Groundwater Committee Meeting

September 12, 2019

"A vision must be much more than a project, even a big project."

Congressman Robert S. Walker, Final Frontier magazine, 1989

United Water CONSERVATION DISTRICT

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Agenda Items 1 through 3

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

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4. Groundwater Sustainability Plans

FCGMA Has Released Draft GSPs for Stakeholder Comment

- July 16—Draft GSPs shared on FCGMA web page
  - *Oxnard basin (550 pages, 15 appendices)*
  - *Pleasant Valley basin (440 pages, 15 appendices)*
  - *Las Posas Valley basin (360 pages, 11 appendices)*
- July 24—60-day comment period opened
- Aug 21 & 22—FCGMA's GSP "workshops"
- Sept 23—Comment period closes
- Dec 13—Adoption of GSPs to be considered

United Staff Thoughts on Draft GSPs:

1. Good descriptions of hydrogeologic conditions in basins
2. Best available science was used to develop water budgets, forecast future impacts
   - groundwater models developed by United and Calleguas
3. Overall results are consistent with United's and FCGMA's message for the past several decades:
   - Groundwater pumping exceeds recharge, resulting in drawdown of groundwater levels. This causes:
     - Wells to go dry
     - Seawater intrusion along the coast
     - Water quality challenges (nitrate and chloride)
4. Seawater intrusion is the primary driver for Oxnard, PV, and WLP basin minimum thresholds
5. Short list of new water-supply projects included in GSPs

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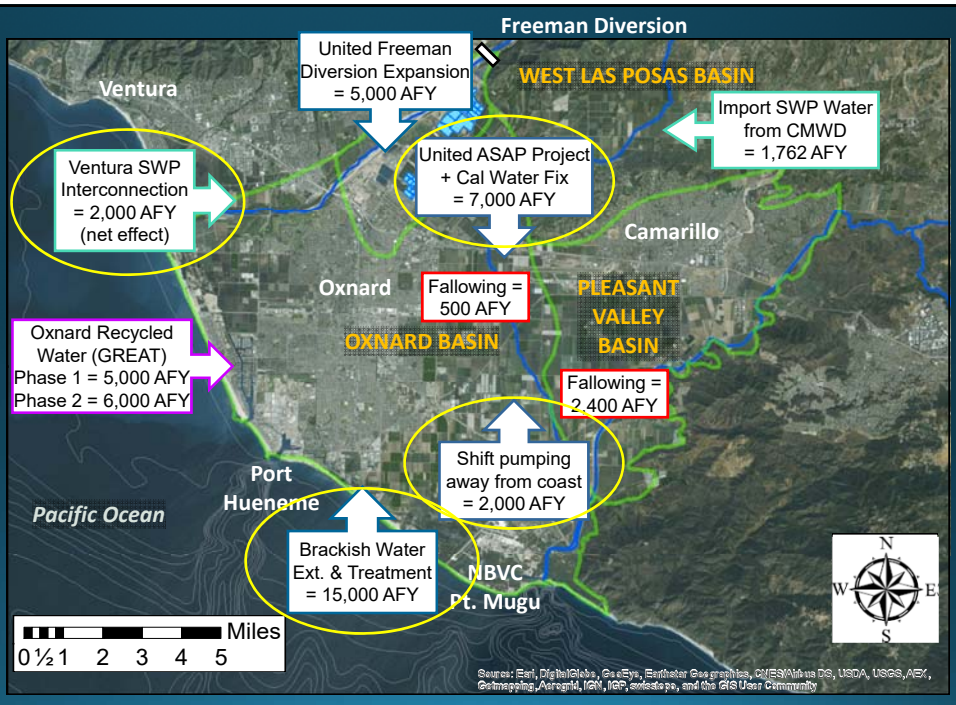
Potential Projects to Return to Status Quo



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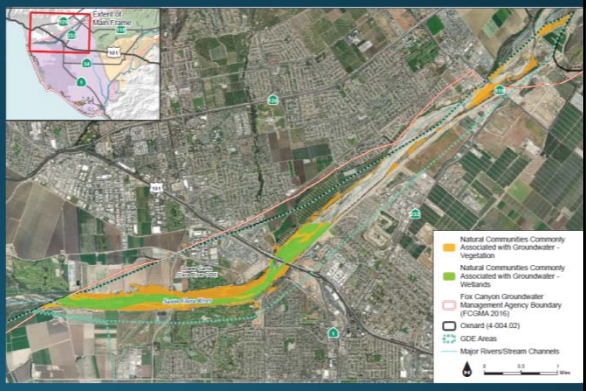
Specific Concerns of Significance:

1. Depiction of Santa Clara River in Forebay area as a Groundwater Dependent Ecosystem
2. Aiming for groundwater levels to be "above minimum threshold 50% of the time"
3. Potential for analysis to be excessively conservative as a result of repeating 1945-65 dry period (driest 20-yr period in last 720 years)
4. Should the interim milestones be linear?



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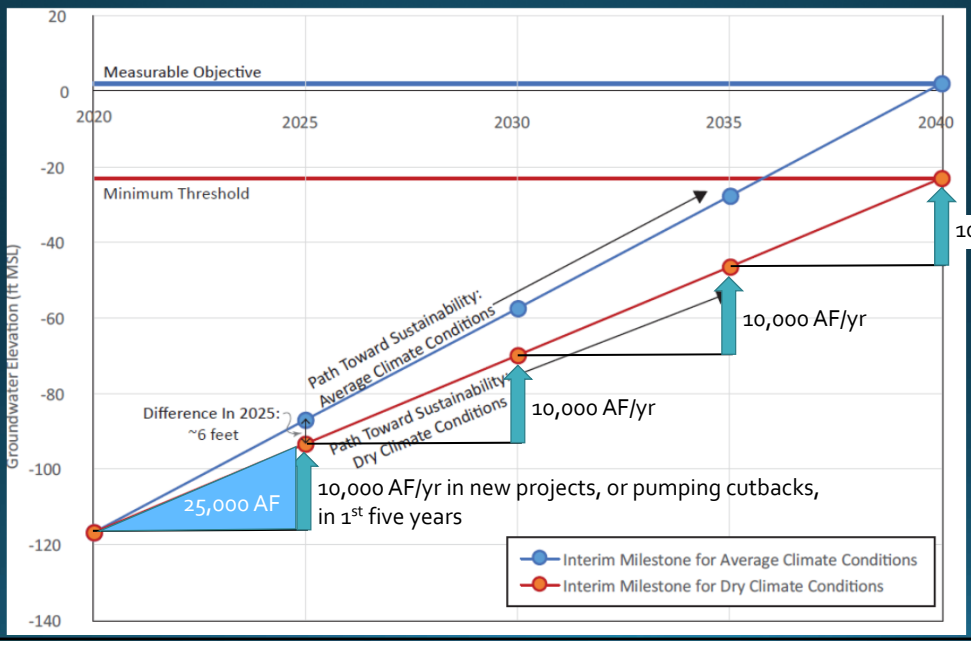
Planned Interim Milestones for Achieving Sustainability



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What are the Economic Impacts of Replacing or Eliminating 25,000 AF of Groundwater Use Over the Next 5 Years?

If replaced by GREAT water at $3,100/AF: $77,500,000 more than groundwater

If replaced by SWP imports at $1,500/AF: $25,000,000 more than groundwater

Area of fallowed farmland: 2,000 acres on average; 4,000 acres total by Year 5

- 30,000 to 60,000 tons of produce, with a crop value of $30 to $60 million
- $60 to $120 million total economic impact to Oxnard Plain

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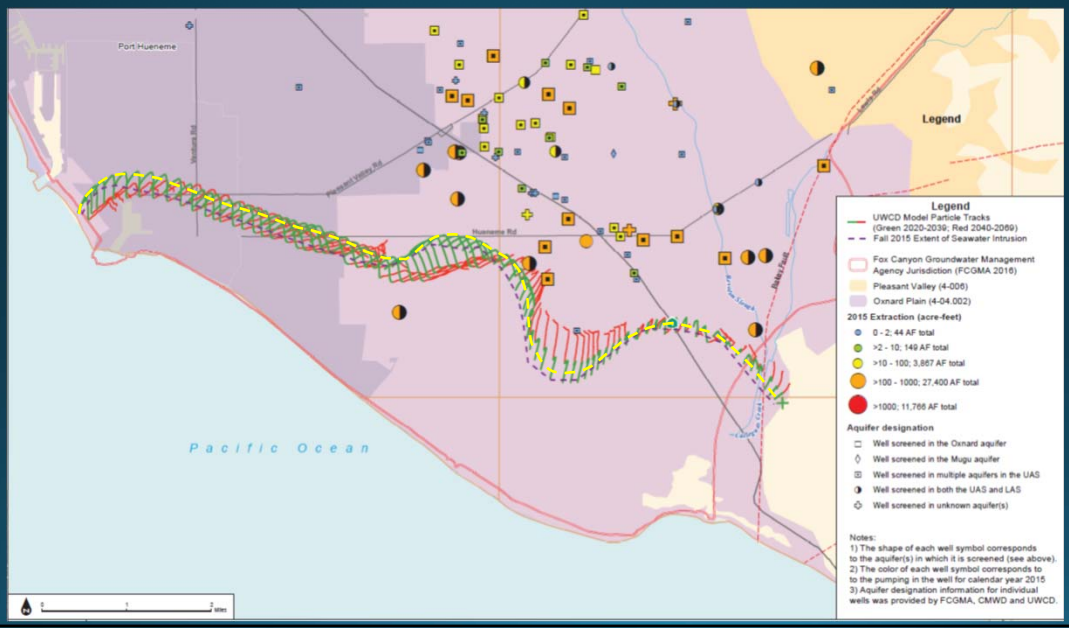
Forecasted Seawater Intrusion in Oxnard Aquifer if No Action Taken



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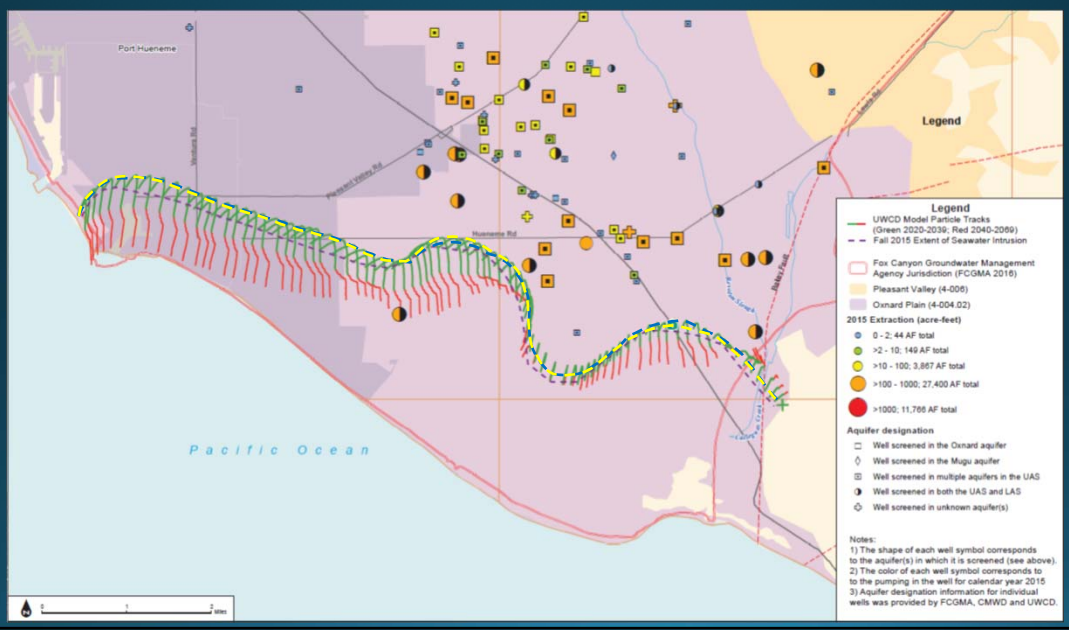
Forecasted Seawater Intrusion in Oxnard Aquifer if Pumping Reduced



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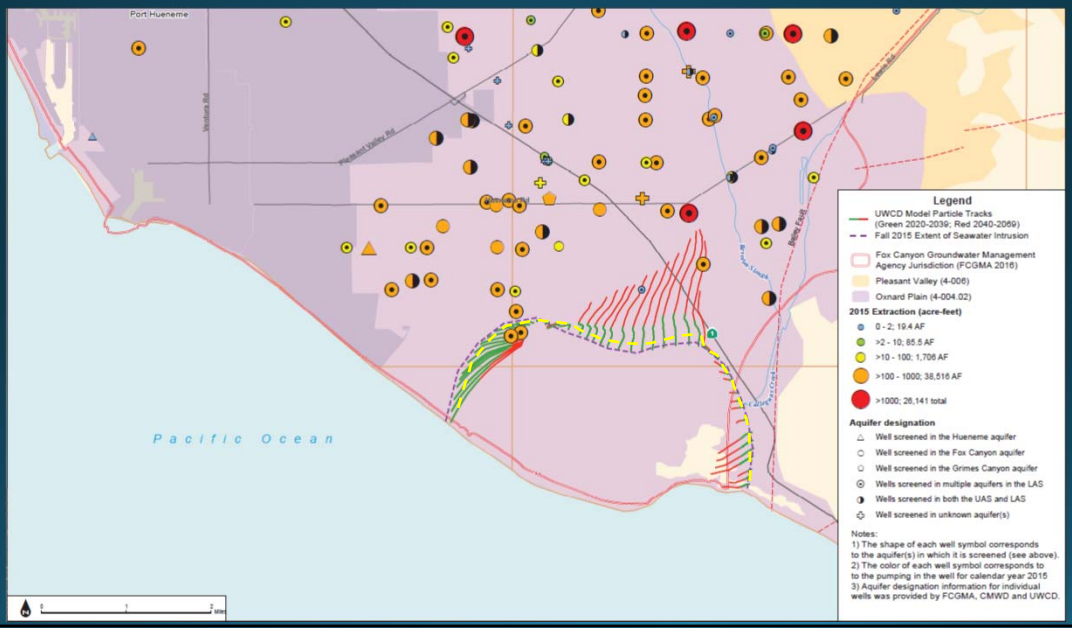
Forecasted Seawater Intrusion in Fox Canyon Aquifer if No Action Taken



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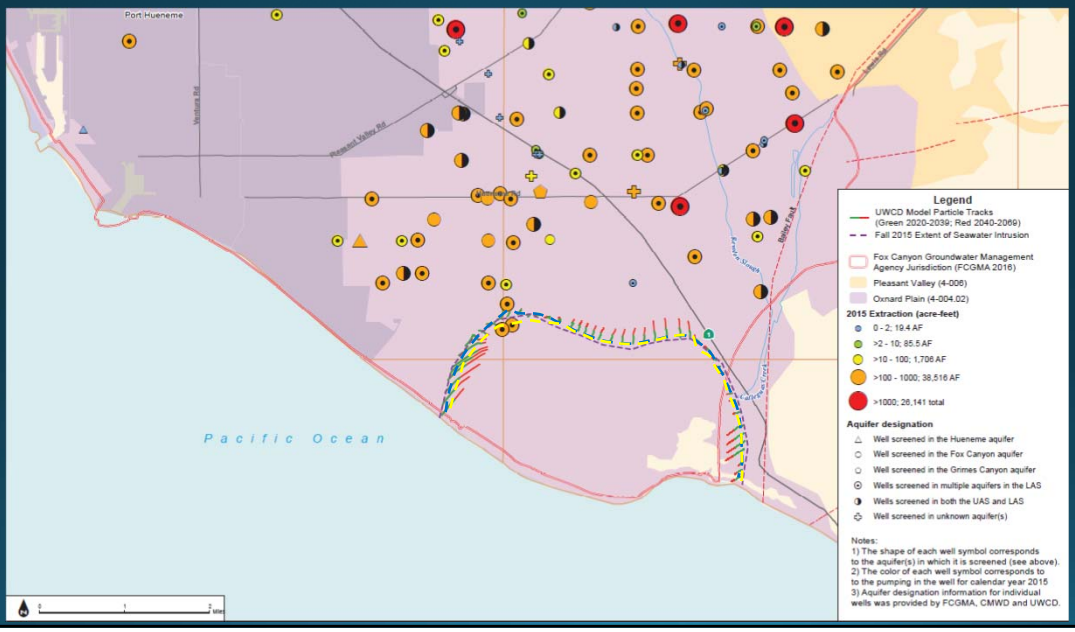
Forecasted Seawater Intrusion in Fox Canyon Aquifer if Pumping Reduced



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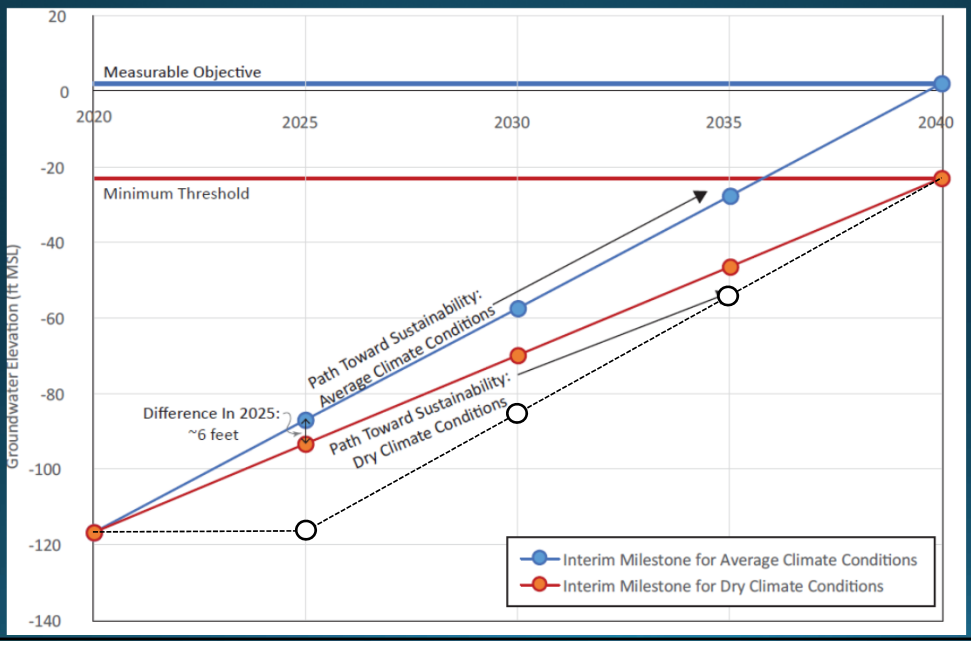
Is There Another Pathway to Sustainability?



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5. FCGMA Proposed Allocation Ordinance

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Two OPV Allocation-Ordinance Issues Remaining

1. Allocation carryover transfers requested by private well owners

2. "SCR Flex Allocation"--Two possible approaches noted by FCGMA staff:
   - Provide minimum and maximum to United's extraction allocation
   - "One-water" approach

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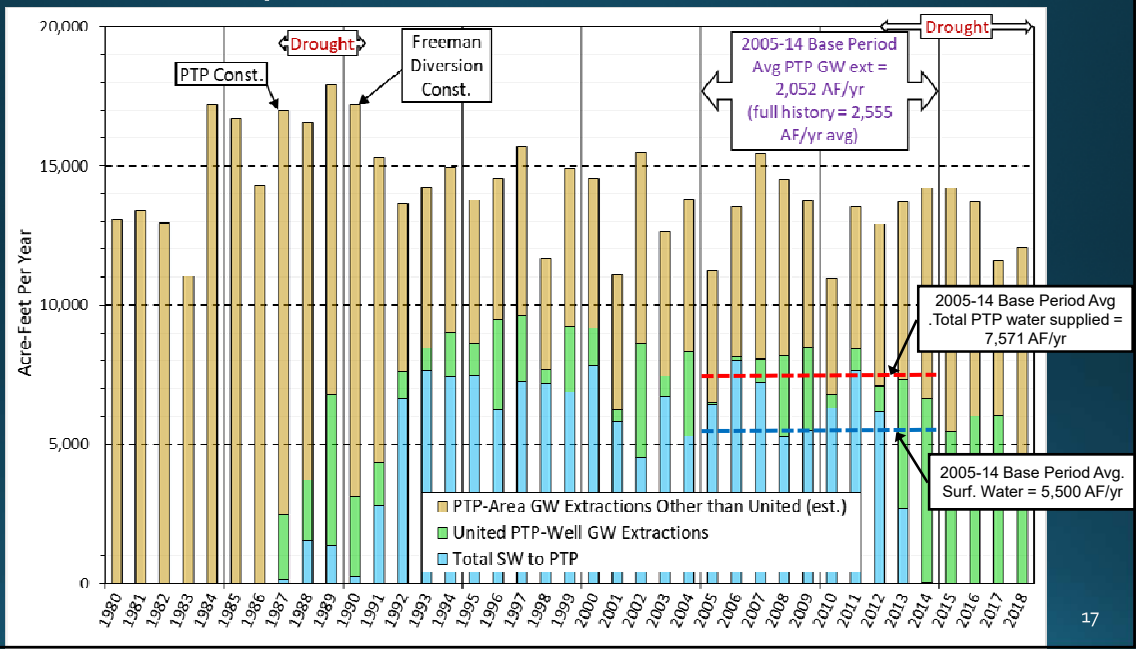
Historical PTP Operation



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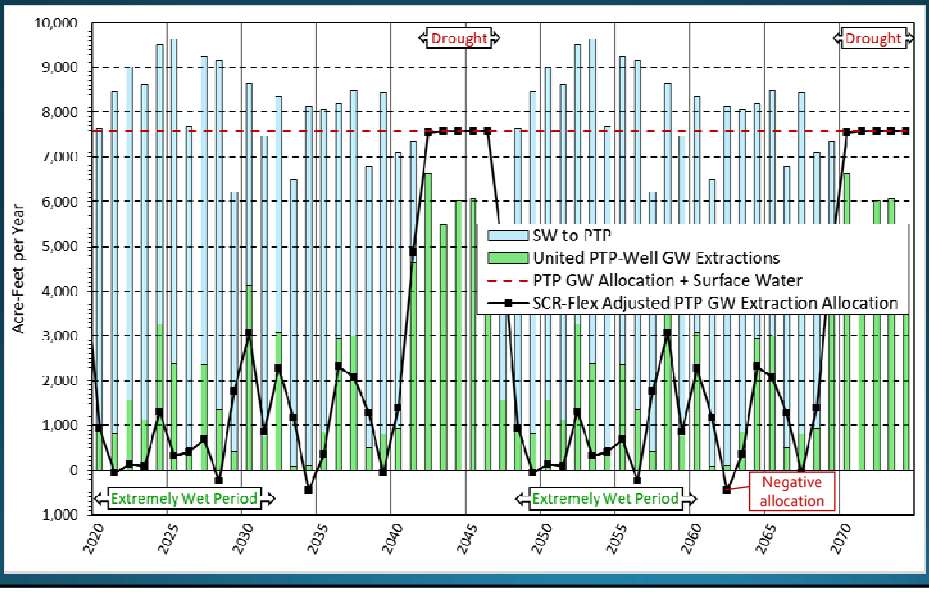
FCGMA's June 2019 Draft Allocation Ordinance



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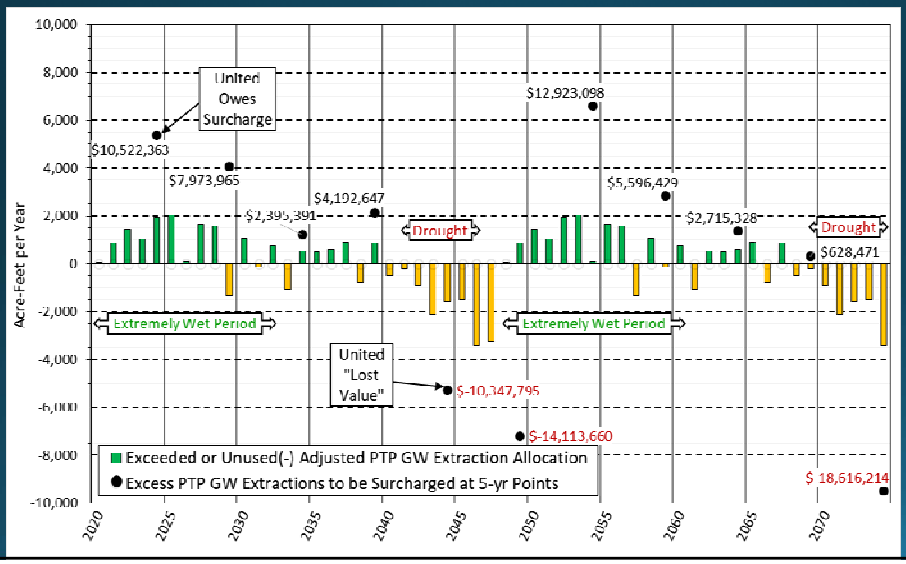
Potential Surcharges (assumes repeat of 1991-2015 climate cycle)



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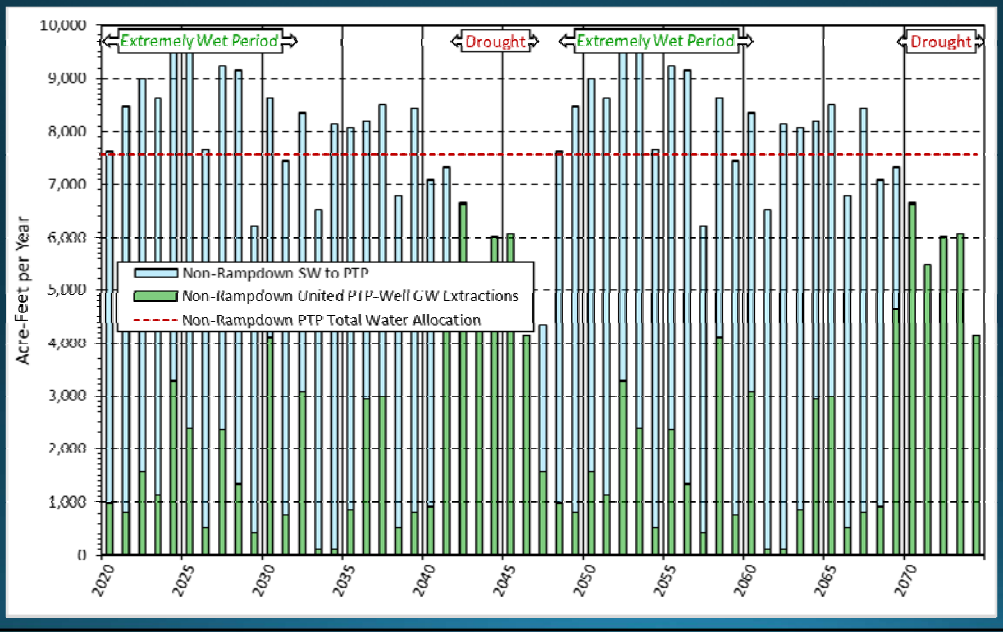
One-Water Approach Without Rampdown



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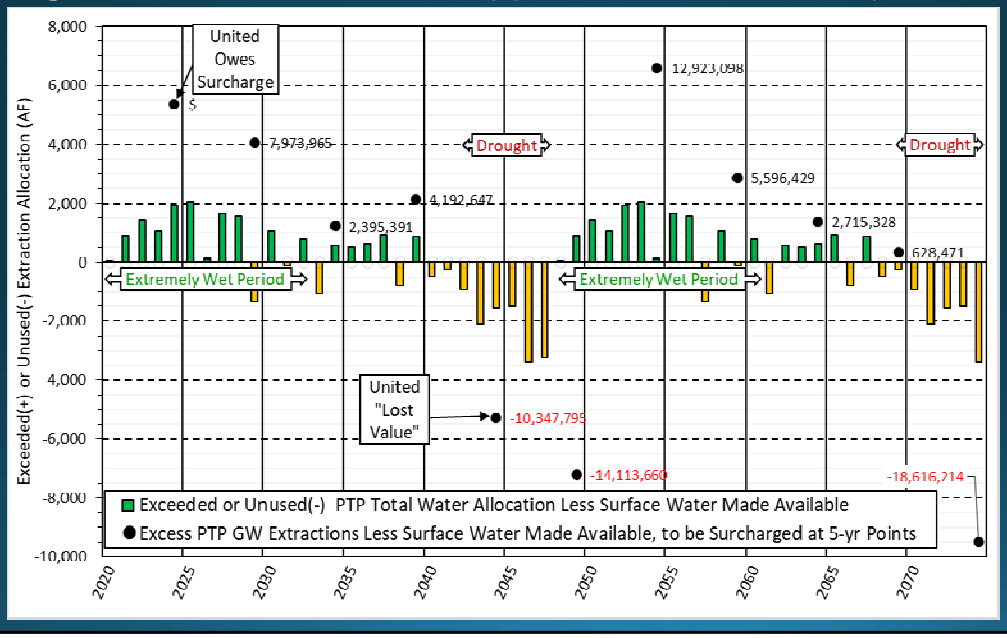
Surcharges Under "One Water" Approach without Rampdown



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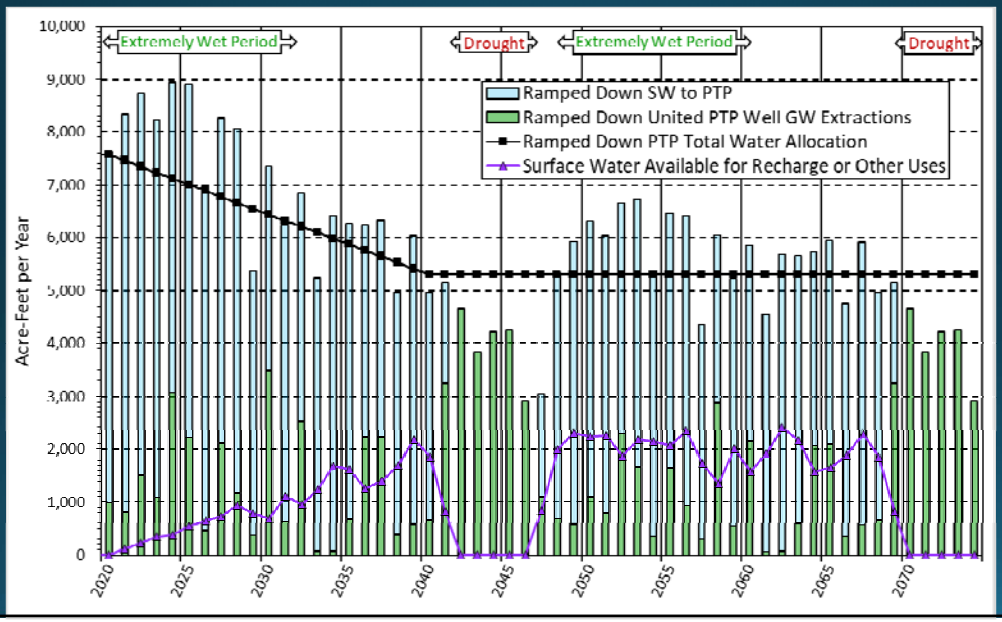
One-Water Approach w/Rampdown



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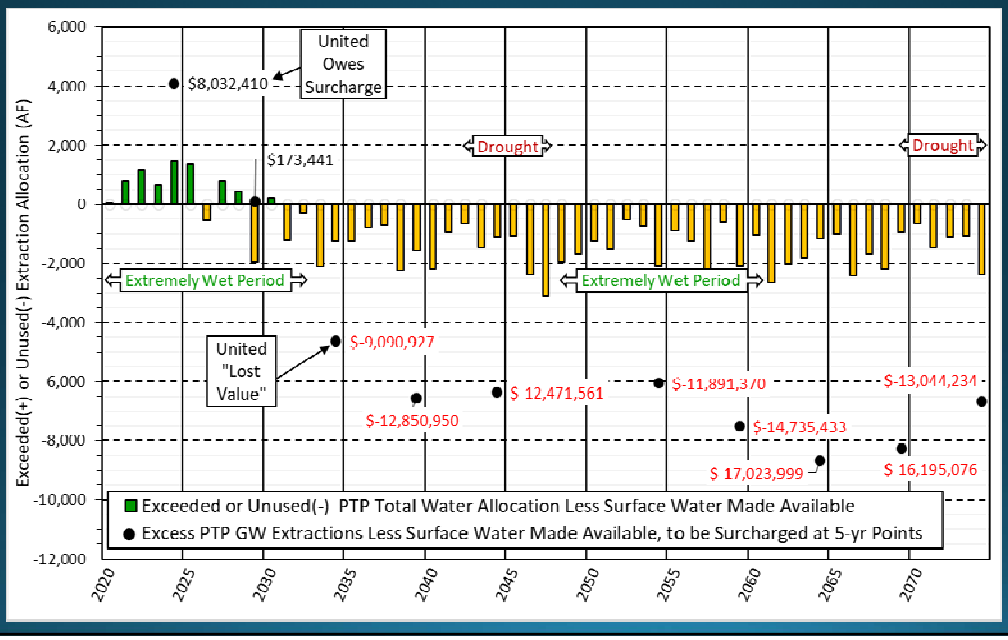
Surcharges Under "One Water" Approach w/Rampdown



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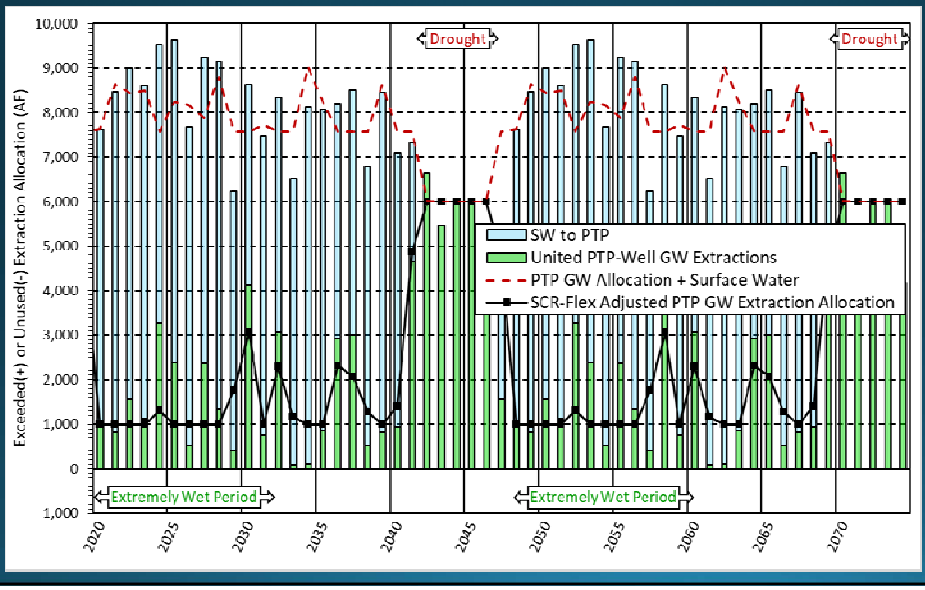
"Limits" (or "Floor and Ceiling") Approach



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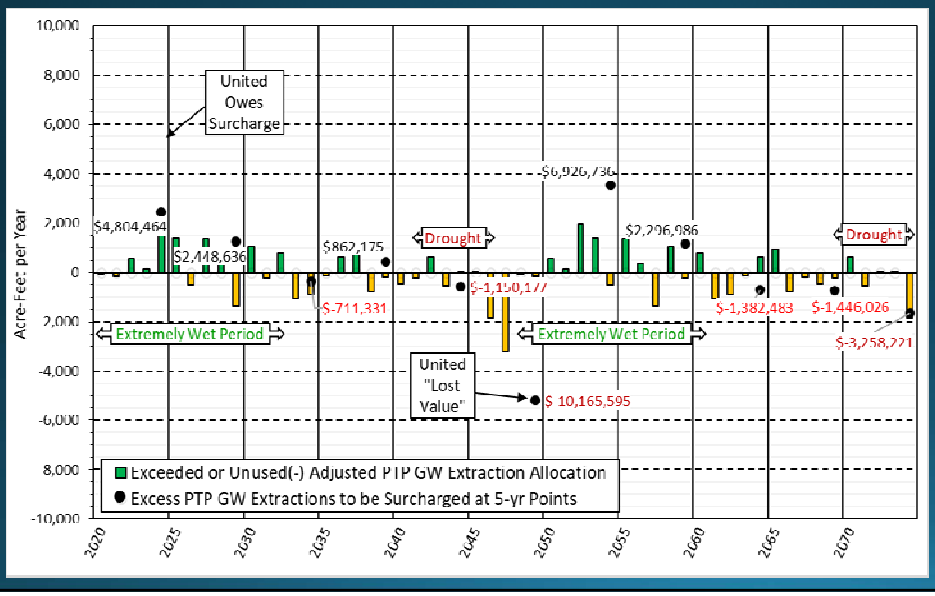
Potential Surcharges become Much Less Volatile



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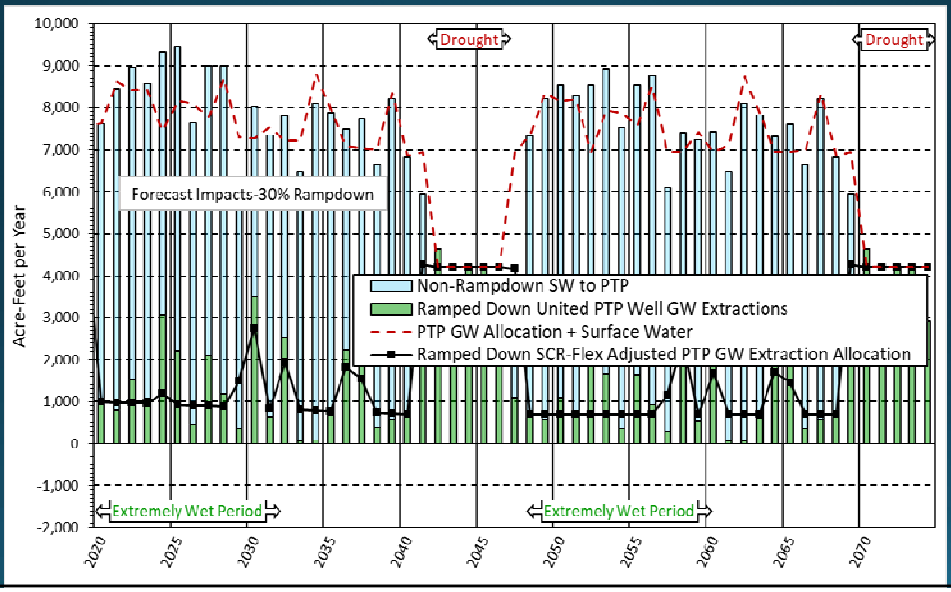
Floor and Ceiling Approach with future 30% Rampdown of Groundwater Allocation



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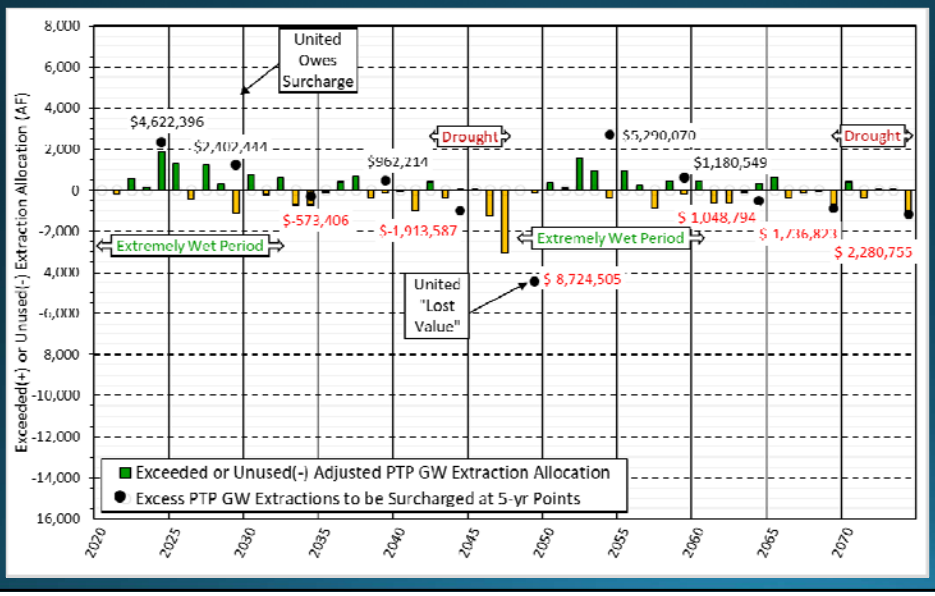
Volatility of Under- and Over-Allocation Following Rampdown Not as Severe as Original Allocation Ordinance Language



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6. Conservation Release Updates

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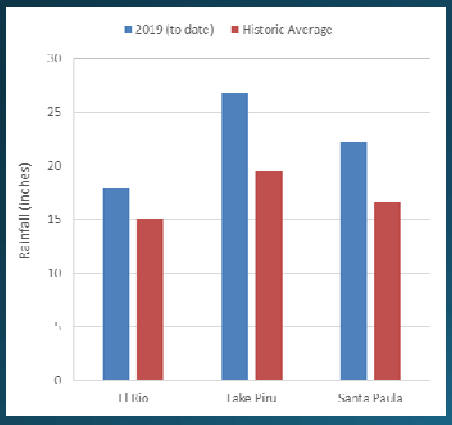
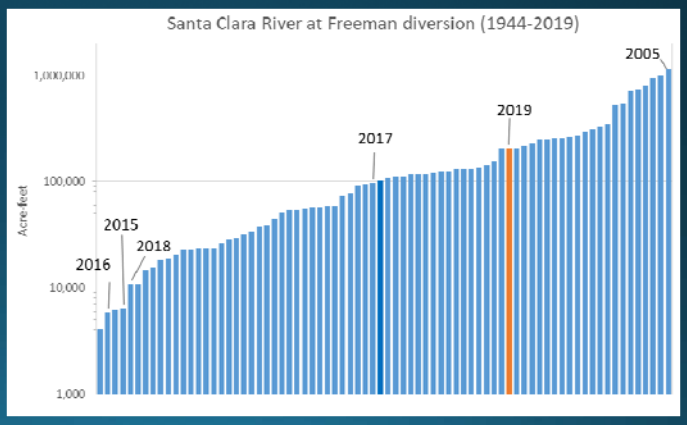
2019 WY above Normal Precipitation and Runoff

- Sufficient water for significant releases

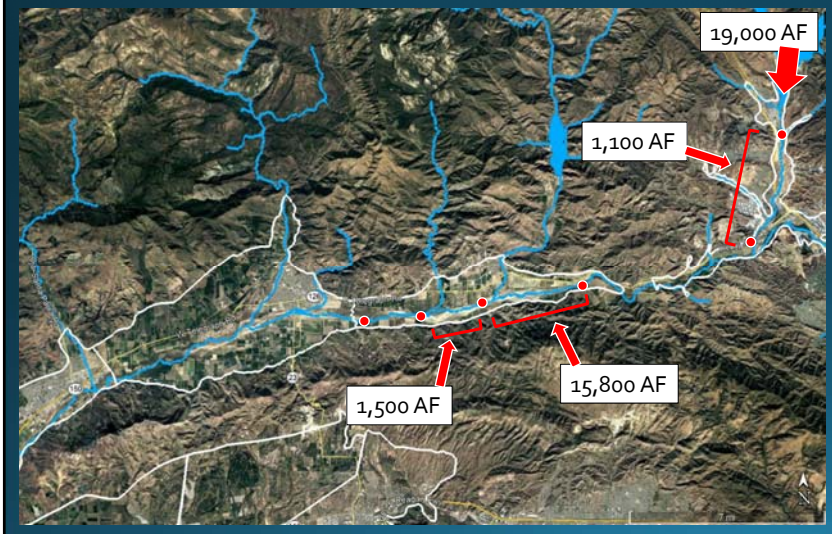




Above average rainfall (~130%)

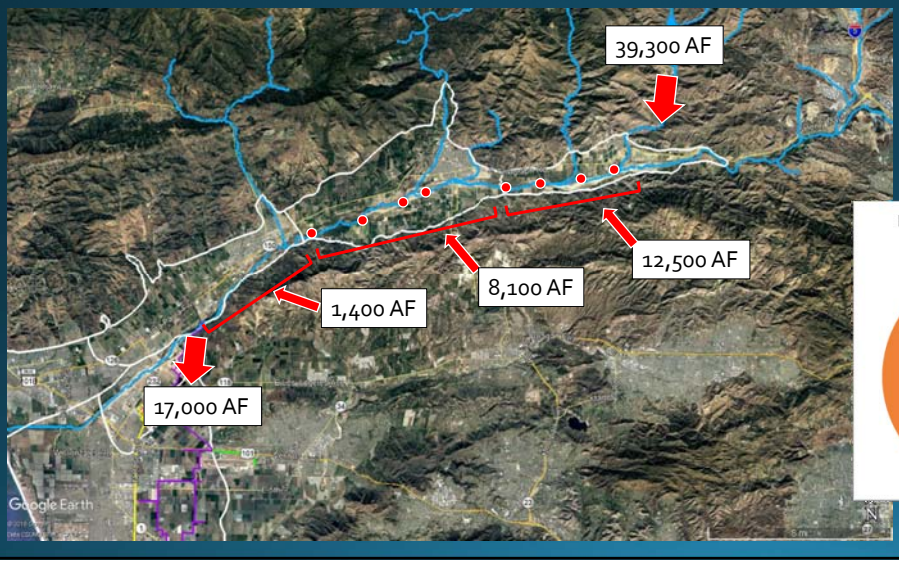
Higher than normal runoff

Castaic Release Summary

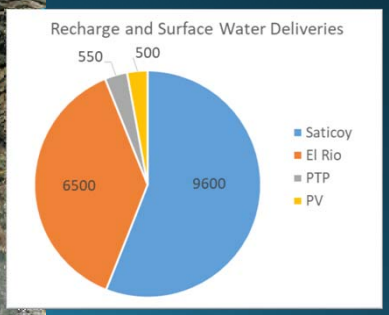


- March 12 – June 4, 2019
- Up to 150 cfs
- 19,000 AF release
- 17,300 AF to Piru basin

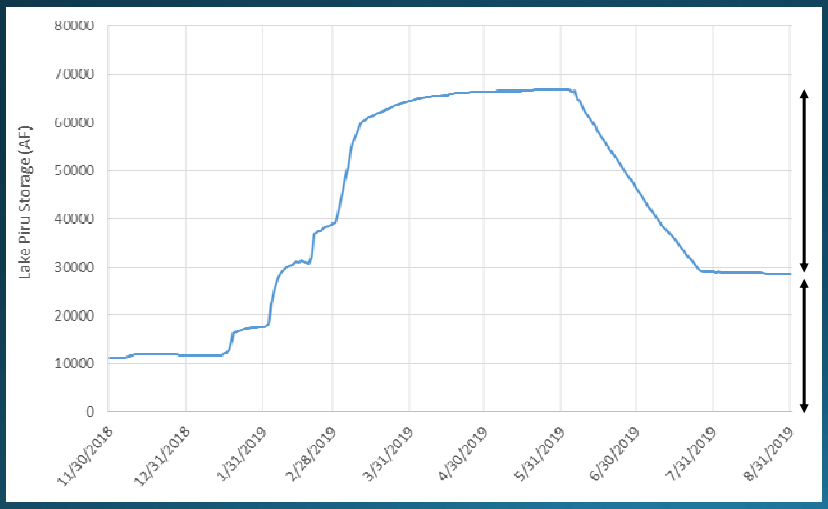
Lake Piru Release Summary



- June 3 – July 29, 2019
- Up to 400 cfs
- 39,300 AF release
- Incl. 15,000 AF Art. 21



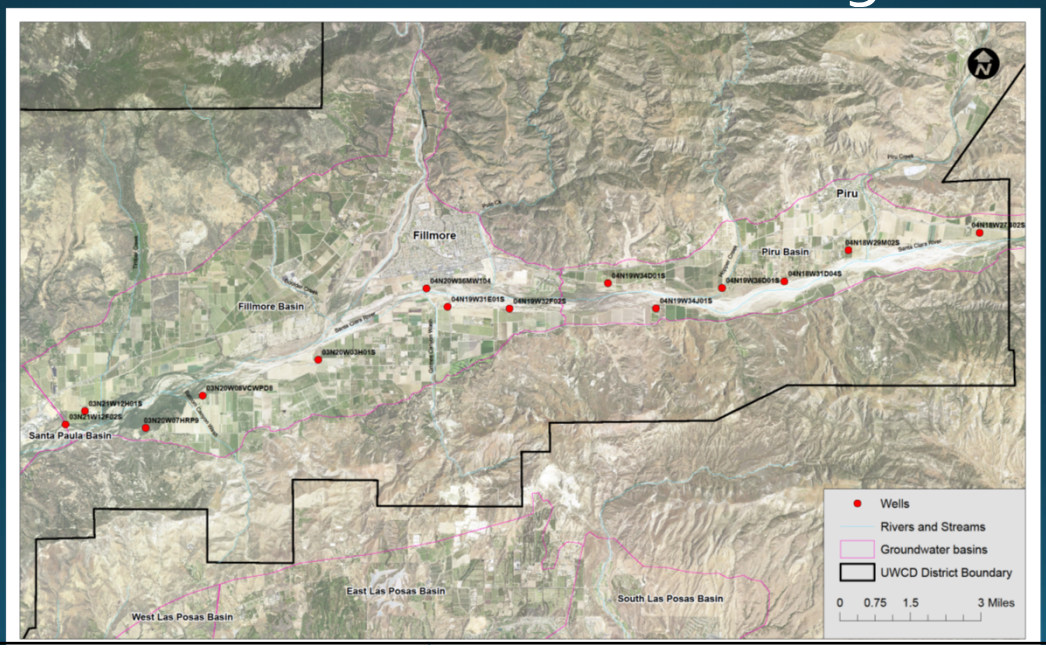
Lake Piru Storage



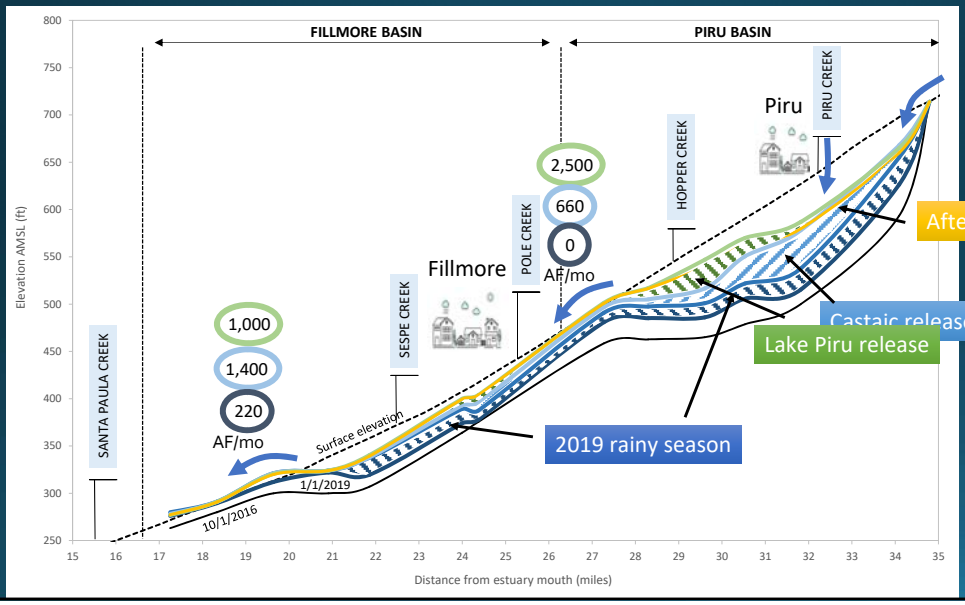
39,300 AF released

28,500 AF in storage

Groundwater level monitoring



Releases restored water levels and surface flows in Upper Basins



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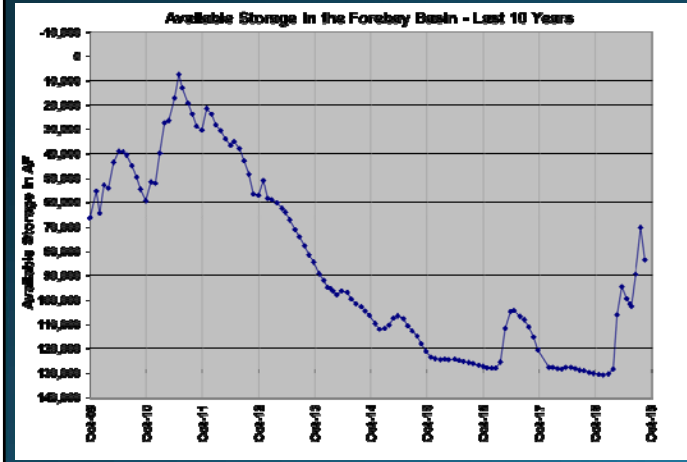
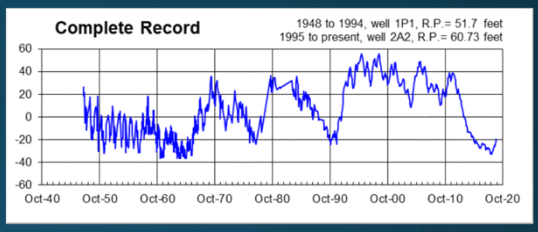
Lower basins still significantly depleted

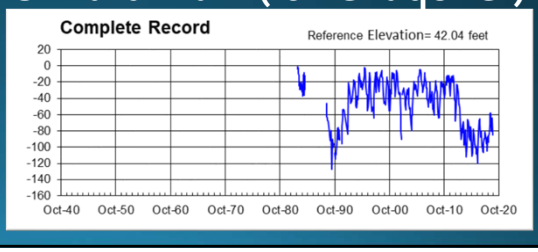
Forebay



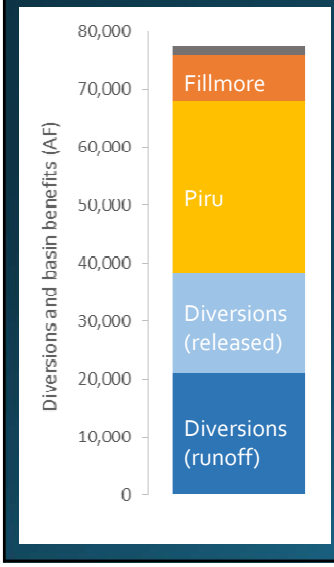
Oxnard Plain (upper aquifer)



Oxnard Plain (lower aquifer)



Summary



- Above average year for rainfall and runoff
- Supplemental Art. 21 purchase of 15,000 AF
- First opportunity for significant releases since 2012
- Upper basins almost fully recovered
- Total diversion at Freeman below average
- Lower basins still significantly depleted

7. Alternative Water Resources

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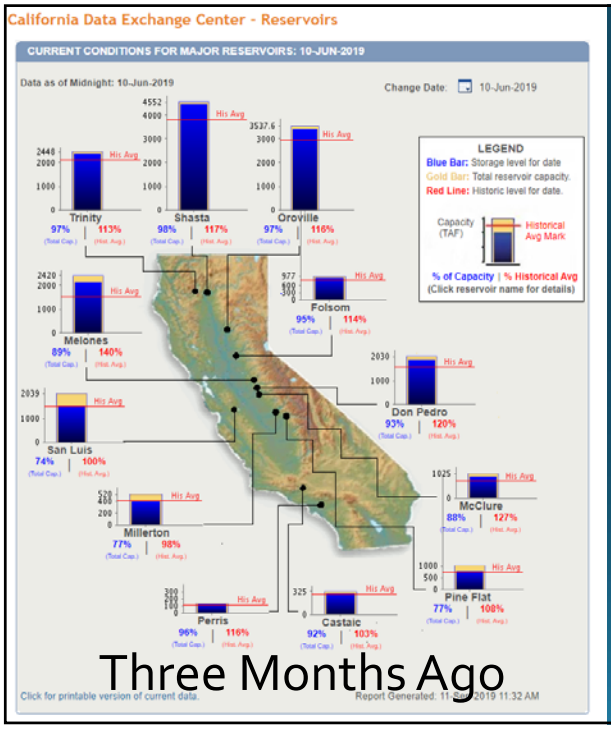
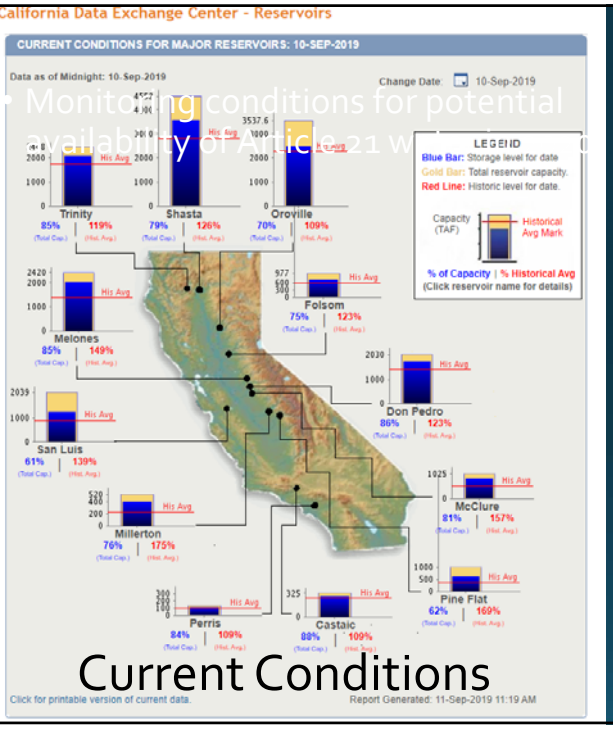
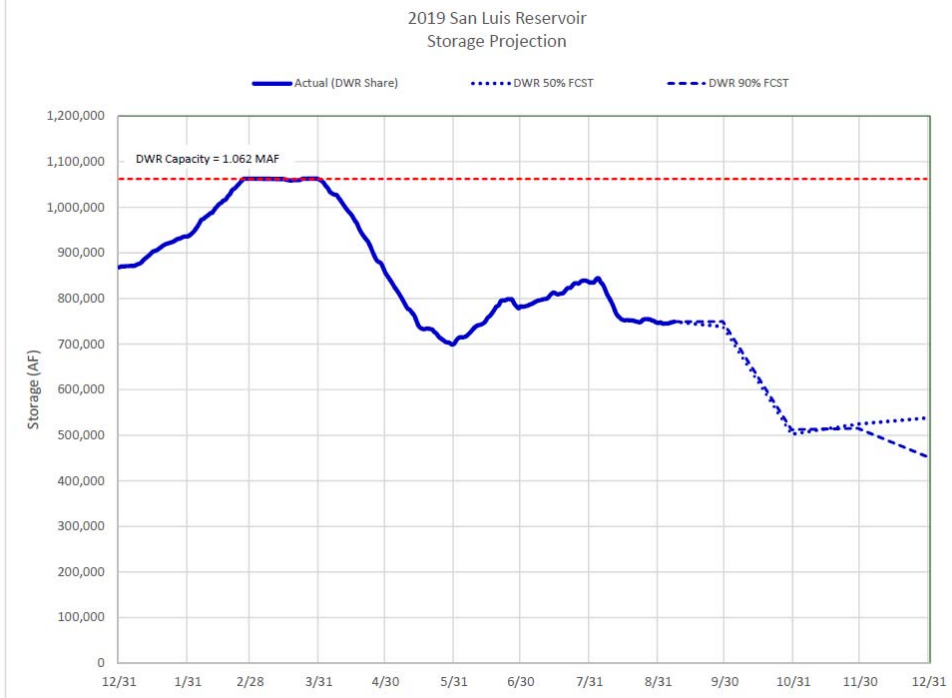


Three Months Ago



- Monitoring conditions for potential availability of Article 21 w

Current Conditions



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8. FCGMA Agenda Review

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9-11. Update on Activities of:

- Mound Basin GSA
- Fillmore and Piru Basins GSA
- Santa Paula Basin TAC

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12. Future Agenda Items

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13. Adjournment

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