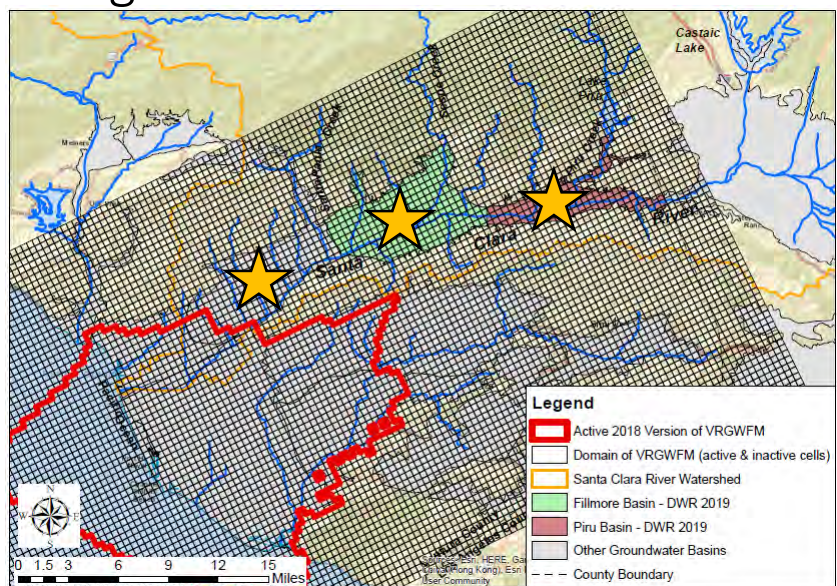
26



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Numerical Modeling

- Extension of coastal plain model (2018)
 - Dr. Jason Sun
- Modeling Period
 - 1985 – 2015
- Validation Period
 - 2016 - 2019



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Data Collection

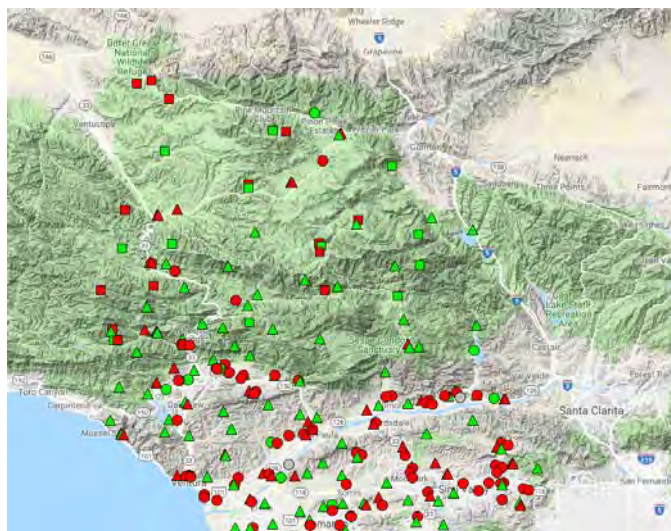
& Pre-Processing

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Data Collection – Precipitation

- Precipitation Gages
 - Ventura County
 - Los Angeles County
 - US Geological Survey
 - United Water
 - Research database products

Streamflow Stations
■ = Daily and Peak Stations
▲ = Peak Only (Event) Stations
● = ALERT Peak Stations
Active Station
Inactive Station



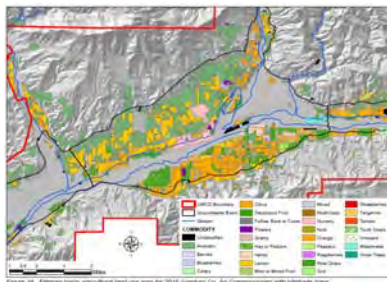
Ventura County Precipitation Gage Network

30

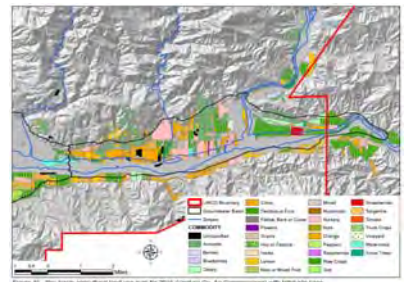
Data Collection – Recharge Processes

- Groundwater Recharge to Aquifers
 - Ag and M&I return flows
 - Deep infiltration of precipitation
 - Mountain-front recharge
 - Stream-channel recharge
 - Artificial recharge

Fillmore Ag Land Use (United, 2016)



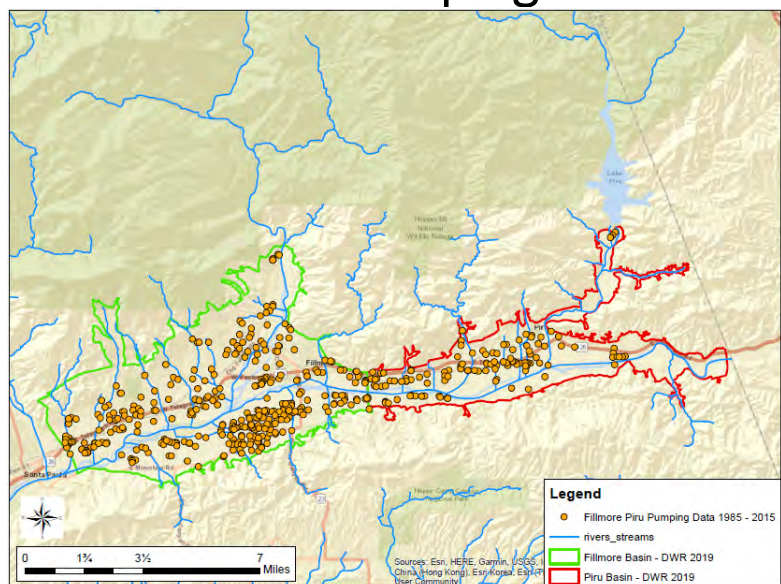
Piru Ag Land Use (United, 2016)



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Data Collection – Groundwater Pumping

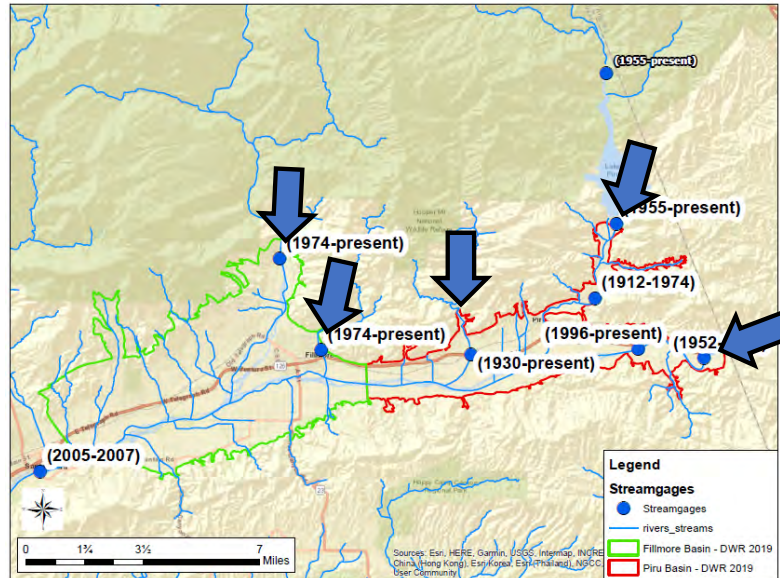
- ~500 wells with records
 - 1985 - 2015



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Data Collection – Streamflow at Boundaries

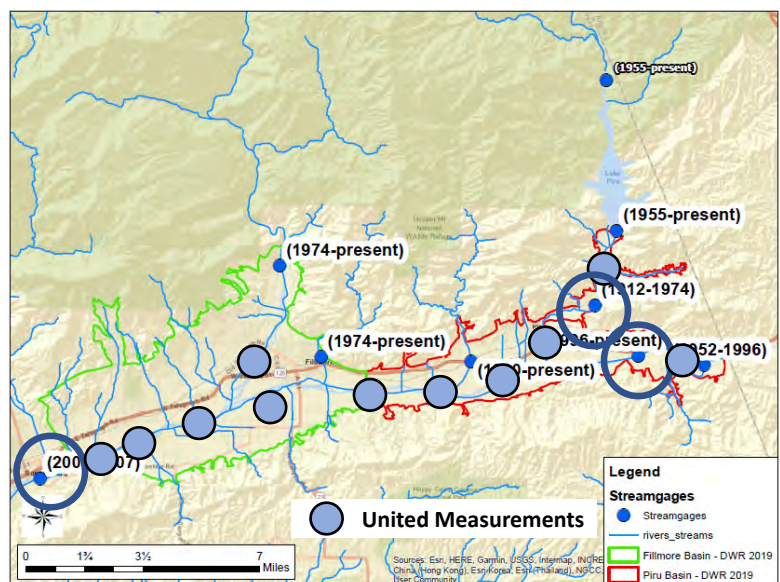
- Streamflow gaging sites
 - 9 USGS and Ventura County gages
 - Daily average discharge
 - Decades of data



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Data Collection – Streamflow within Boundaries

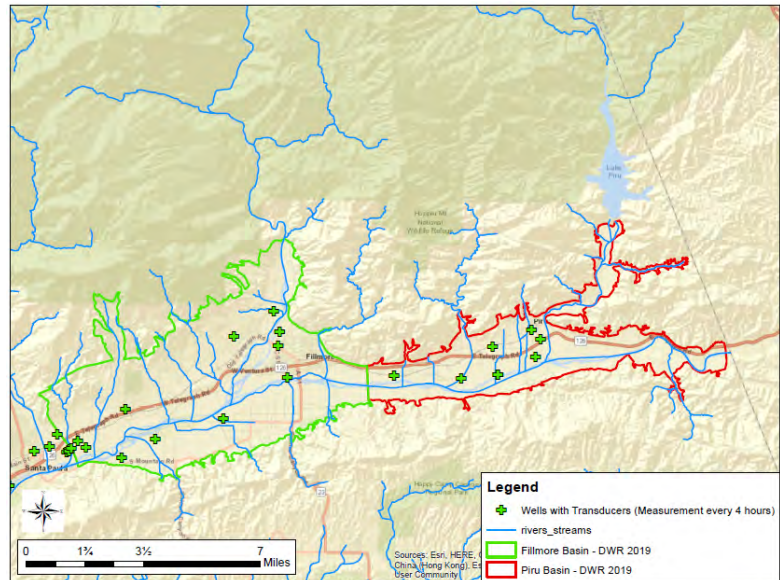
- Streamflow gaging sites
- Percolation rates within stream channel
- United (manual) measurements
 - 500 + along Santa Clara River and tributaries
 - Majority 1999 - present



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Data Collection – Groundwater Levels

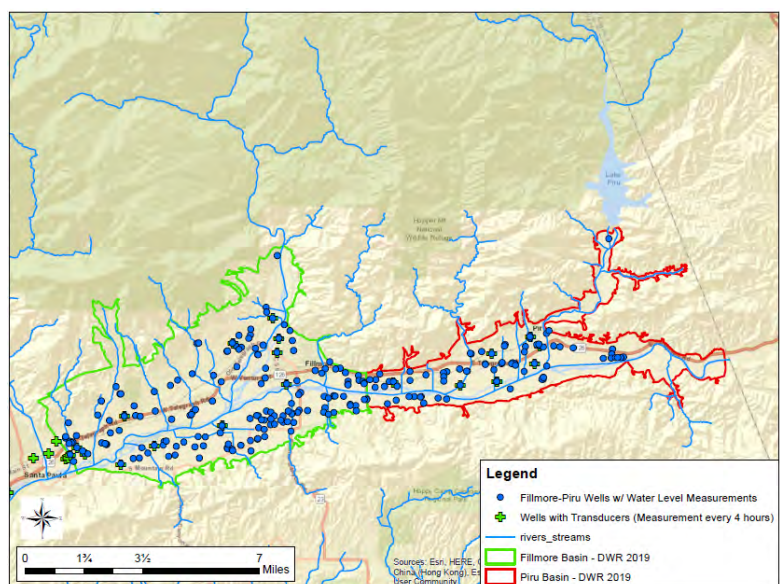
- Pressure Transducers
 - 4-hour intervals
 - 23 wells
 - 260,000+ records



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Data Collection – Groundwater Levels

- Pressure Transducers
 - 4-hour intervals
 - 23 wells
 - 260,000+ records
- Water Level Elevations
 - Single measurements
 - 254 wells
 - 23,000+ records



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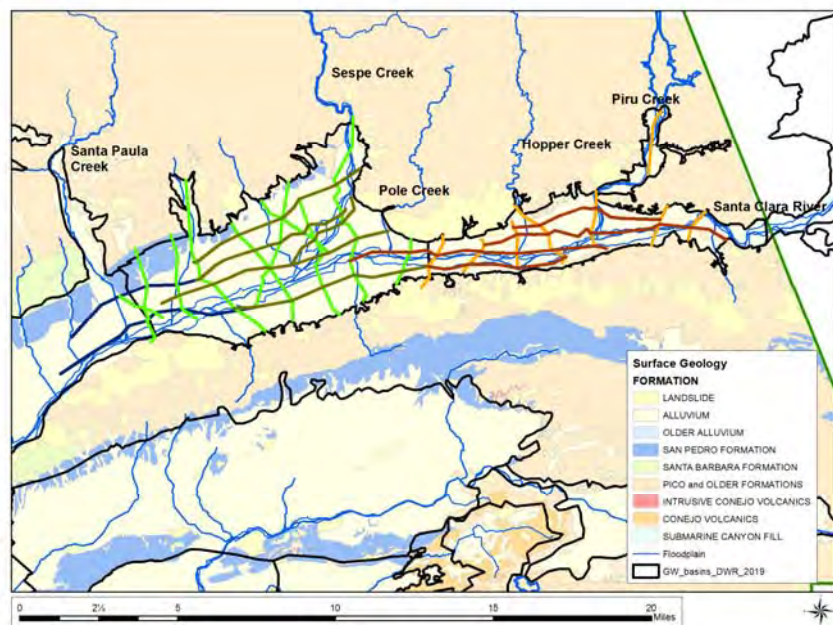
Mapping of Hydrostratigraphic Units

- United staff also needed to map subsurface hydrostratigraphic units (aquifers)
- Used information from existing water and oil wells
 - Geophysical well logs
 - Description of lithology (sand, cobbles, silt, clay)
 - Well construction information (screened zones)
 - Other information (water levels, well production)

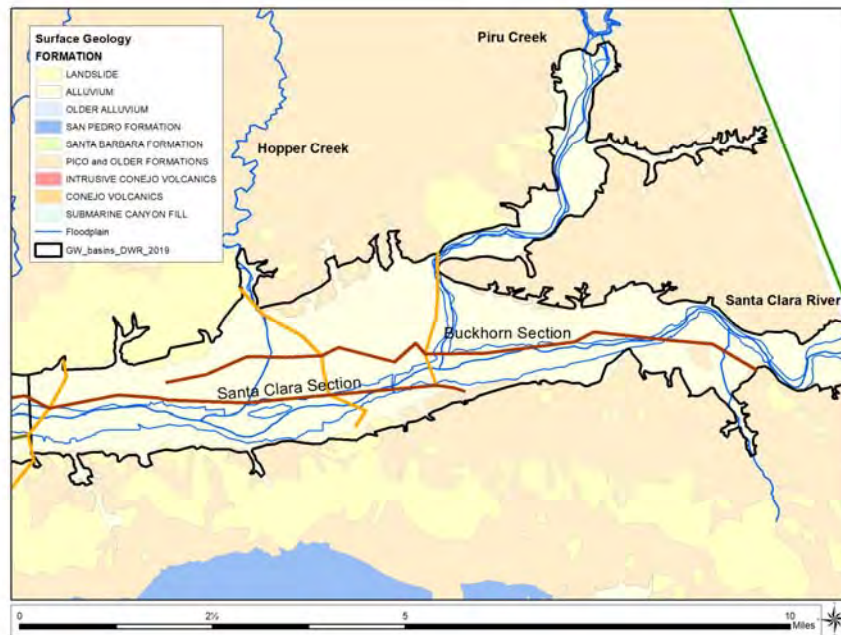
This mapping of units forms the framework/architecture of the groundwater flow model

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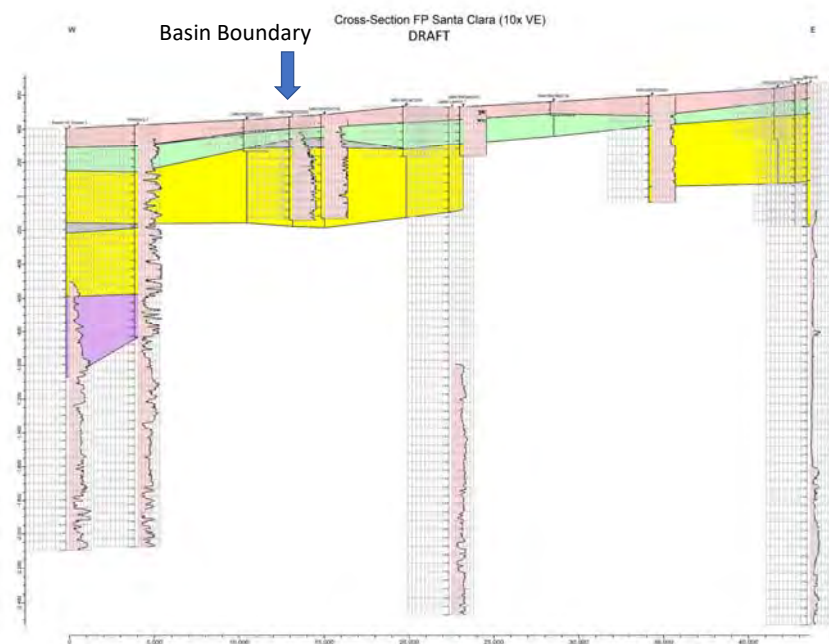
Section lines in the Piru and Fillmore basins



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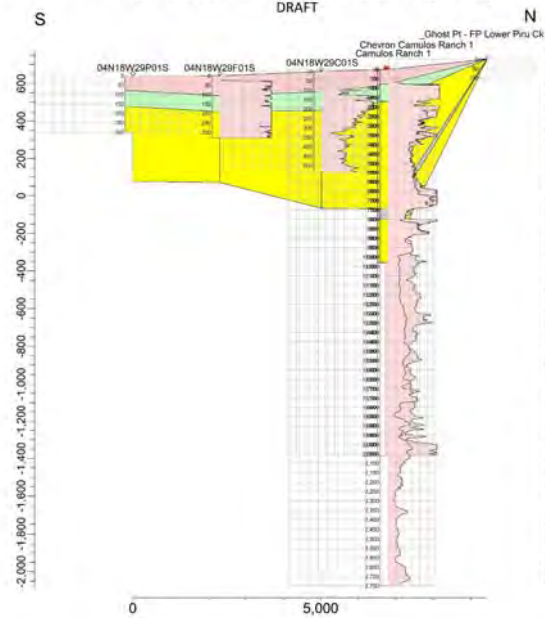
39



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Cross-Section FP Lower Piru Creek (5x VE)

DRAFT

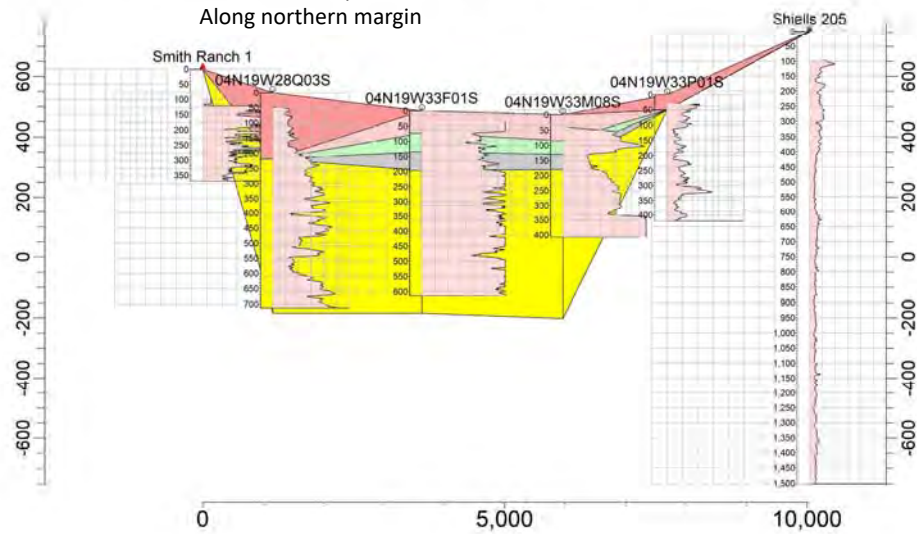


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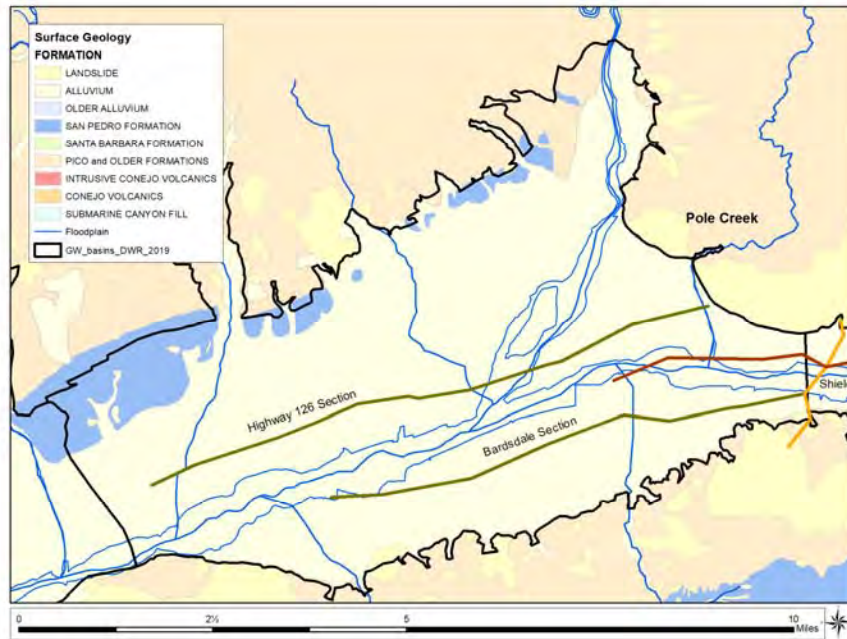
Cross-Section FP Shields (5x VE)

DRAFT

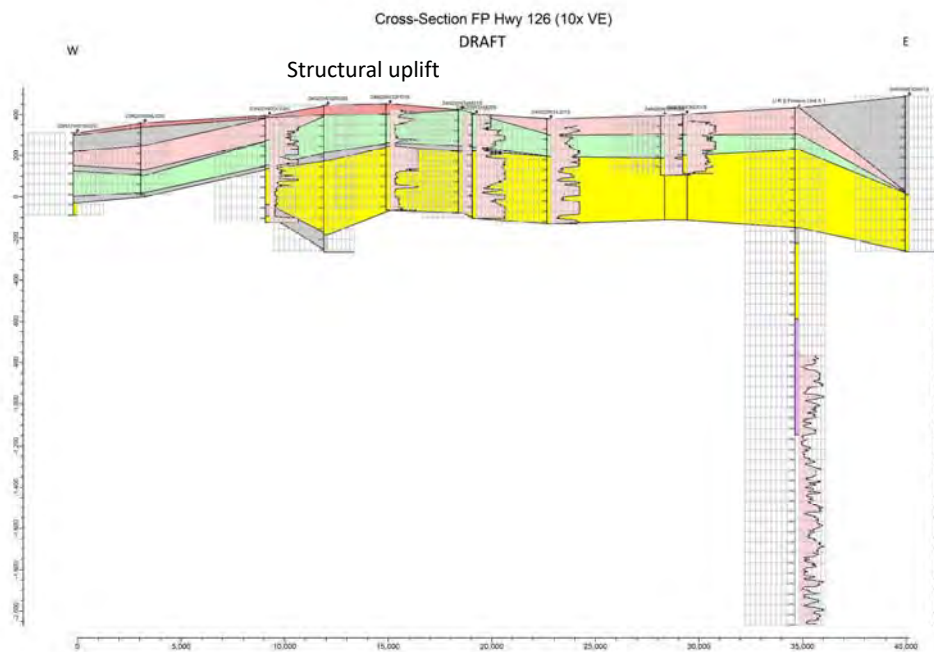
Fine alluvial deposits
Along northern margin



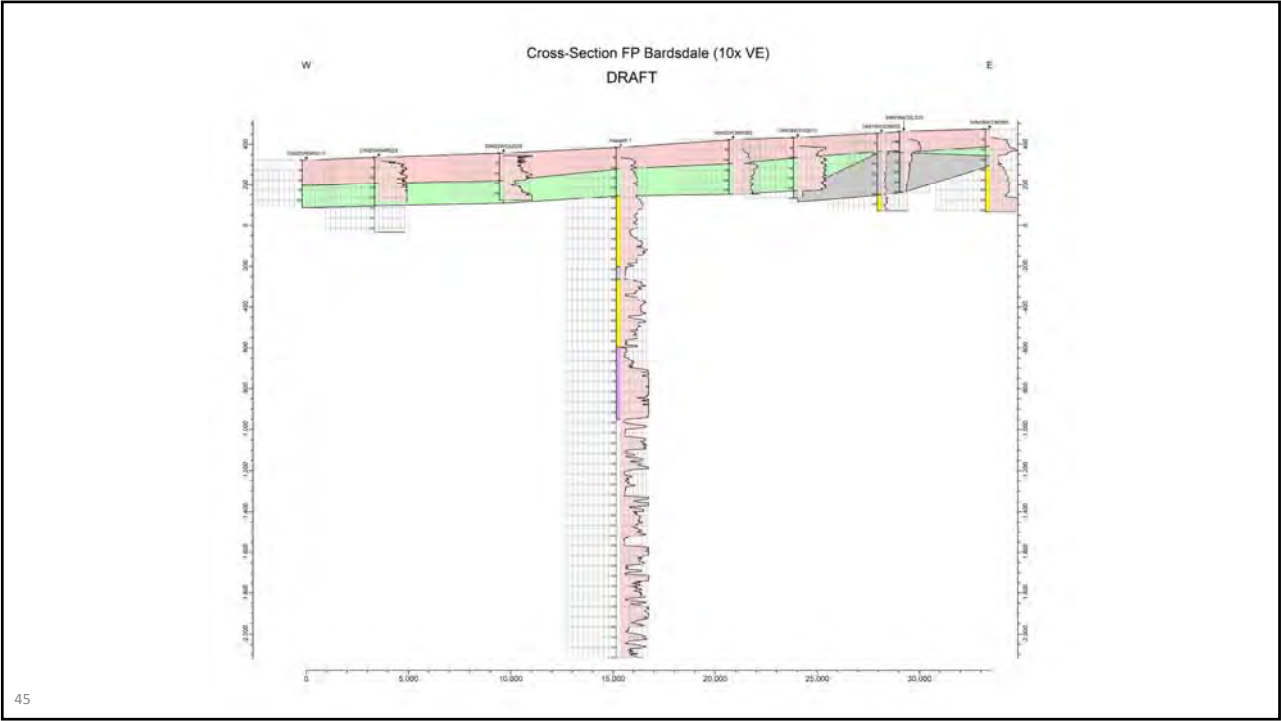
42



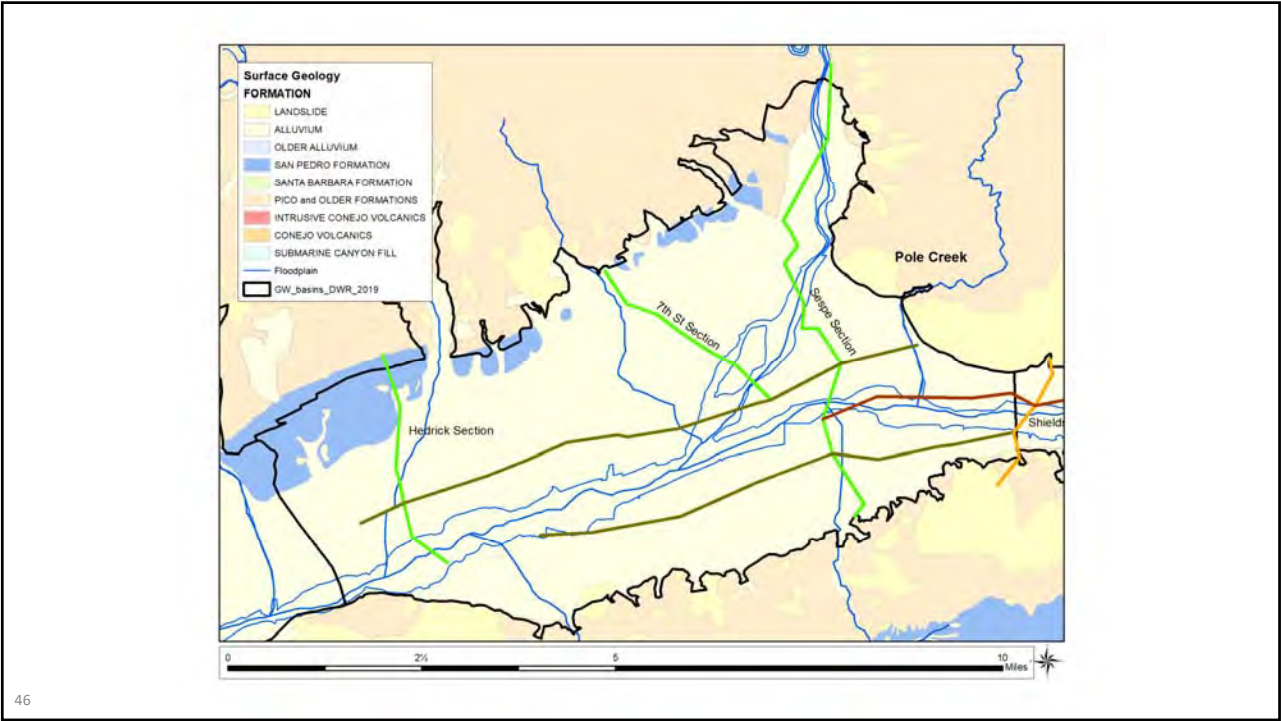
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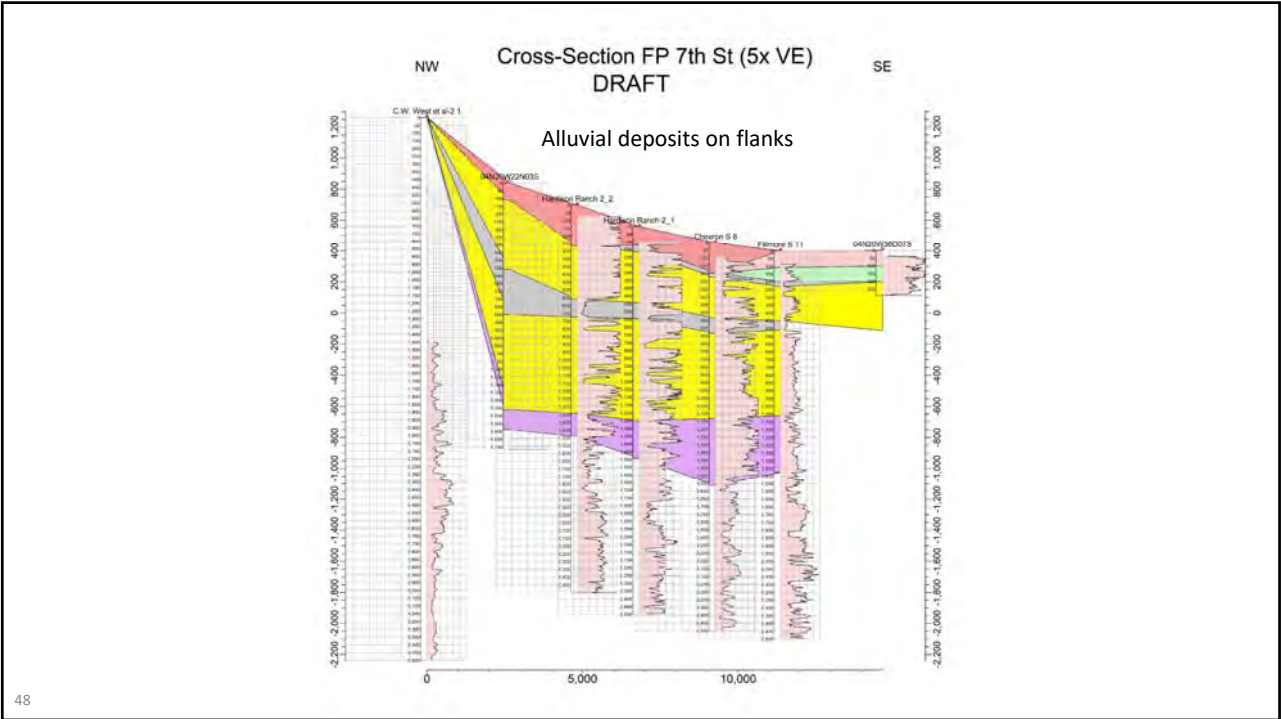
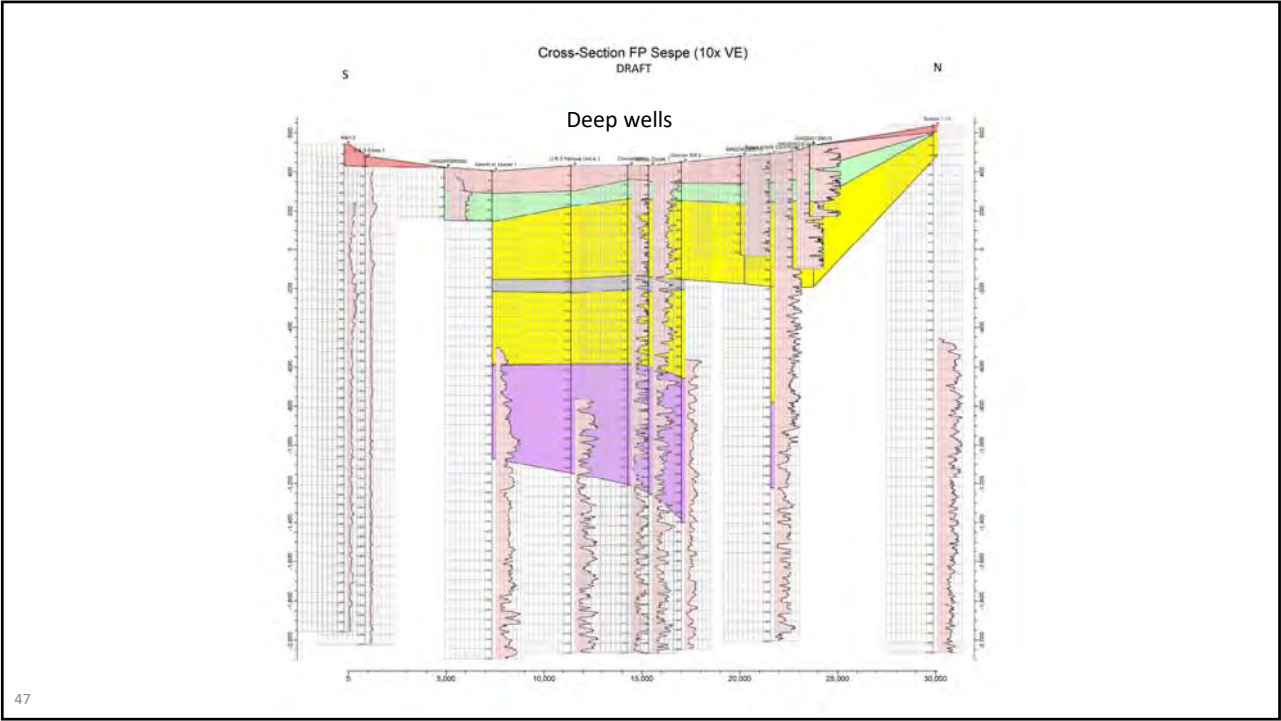
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7. Santa Paula Basin Technical Advisory Committee (TAC) Update

Santa Paula basin

Priority: Very Low

Reason: Adjudicated

GSA type: Technical Advisory Committee

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Upcoming Activities

- Next TAC meeting: Nov. 7 (not a public meeting)
- Upcoming activities:
 - Consider effects of Ventura SWP-Interconnection project on potential Santa-Paula-basin “yield enhancement” projects
 - Progress regarding “triggers” document and funding for yield-enhancement projects
 - Review SP Basin Annual Report for 2018

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8. FUTURE AGENDA ITEMS



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9. ADJOURNMENT



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Staff Report

To: Board of Directors

Through: Mauricio E. Guardado, Jr., General Manager
Robert C. Siemak, Assistant General Manager

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

Date: April 28, 2020 (prepared for May 13, 2020 UWCD Board Meeting)

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Information Item

Staff Recommendation:

Receive a summary report on various departmental activities.

Discussion:

(Due to the Covid 19 stay-at-home order, a majority of staff worked from home, To facilitate communications and coordination, a daily conference call was held in the morning on Teams; this has proven to be an effective way of moving all projects and programs forward. In instances where field work was required, all social distancing and safety procedures were followed. Also, staff maximized the use of teleconferencing using 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 (reported in a separate staff report), major efforts and activities conducted by staff during the past month included the following:

- Groundwater modeling:
 - Staff have completed preparation of the major input files needed to expand the active domain of United's numerical groundwater flow model to incorporate the Piru, Fillmore and Santa Paula basins, and are continuing with model calibration efforts.
 - Staff and Expert Panel participants met via videoconference on March 24 to share progress and receive feedback on model expansion and preliminary calibration of United's numerical groundwater flow model. The Expert Panel will review revised
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model input and output files over the next few weeks and provide suggestions on how best to simulate some aspects of groundwater-surface water interaction.

- Staff has completed preliminary model runs that shows pumping of as little as 5,000 AF per year may effectively control the inland progression of seawater intrusion in the UAS near Mugu lagoon, and over time will clean up brackish groundwater in the project area. Navy representatives have recently reiterated their interest in this feasibility study and are coordinating with United staff to further develop the project.
 - Staff are conducting various model simulations for Calleguas to evaluate groundwater impacts and supply options in case of a water-supply emergency (e.g., interruption to State Water Project deliveries due to a major earthquake).
 - Staff continue to help the Environmental Planning and Conservation Department (EPCD) evaluate effects of existing and potential future surface-water flow conditions at the Freeman Diversion.
 - Staff are assisting EPCD in evaluating fish passage modifications under consideration for United's Habitat Conservation Plan (HCP).
 - Staff began preparing an assessment of impacts of United's conjunctive-use and related activities in the Oxnard basin (including the Forebay area) on surface-water conditions in the Santa Clara River, which will be an appendix to United's MSHCP.
 - Staff continued assisting 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 received a letter from the DWR on October 18, 2019 regarding the DWR's approval of the Prop 1 groundwater grant funding preliminary award of up to \$103,600 for the Coastal Brackish Water Treatment Plant – Basin Impacts and Benefits. Staff had a second grant coordination call with DWR on March 25 to finalize the grant agreement before the anticipated start date in July. Several Technical Advisory Committee meetings and outreach meetings were added to the agreement and budget was revised to \$122,563.
 - Groundwater Department staff coordinated efforts with Engineering Department staff and United's Regional Optimization Planning consultant to continue design and implementation efforts for the new water-supply projects discussed at United's Water Sustainability Summit.
 - Staff are analyzing sediment load at the Freeman Diversion and removal options for accumulated sediment from the desilting basin.
 - Staff provided data and answered questions asked by City of Oxnard staff about the M&I Supplemental and Good Deed groundwater credit programs that Oxnard and United participated in beginning in approximately 2005.
 - Staff led or participated in the following public outreach activities:
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Agenda Item: 5.3 Monthly Groundwater Department Report
Information Item

- Several phone conversations related to groundwater sustainability, FCGMA allocation ordinance, and conjunctive use strategies and operations.