Groundwater Committee Meeting
Tuesday, March 26, 2019 1p.m. – 2:20p.m.
Boardroom, UWCD G.I. "Irv" Wilde Headquarters
106 N. 8th Street, Santa Paula CA 93060

MINUTES

COMMITTEE MEMBERS PARTICIPATING

Michael Mobley, Chair
Robert Eranio
Ed McFadden

STAFF

Robert C. Siemak, assistant GM
Dr. Maryam Bral, chief engineer
Mike Ellis, chief operations officer
Dan Detmer, supervising hydrogeologist
Eric Elliott, staff hydrogeologist
Kathleen Kuepper, staff hydrogeologist
John Lindquist, senior hydrogeologist
Dr. Bram Sercu, hydrologist
Kris Sofley, executive assistant

PUBLIC

Jared Bouchard, Pleasant Valley County Water District
Frank Brommenschenkel
Burt Handy, Ventura resident
Tony Morgan, DBS&A

Open Session 1p.m.
Chair Mobley called the Groundwater Committee meeting to order at 1p.m.

1. **Public Comment**

   Chair Mobley asked if there were any public comments or questions. None were offered.

2. **Approval of the Agenda**

   Chair Mobley asked if there were any changes to the agenda. No changes were recommended.

   Motion to approve the agenda, Director Eranio; Second, Director McFadden. Voice vote: three ayes (Eranio, McFadden, Mobley), none opposed. Motion carries 3/0.

3. **Approval of the Minutes**

   Motion to approve the Minutes from the February 26, 2019 Groundwater Committee Meeting, Director Eranio; Second Director Mobley. Voice vote: two ayes (Eranio, Mobley); none opposed; one abstained (McFadden). Minutes approved 2/0/1.

Ms. Sofley mentioned that the minutes from the October 29, 2018 Groundwater Committee Meeting were not approved at the previous meeting. Motion to approve the Minutes from the October 29, 2018, Groundwater Committee Meeting, Director McFadden; Second, Director Mobley. Voice vote: two ayes (McFadden, Mobley); none opposed; one abstained (Eranio, noting that he was not on the Groundwater Committee in October 2018). Motion carries, Minutes approved 2/0/1.

4. **Groundwater Conditions (Detmer)**

Mr. Detmer reported on Groundwater Conditions within the District. Mr. Detmer reported that, on average, Santa Paula receives 90 percent of its total water-year rainfall by the end of March. Rain gauges in Santa Paula showed over 20 inches at end of March, and the average for the end of Water Year was 17.19 inches.

He added that staff was starting to see groundwater level improvements in Piru wells and the Fillmore basin. Director McFadden added that 30 to 40 feet of groundwater-level rise was reported in some wells in Bardsdale.

Mr. Detmer said that diversions at the Freeman were above previous years, but still below average for past water years. Mr. Detmer said the highest diversion at the Freeman was experienced in Water Year 1993, of some 130,000 acre feet; and the lowest (nearly zero acre feet) was in 2016, due to long-term sustained drought.

Mr. Detmer also reported that Oxnard Plain basin storage was improving, but still similar to 1990 drought conditions. Mound Basin hasn't experienced much recovery, and the coast is still experiencing active seawater intrusion, rising chloride levels and overall, is slow to recover from sustained drought conditions.

5. **Short-term Climate Forecast (Detmer)**

Mr. Detmer showed maps of California, comparing March 2018 to March 2019, which showed that California was no longer classified as being in a drought. Mr. Detmer explained that NOAA makes these determinations based on rainfall and snowpack, not groundwater levels, which can be misleading. He continued with maps which showed the National outlook for three months (March through June), demonstrating no drought conditions in California, and only minor flooding possible. He also explained that NOAA was predicting weak El Niño conditions for the remainder of the spring, with higher than normal temperatures and average (more or less) precipitation predicted for the remainder of the spring.

6. Presentation of ASAPP (Sercu)

Dr. Bral addressed the Committee, explaining that the Alternative Supply Assurance Pipeline Project (ASAPP) was presented to the Planning Committee in December 2018. She wanted to introduce Dr. Sercu to present an updated on the project, based on a technical memo being prepared for the project, and said staff would appreciate any feedback from the committee.

Dr. Sercu explained that the ASAPP was a concept developed to maximize surface water deliveries to the Oxnard Plain, and would provide for an alternative imported water supply which could be stored at Lake Piru, maintain historic releases to the upper basins of some 28,000 acre feet per

year, while also assure a more efficient delivery system for moving stored water to the Oxnard Plain via a pipeline, when demand is not met by the Freeman Diversion.

Dr. Sercu than presented a series of slides (see attached presentation) that showed the various scenarios analyzed by staff, including pipe sizes, releases, and benefits to the Oxnard and Pleasant Valley basins.

In summarizing his remarks, Dr. Sercu stated that the ASAPP yield and groundwater benefits are based on 3,000 to 6,000 acre feet of alternative water supply per year; effectively increases surface water delivery to Oxnard Plain by 5,000 to 15,000 acre feet per year (in lieu of pumping groundwater); significantly decreases onshore groundwater fluxes in south coast by 11 percent to 85 percent; is expected to increase sustainable yield and to maximize benefits of ASAPP expansion of surface water delivery system is required. Dr. Sercu concluded with the "next steps" for the ASAPP, which include finalization of a yield and groundwater benefits report, an engineering feasibility study, and a comparison of the groundwater benefits of the ASAPP with other projects. Director McFadden asked if this would facilitate wheeling water from basins to Freeman Diversion. Dr. Sercu said, yes, it would, with some design changes as the pipeline would run 40 to 60 percent of the year, which creates an opportunity for repurposing the pipeline. Director McFadden said that the Fillmore and Piru Pumpers Associations had expressed concerns about partially funding a project that doesn't directly benefit the upper basins. Dr. Bral answered that while the ASAPP focuses on the Oxnard Plain, staff could expand the focus of the project to include the upper basins.

7. Effects of Pumping Location on Sustainable Yield and Saline Intrusion in Oxnard Plain and Pleasant Valley Basins – Concepts and Evaluations to Date (Lindquist)

Mr. Lindquist presented numerous slides which demonstrated hypothetical pumping scenarios and how the location of pumping has a significant impact on saline intrusion and sustainable yield, stressing that "where you pump matters."

8. Fox Canyon Groundwater Management Agency (FCGMA) Agenda Review (Siemak/Detmer/Lindquist)

Director Eranio reported that the FCGMA Ops and TAG Committee meetings for April had been canceled, that FCGMA was holding a workshop review addressing various issues that have been raised with the allocation ordinance. Among the outstanding issues to be addressed are: differences between PVCWD and FCGMA on groundwater use, partial or complete allocation for Conejo Creek surface water; allow carryover of surface-water allocations, same as groundwater; 10-year rolling average for surface-water deliveries (instead of 5 years); allow allocation sharing among wells in a well field, without requiring a variance; the addition of language allowing exceedance of allocation during Emergencies (and what defines Emergency); and ordinance language regarding allocations and suballocations for OH users and United.

9. Mound Basin Groundwater Sustainability Agency (MBGSA) Agenda Review (Lindquist)

Mr. Lindquist reported that the April 25 Board meeting may be canceled; upcoming events include a groundwater isotope analysis (coordinated sampling with United); a team kick-off meeting with consultants (United, Intera) regarding data exchange and analysis; and the GSA's plans for new monitoring wells.

10. Fillmore and Piru Basins Groundwater Sustainability Agency (FPB GSA) Agenda Review (Emmert/Detmer)

Mr. Lindquist reported that the FPB GSA had signed a contract with GSP contractor Daniel B. Stephens & Associates (DBS&A), and that DBS&A and United staff were sharing data to begin preparing the GSPs. The GSA Board recently received a presentation from Mr. Emmert on the District's recent State Water purchases, and a special presentation on stakeholder outreach effort is planned for the Board's next meeting. A Special Board meeting was called for March 28 to discuss financial issues.

11. Santa Paula Basin Technical Advisory Committee (TAC) update (Lindquist)

Mr. Lindquist reported that the draft 2017 Annual Report had been revised and resubmitted to TAC. The TAC must complete SGMA reporting for adjudicated basins by April 1, 2019. TAC Working Group is making progress on groundwater elevation "triggers." The TAC, which meets again on September 5 (not a public meeting), will also be considering effects of the Ventura SWP-Interconnection project on potential Santa-Paula-basin "yield enhancement" projects; progress regarding "triggers" document and funding for yield-enhancement projects; and will evaluate existing index wells, and whether or not there is a need for more pressure transducers.

12. Future Agenda Items

None offered.

Adjournment 2:23p.m.

Chair Mobley adjourned the meeting at 2:23p.m. and reminded everyone that the next Groundwater Committee meeting would be on April 23 and would continue to be held every month on the fourth Tuesday of the month, unless otherwise scheduled.

United Water
CONSERVATION DISTRICT

ATTENDANCE LIST

MEETING DATE: Tuesday, March 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.

Name (Please Print)	Representing
TONY MORGAN	DWR
[illegible] Hanson	
Jennifer Tribo	Ventura Water
Jared Bouchard	PVCWD
FRANK DROMMERSCHEIDER	

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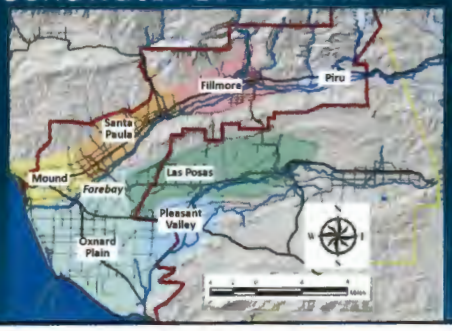
Groundwater Committee Meeting

March 26, 2019

United Water
CONSERVATION DISTRICT

4. Groundwater Conditions



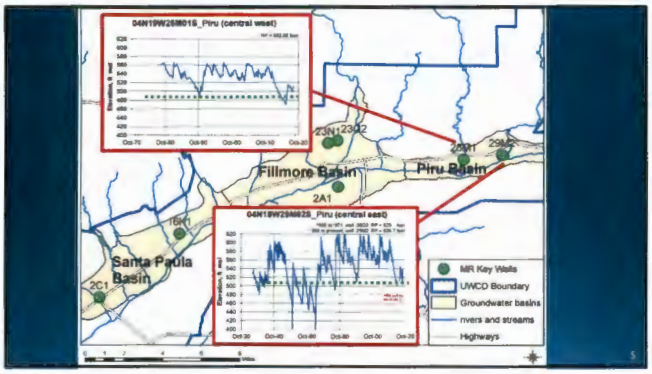
Agenda Items 1 through 3

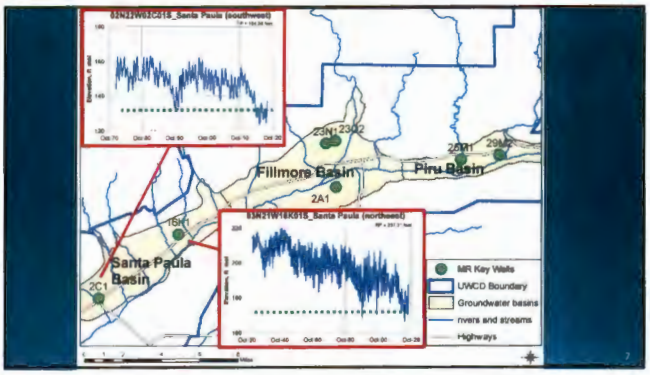
1. Public Comment
2. Approval of the Agenda
3. Approval of the Minutes

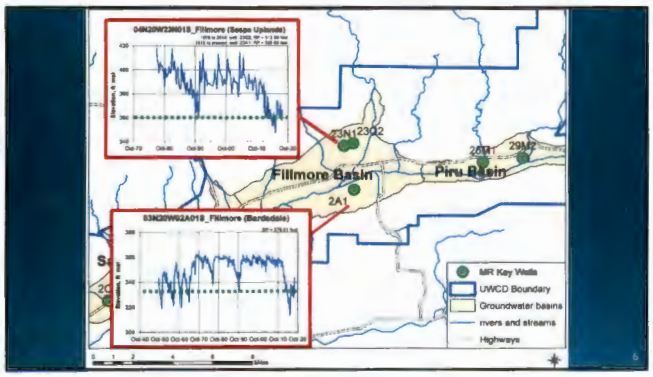
On average, *Santa Paula receives 90% of its total water-year rainfall by the end of March.*

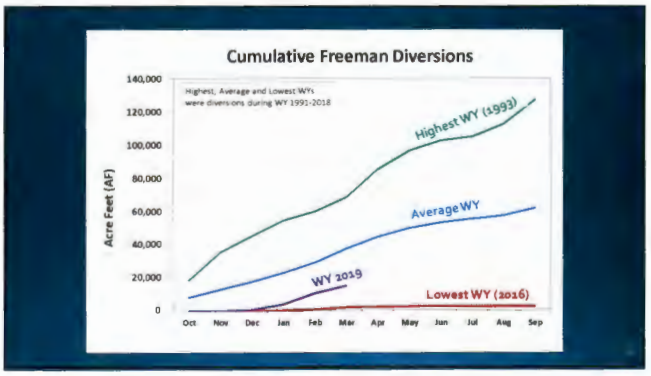
Average at end of March = 15.51" (max = 39.33")

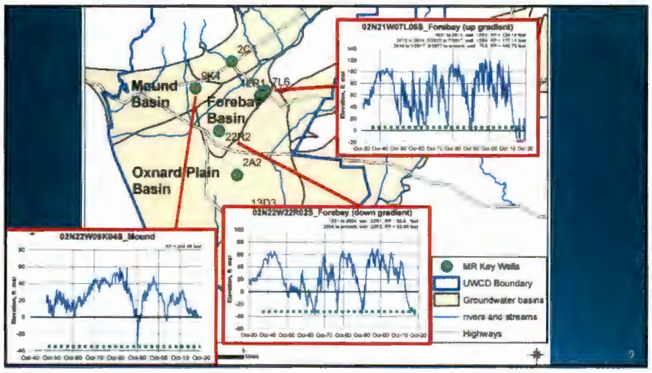
Average at end of Water Year = 17.19" (max = 44.77")

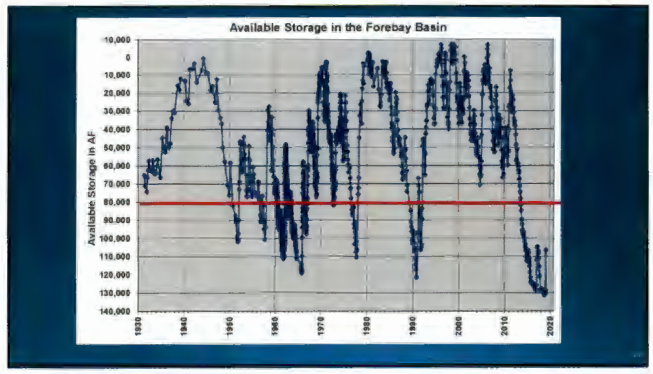

04N19W25M01S_Piru (central west)
23N23Q2
25M1
29M2
Fillmore Basin
Piru Basin
2A1
15K1
04N19W29M02S_Piru (central east)
Santa Paula Basin
2C1
MR Key Wells
UWCD Boundary
Groundwater basins
rivers and streams
Highways

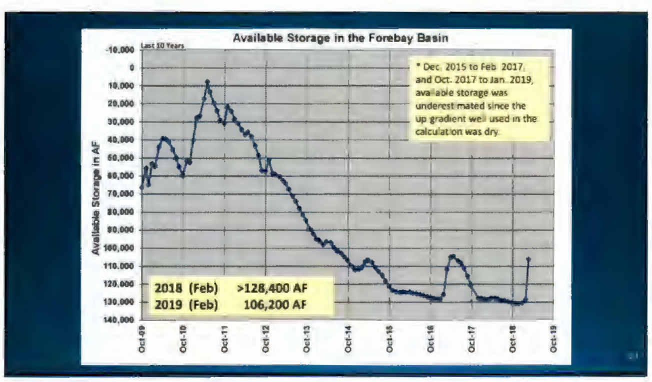

03N21W01C01S_Santa Paula (southwest)
23N23Q2
25M1
29M2
Fillmore Basin
Piru Basin
2A1
15K1
03N21W16K01S_Santa Paula (northeast)
Santa Paula Basin
2C1
MR Key Wells
UWCD Boundary
Groundwater basins
rivers and streams
Highways

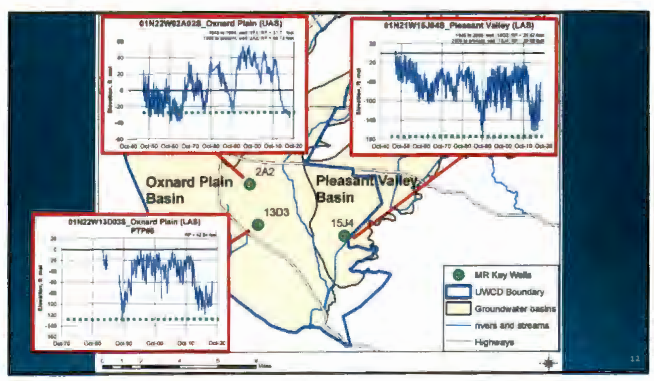

04N20W23M01S_Fillmore (Sespe Uplands)
23N23Q2
25M1
29M2
Fillmore Basin
Piru Basin
2A1
03N20W02A01S_Fillmore (Bardsdale)
MR Key Wells
UWCD Boundary
Groundwater basins
rivers and streams
Highways

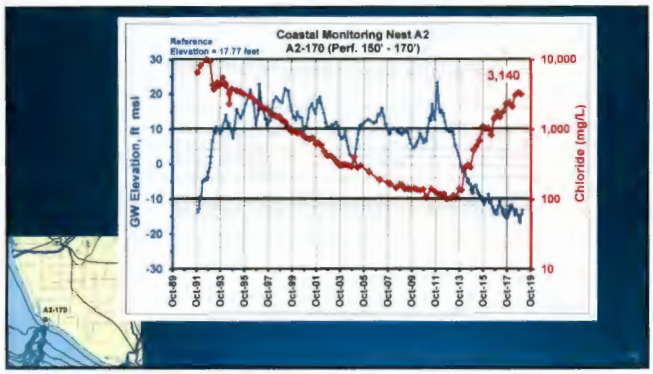

Cumulative Freeman Diversions
Highest, Average and Lowest WYs were diversions during WY 1991-2018
Acre Feet (AF)
140,000
120,000
100,000
80,000
60,000
40,000
20,000
0
Highest WY (1993)
Average WY
WY 2019
Lowest WY (2016)
Oct
Nov
Dec
Jan
Feb
Mar
Apr
May
Jun
Jul
Aug
Sep

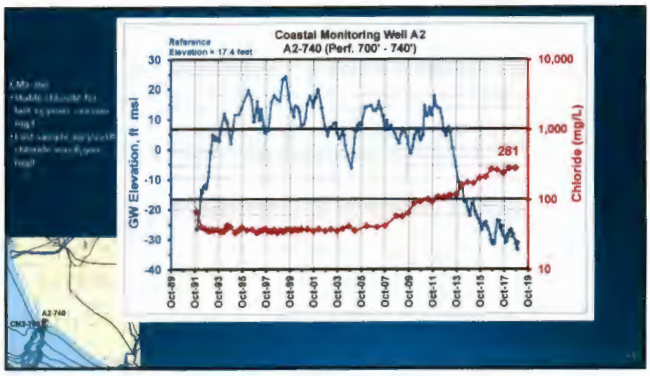

Mound Basin
Forebay Basin
Oxnard Plain Basin
2A2
9K4
7L6
13D3
MR Key Wells
UWCD Boundary
Groundwater basins
rivers and streams
Highways

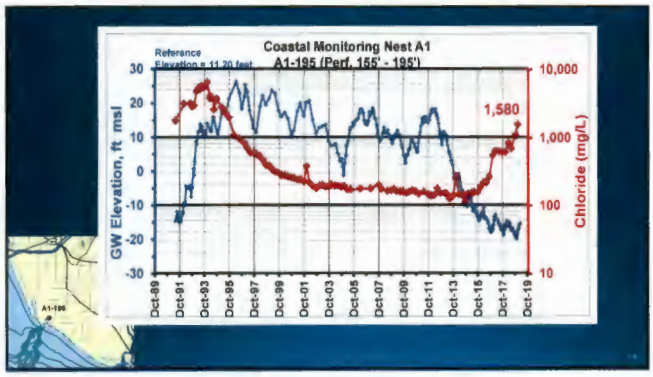

Available Storage in the Forebay Basin
Available Storage in AF

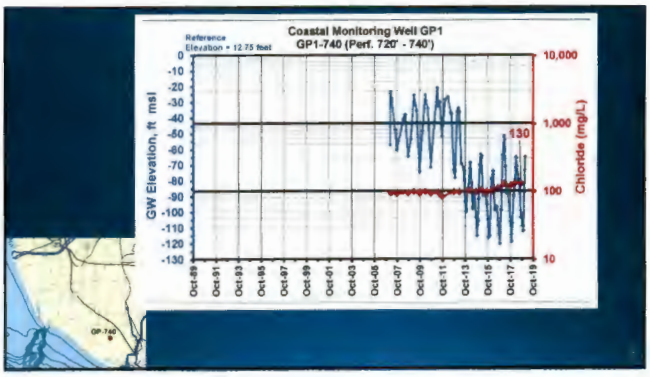

Available Storage in the Forebay Basin
Last 10 Years
* Dec. 2015 to Feb. 2017, and Oct. 2017 to Jan. 2019, available storage was underestimated since the up gradient well used in the calculation was dry.
2018 (Feb) >128,400 AF
2019 (Feb) 106,200 AF
Available Storage in AF


Oxnard Plain Basin
Pleasant Valley Basin
2A2
13D3
15J4
MR Key Wells
UWCD Boundary
Groundwater basins
rivers and streams
Highways

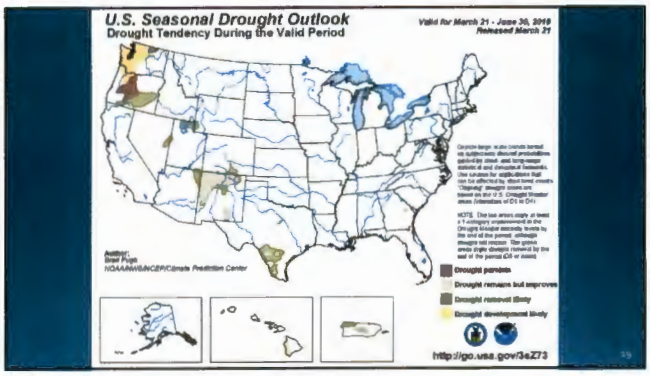

Coastal Monitoring Nest A2
A2-170 (Perf. 150' - 170')
Reference Elevation = 17.77 feet
GW Elevation, ft msl
Chloride (mg/L)
3,140
A2-170

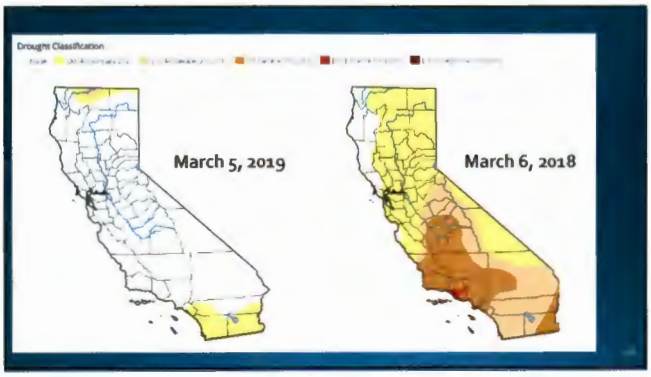

Coastal Monitoring Well A2
A2-740 (Perf. 700' - 740')
Reference Elevation = 17.4 feet
GW Elevation, ft msl
Chloride (mg/L)
281
A2-740

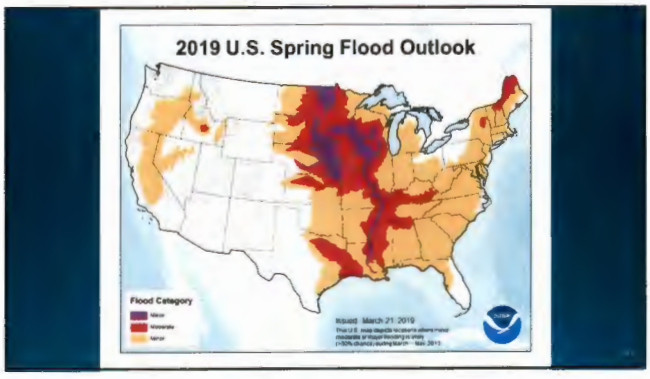

Coastal Monitoring Nest A1
A1-195 (Perf. 155' - 195')
Reference Elevation = 11.20 feet
GW Elevation, ft msl
Chloride (mg/L)
1,580
A1-195


Coastal Monitoring Well GP1
GP1-740 (Perf. 720' - 740')
Reference Elevation = 12.75 feet
GW Elevation, ft msl
Chloride (mg/L)
130
GP-740

5. Short-Term Climate Forecast







El Niño/Southern Oscillation (ENSO)

Recent Evolution, Current Status and Predictions:

- El Niño conditions are present.
- Equatorial sea surface temperatures (SSTs) are above average across most of the Pacific Ocean.
- The pattern of anomalous convection and winds are consistent with El Niño
- Weak El Niño conditions are expected to continue through the Northern Hemisphere spring 2019 (~55% chance).

Update prepared by:
Climate Prediction Center / NCEP
4 March 2019

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6. Presentation of ASAPP

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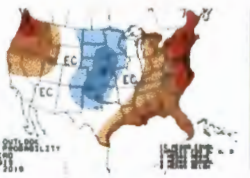
April - June 2019

Temperature



Precipitation

ASAPP Objective

= Maximize surface water deliveries to Oxnard Plain when importing alternative water supplies

How?

- Import alternative water supplies (AWS) to Lake Piru
- Maintain historic releases to Upper Basins (~28,000 AF/yr)
- AWS distributed to Upper Basins/OP per tax assessment
- Deliver stored water to OP via pipeline to surface water delivery system (when demand is not met by Freeman diversions)
- Additional pipeline releases for recharge to minimize spill losses

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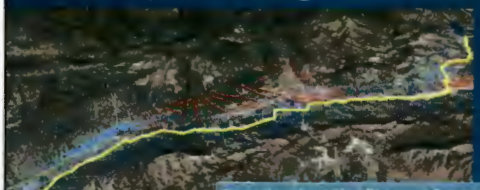
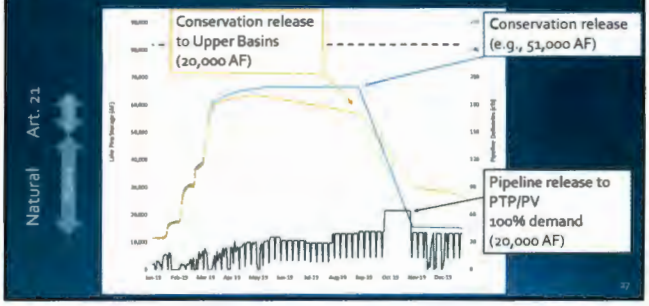
Conceptual Design



Capacity	Length	Pipe	General	Sitework	Total
50 cfs	28 mi	36" RCP	$57M	$46M	**$103M**
75 cfs	28 mi	48" RCP	$72M	$58M	**$129M**

ASAPP example for 2019



Alternatives considered

Well field alternatives:

- Reduced yield
- Delayed deliveries
- Limited operational control
- Addl. environmental concerns
- Lower cost

ASAPP scenarios

Scenario	Pipeline capacity (cfs)	Alternative Water Supply (AWS)	Surface water demand
Baseline	n/a	n/a	Historic
S1-20	20	5000 DN	Historic
S1-50	50	5000 DN	Historic
S1-75	75	5000 DN	Historic
S2-20	20	5000 DN + Art 21	Historic
S2-50	50	5000 DN + Art 21	Historic
S2-75	75	5000 DN + Art 21	Historic
S3-20	20	5000 DN + Art 21	Service area pumping
S3-50	50	5000 DN + Art 21	Service area pumping
S3-75	75	5000 DN + Art 21	Service area pumping
S4-20	20	5000 DN + Art 21	Service area + coastal pumping
S4-50	50	5000 DN + Art 21	Service area + coastal pumping
S4-75	75	5000 DN + Art 21	Service area + coastal pumping

Surface water demand scenarios

Historic

Service Area Pumping

Service Area Pumping + Coastal

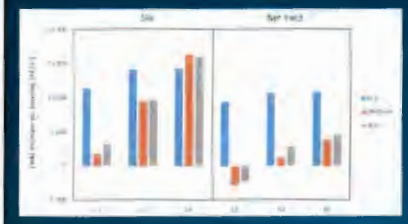
Pipeline capacity of 50 cfs optimal for SW deliveries

- Low net yield at 20 cfs
- Large increase in SW deliveries/net yield from 20 to 50 cfs
- Smaller increases from 50 to 75 cfs

ASAPP significantly increases surface water deliveries (vs. baseline)

- SW deliveries increase by 6,000 – 15,000 AF/yr
- S2 not effective (high AWS, low demand)
- High AWS (6,000 AF/yr) benefits from delivery system expansion (S3, S4)

Yields higher during dry years



- SW deliveries higher during dry years for S1, S3
- Net yield higher during dry years for all scenarios

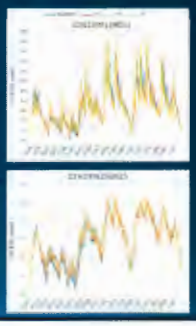
Evaluation of groundwater benefits

WLE

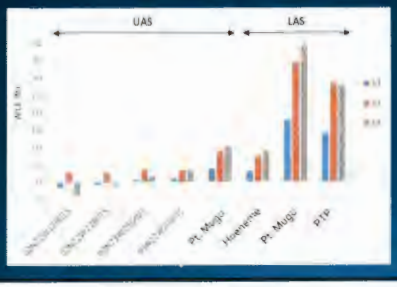
Seawater intrusion

Significant increases in LAS WLE

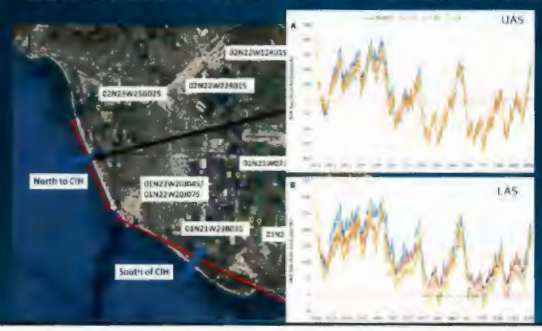
Some increases in UAS WLE



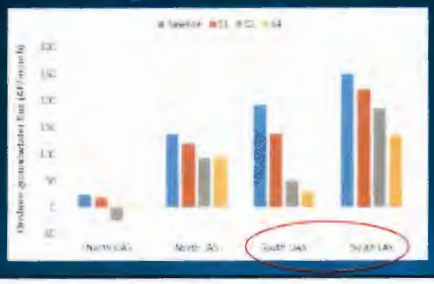
ASAPP increases average WLE



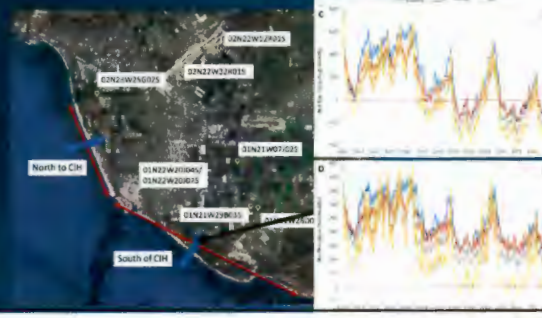
Some reduction onshore flux north coast



ASAPP significantly reduces average onshore groundwater fluxes



Significant reduction onshore flux south coast



Conclusions

- Analysis of ASAPP yield and groundwater benefits complete (assumed AWS imports of 3,000 – 6,000 AF/yr)
- ASAPP effectively increases surface water deliveries to Oxnard Plain by 5,000 – 15,000 AF/yr
- Significant increases in WLE in LAS (3 to 40 ft)
- Significant decreases in onshore groundwater fluxes in south coast (-11% to -85%)
- ASAPP expected to increase sustainable yield
- Maximum benefits requires expansion of surface water delivery system

Next Steps

- Finalize yield and groundwater benefits report
- Engineering feasibility report
- Compare to groundwater benefits other projects

"GSP-Lite" Results for Pumping Scenarios (No New Water-Supply Projects)

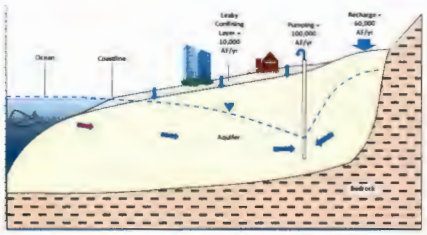
Scenario	Pumping Rate Changes	Avg. GW Extractions (AF/yr)	Reduction in Pumping (%)
Base Case	*No changes in 1985-2015 pumping rates*	*99,000*	*0*
Reduced Pumping	50% "haircut" in pumping	49,000	50
Shifted Pumping	No pumping in coastal area, 75% reduction in lower-aquifer pumping, 50% increase in upper-aquifer pumping	69,000	30

7. Effects of Pumping Location on Sustainable Yield and Saline Intrusion in Oxnard Plain and Pleasant Valley Basins—Concepts and Evaluations to Date

Conceptual effects of pumping 100,000 AF/yr from a single wellfield near the center of a coastal basin

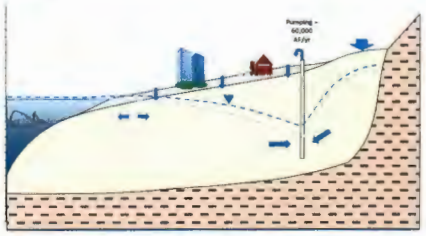
Hypothetical Inland Pumping Only
SY < 100,000 AF/yr

This illustration is conceptual and based on effects of different hypothetical pumping scenarios. Actual effects of this scenario have not been quantitatively evaluated, and the values shown are for illustrative purposes only.



Hypothetical Inland Pumping Only
SY = 60,000 AF/yr

This illustration is conceptual and based on effects of different hypothetical pumping scenarios. Actual effects of this scenario have not been quantitatively evaluated, and the values shown are for illustrative purposes only.

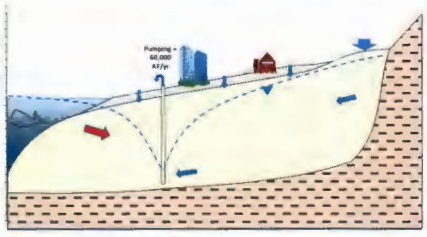


Total pumping must be reduced to avoid seawater intrusion

However, if the same total pumping occurred at wells closer to the coast, then seawater intrusion is a problem again

Hypothetical Coastal Pumping Only
SY < 60,000 AF/yr

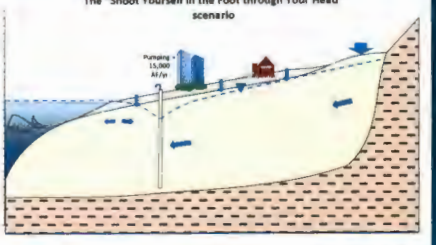
This illustration is conceptual and based on effects of different hypothetical pumping scenarios. Actual effects of this scenario have not been quantitatively evaluated, and the values shown are for illustrative purposes only.



Hypothetical Coastal Pumping Only
SY = 15,000 AF/yr

The "Shoot Yourself in the Foot through Your Head" scenario

This illustration is conceptual and based on effects of different hypothetical pumping scenarios. Actual effects of this scenario have not been quantitatively evaluated, and the values shown are for illustrative purposes only.



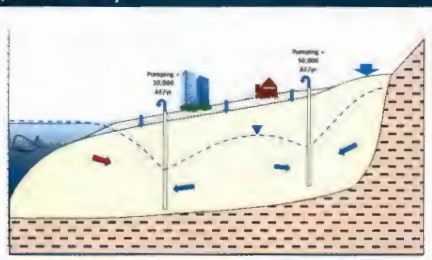
When pumping occurs near the coast, drastic cutbacks may be required to prevent seawater intrusion

Now consider two distinct well fields pumping a total of 60,000 AF/yr:

Seawater intrusion becomes a problem again

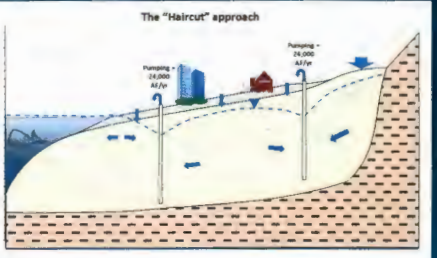
Hypothetical Inland + Coastal Pumping
SY < 60,000 AF/yr

This illustration is conceptual and based on effects of different hypothetical pumping scenarios. Actual effects of this scenario have not been quantitatively evaluated, and the values shown are for illustrative purposes only.



Hypothetical Inland + Coastal Pumping
SY = 50,000 AF/yr

This illustration is conceptual and based on effects of different hypothetical pumping scenarios. Actual effects of this scenario have not been quantitatively evaluated, and the values shown are for illustrative purposes only.

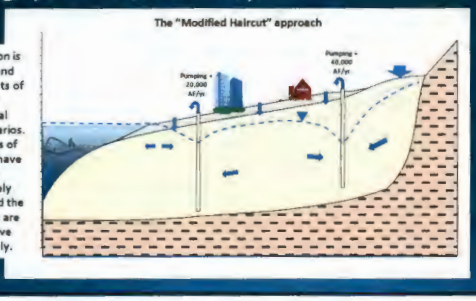


Equal cuts mean each well field will have to reduce pumping to prevent seawater intrusion

Greater cuts near the coast (compared to inland wells) increases total basin yield without causing seawater intrusion

Hypothetical Inland + Coastal Pumping
SY = ~~50,000~~ 60,000 AF/yr

This illustration is conceptual and based on effects of different hypothetical pumping scenarios. Actual effects of this scenario have not been quantitatively evaluated, and the values shown are for illustrative purposes only.



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

Oxnard sub-basin (Oxnard Plain)
Priority: High – Critical
Reason: Seawater intrusion, overdraft
GSA: Fox Canyon GMA

Pleasant Valley basin
Priority: High – Critical
Reason: Saline intrusion, overdraft
GSA: Fox Canyon GMA

Las Posas basin
Priority: High
Reason: Water quality, overdraft
GSA: Fox Cyn. GMA

Actual Well Locations are More Complicated

Future agenda items/upcoming activities:

- Regular BoD meeting for March 27 cancelled
  - Held Special Meeting and GSP workshop on sustainability criteria on March 15
  - Working on revisions to Allocation Ordinance
- Not clear whether a special BoD meeting will be held in April
- April TAG meeting cancelled

Modeling Performed by United:

- 1930-79 Climatic Conditions:
  - **Base case (no reduction in pumping)**
  - **New projects, no reduction in pumping**
  - **New projects, 35% reduction in Oxnard basin, 20% reduction in PV & WLP**
  - **Reduced pumping—45% in Oxnard basin, 25% in PV & WLP**
  - Reduced pumping—55% in Oxnard basin, no reduction in PV & WLP
  - Reduced pumping—55% in Oxnard basin, 20% in PV & WLP
- 1940-89 Climatic Conditions:
  - Base case (no reduction in pumping)
  - Reduced pumping—45% in Oxnard basin, 25% in PV and WLP

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

Mound basin

Priority: Medium => High

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

GSA type: JPA

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Allocation Ordinance: Lingering Issues to Resolve

1. Differences between PVCWD and FCGMA on groundwater use, partial or complete allocation for Conejo Creek surface water
2. Allow carryover of surface-water allocations, same as groundwater
3. 10-year rolling average for surface-water deliveries (instead of 5)
4. Allow allocation sharing among wells in a well field, without requiring a variance
5. Add language allowing exceedance of allocation during "Emergencies"
6. OH-user vs. United allocation language

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Recent Activities (as of March 21 Board meeting)

- Contract with United for GSP support
- GSP contractor selected (Intera)

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Future agenda items/upcoming activities:

- Next meeting: April 25 at 1:00 pm
  - May be cancelled if not needed
- Future agenda items/upcoming activities:
  - Groundwater isotope analysis (coordinate sampling with United)
  - Team kick-off meeting, begin data exchange and analysis for GSP
  - Plan for new monitoring wells

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Recent Activities (as of March 21 Board meeting)

- GSP contractor (Daniel B. Stephens & Assoc.) and United staff sharing data, preparing GSPs
  - Renewed stakeholder outreach effort planned
- Presentation on SWP purchases by United

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

Piru basin
Priority: High
Reason: Water quality, dependence on groundwater
GSA type: JPA (Fillmore + Piru)

Fillmore basin
Priority: Medium => High
Reason: Water quality, dependence on groundwater, forecasted population growth
GSA type: JPA (Fillmore + Piru)

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Future agenda items/upcoming activities:

- Special BoD meeting: March 28 at 5:00 pm
  - Financial issues
- Next regular meeting: April 18 at 5:00 pm
- Future agenda items/upcoming activities:
  - Stakeholder engagement plan development
  - Data exchange and analysis for GSP
  - Plan for new monitoring wells

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

Santa Paula basin
Priority: Medium => Very Low
Reason: Adjudicated
GSA type: Technical Advisory Committee

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Upcoming Activities

- Next TAC meeting: Sept. 5 (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
  - Evaluate existing index wells, need for more pressure transducers?

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Recent Activities

- Draft 2017 Annual Report revised, resubmitted to TAC
  - Must complete SGMA reporting for adjudicated basins by April 1, 2019
- TAC Working Group on groundwater elevation "triggers" making progress

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12. Future Agenda Items

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ADJOURNMENT
"Infiltration... through regional groundwater recharge projects, has the capacity to capture large volumes of water on both individual storm and annual time frames."
from Natural Resources Defense Council and The Pacific Institute's
"June 2014 Issue Brief: Stormwater Capture Potential in Urban and Suburban California"
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