

# YCFC&WCD BOARD OF DIRECTORS

August 2, 2022



YOLO COUNTY  
FLOOD CONTROL &  
WATER CONSERVATION  
DISTRICT

# Agenda Item #1

Adoption of the  
July 5, 2022 Regular Board Meeting Minutes

# Agenda Item #2

## Open Forum

Guest introductions, unscheduled appearances and opportunity for public comment on non-agenda items

## Agenda Item #3

Adding Items to the  
Posted Agenda

## Agenda Item #4

Update on City of Woodland's  
Aquifer Storage and Recovery  
Program

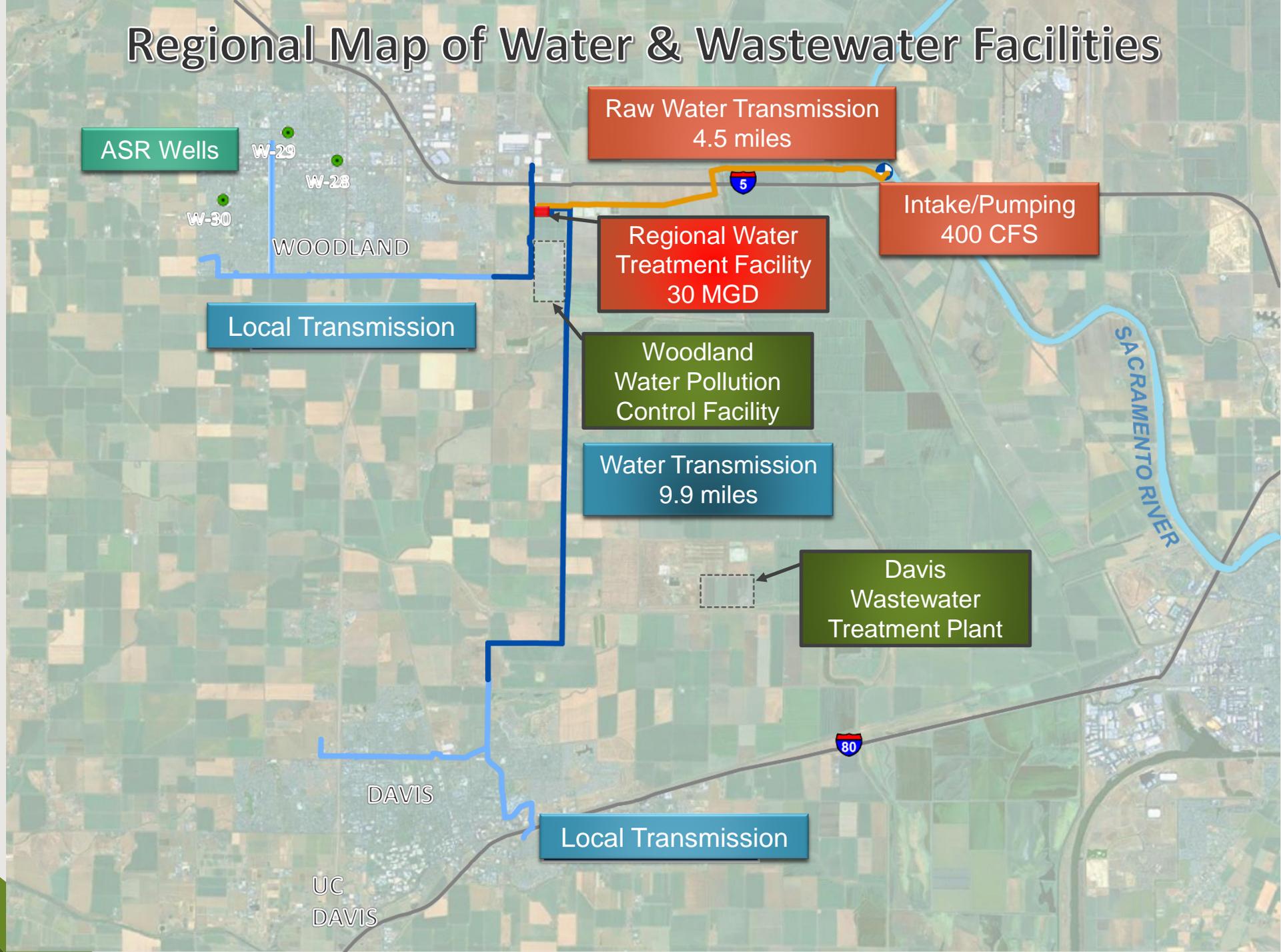
# WDCWA and City of Woodland Aquifer Storage & Recovery Program

August 2, 2022

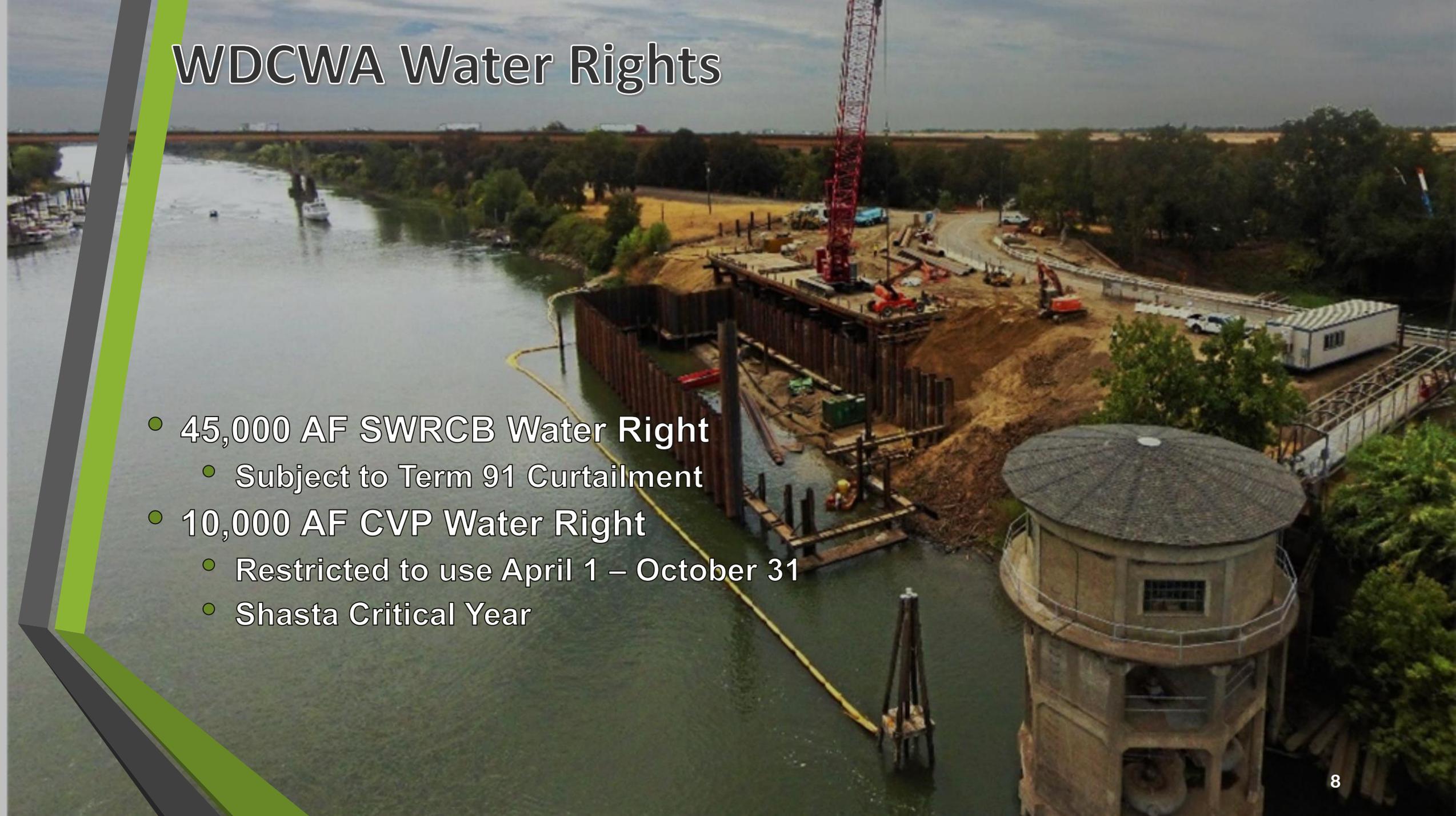
Presented By:  
Tim Busch, PE  
Principal Utilities Civil Engineer, City of Woodland  
General Manager, WDCWA



# Regional Map of Water & Wastewater Facilities



# WDCWA Water Rights

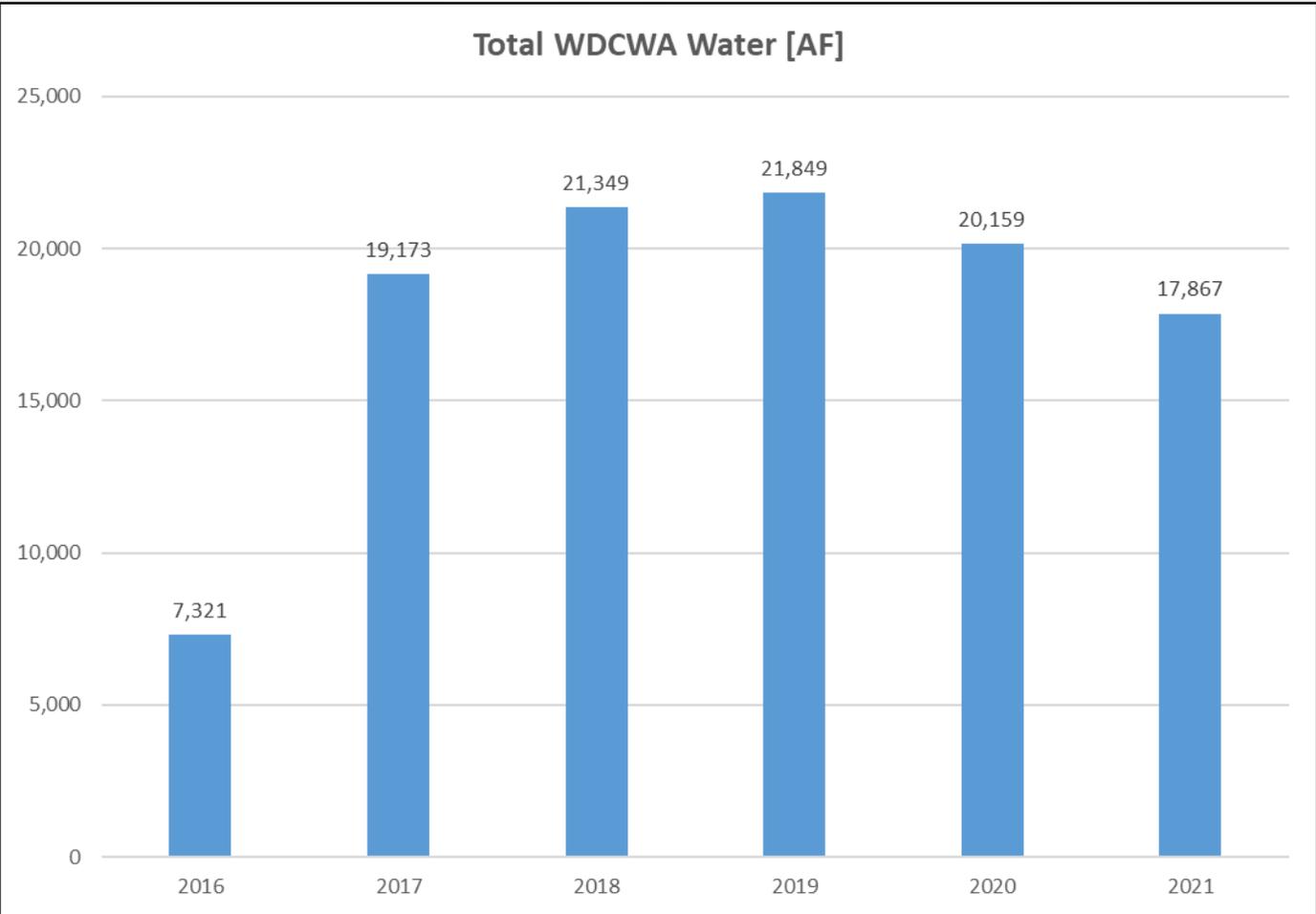


- 45,000 AF SWRCB Water Right
  - Subject to Term 91 Curtailment
- 10,000 AF CVP Water Right
  - Restricted to use April 1 – October 31
  - Shasta Critical Year

# WDCWA Surface Water Supply

## WDCWA surface water supply

- Water delivery to Woodland, Davis, UC-Davis
- Began delivery June 2016
- Offsets groundwater use



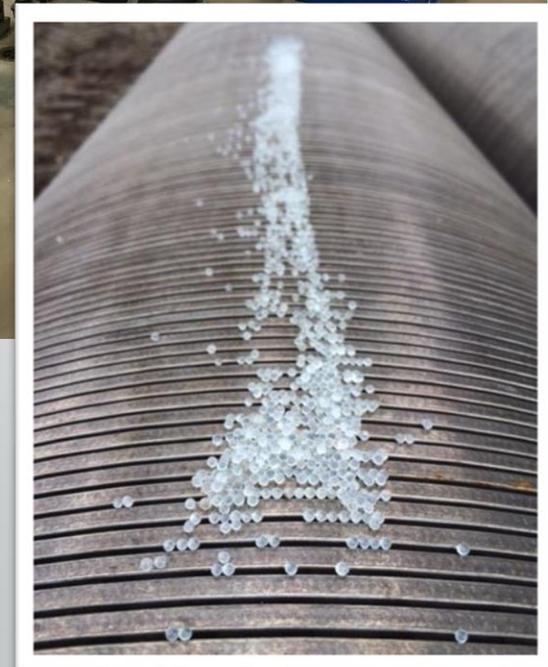
# Woodland Water Quality

Water Quality Parameter	Finished Surface Water (Current Supply)	Groundwater (Former Supply)	Percentage Change
Magnesium (mg/L)	5.4	48.0	89% reduction
Chromium VI (ppb)	0 (non detect)	18	Not Present
Nitrate (as N) (mg/L)	0 (non detect)	5-40	Not Present
Total Hardness as CaCO <sub>3</sub> (mg/L)	47 (2.8 grains)	382 (22 grains)	87% reduction
Sodium (mg/L)	14	60	77% reduction
Chloride (mg/L)	12	73	84% reduction
Sulfate (mg/L)	5.0	38	87% reduction
Total Dissolved Solids (mg/L)	105	531	80% reduction
Specific Conductance (EC)	160	926	83% reduction
Lead (mg/L)	0 (non detect)	Non detect	Not Present
Alkalinity (mg/L as CaCO <sub>3</sub> )	53	338	84% reduction
Boron (mg/L)	0 (non detect)	2.35	Not Present

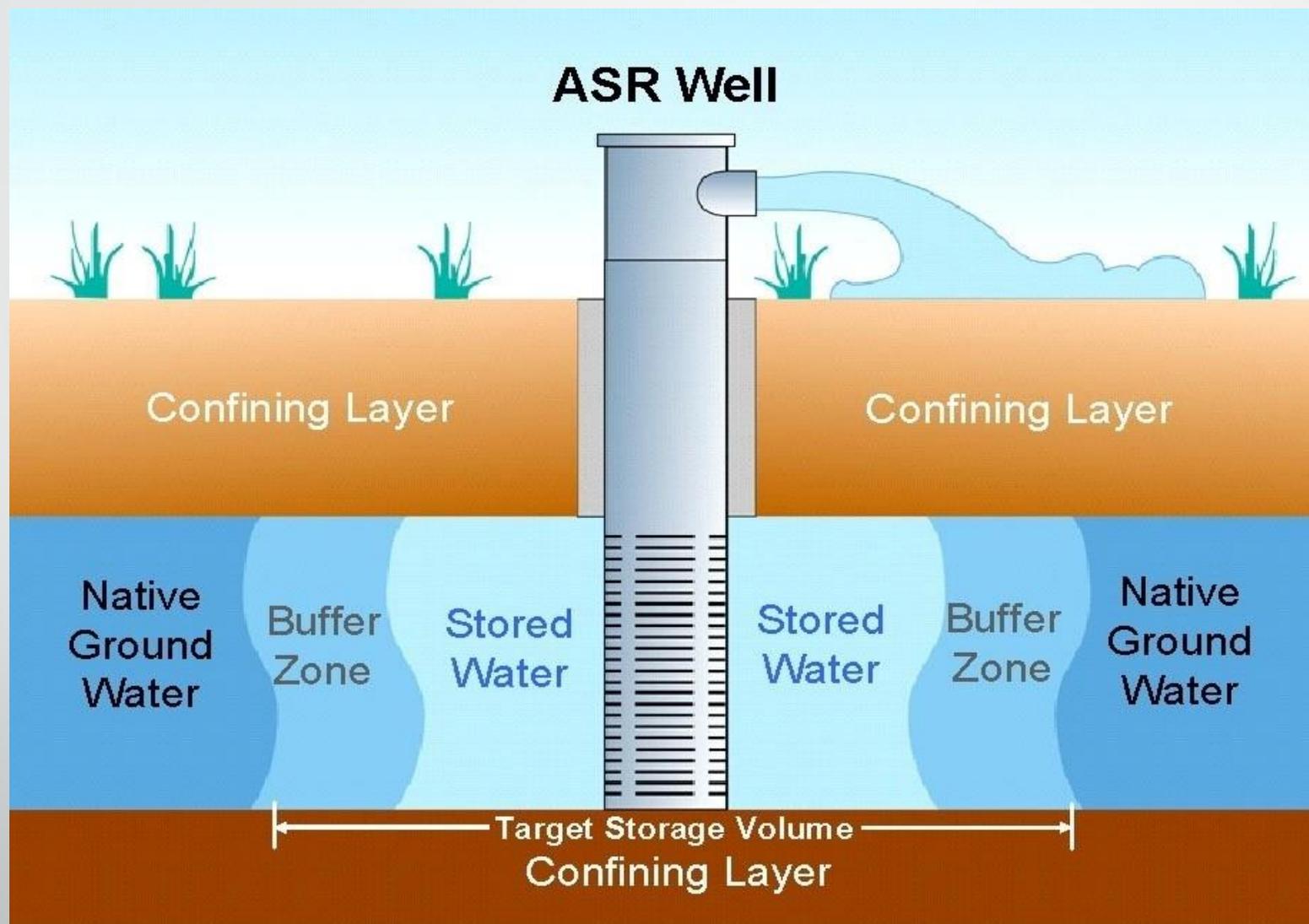
# Aquifer Storage & Recovery

## Why ASR

- Use of native groundwater is less than preferred
- “Right size” WDCWA facilities and water rights
- Cost is \$6M per well to permit/construct, much lower cost than a reservoir or water purchases

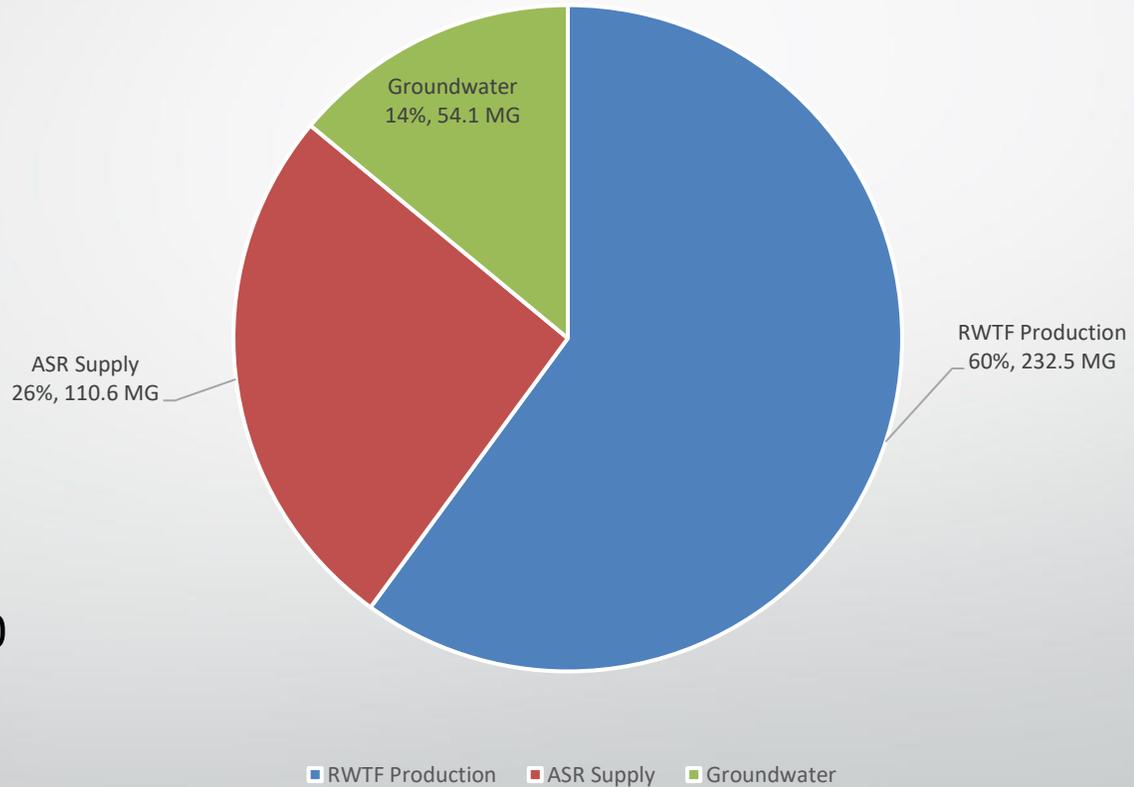


# Aquifer Storage & Recovery



# Woodland drinking water supply

Woodland Water Supply Portfolio - August 2021



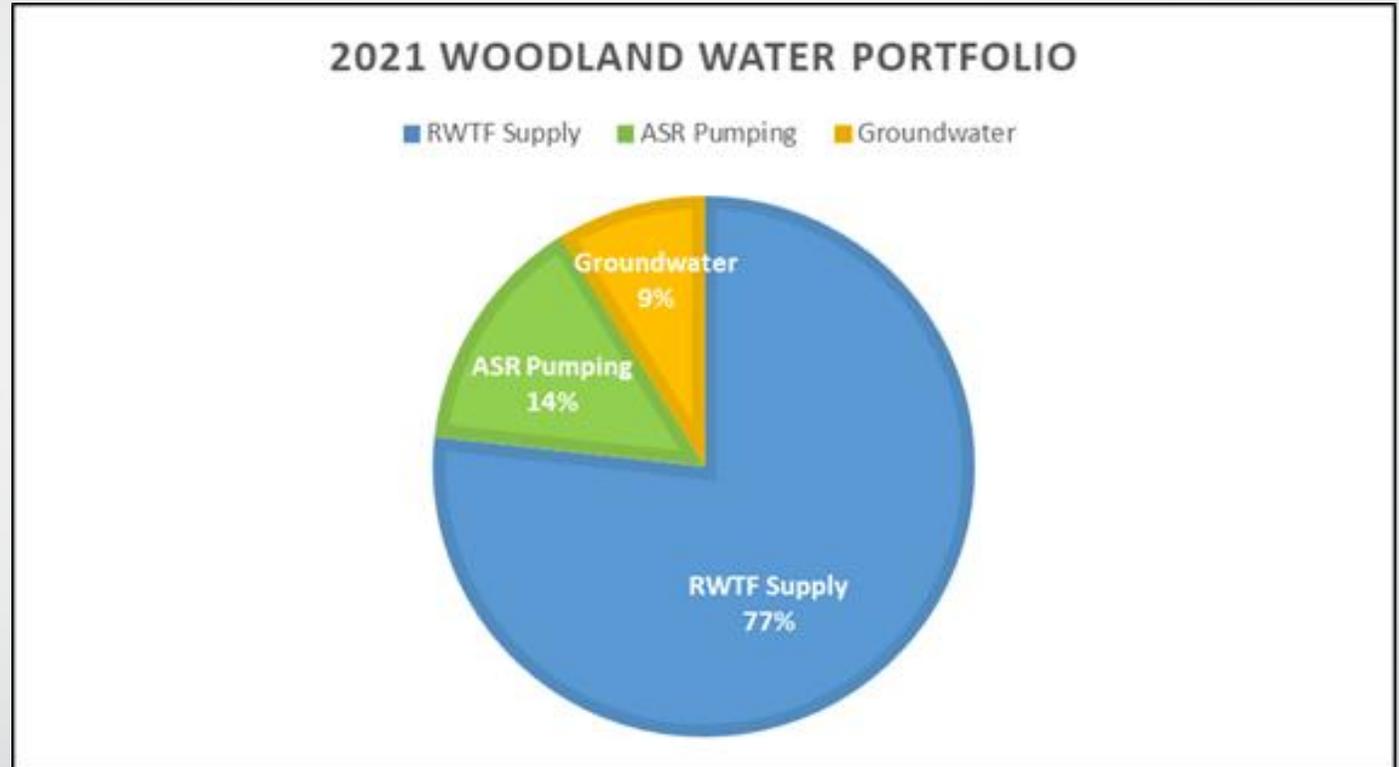
## City of Woodland

- 3 wells constructed
- Significant water quality testing
- Stored 835 million gallons (2,560 AF) this past winter
- Maintains surface water quality

# Woodland drinking water supply

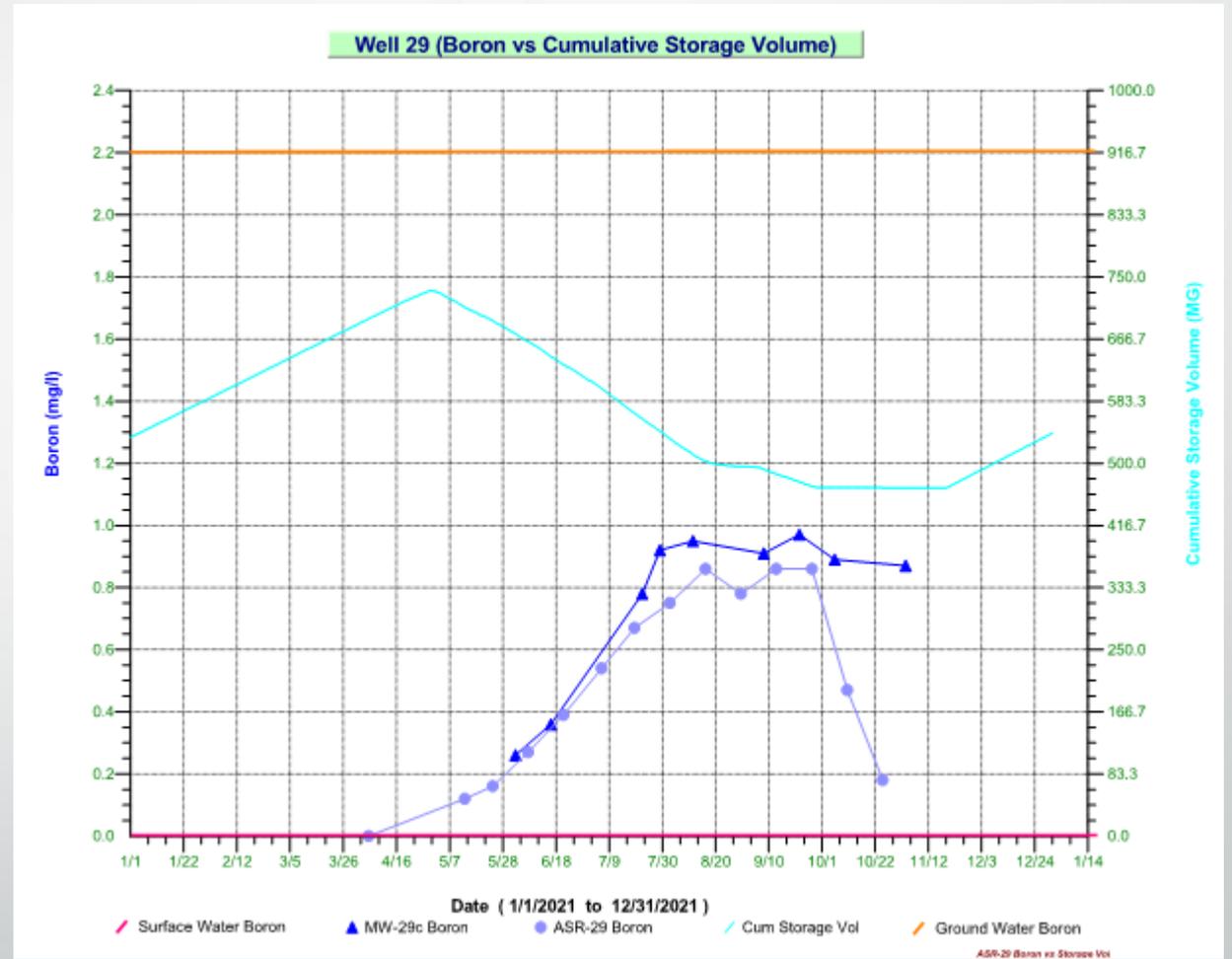
## City of Woodland

- 3 wells constructed
- Significant water quality testing
- Stored 835 million gallons (2,560 AF) this past winter
- Maintains surface water quality



# Tracking stored water in ASR wells

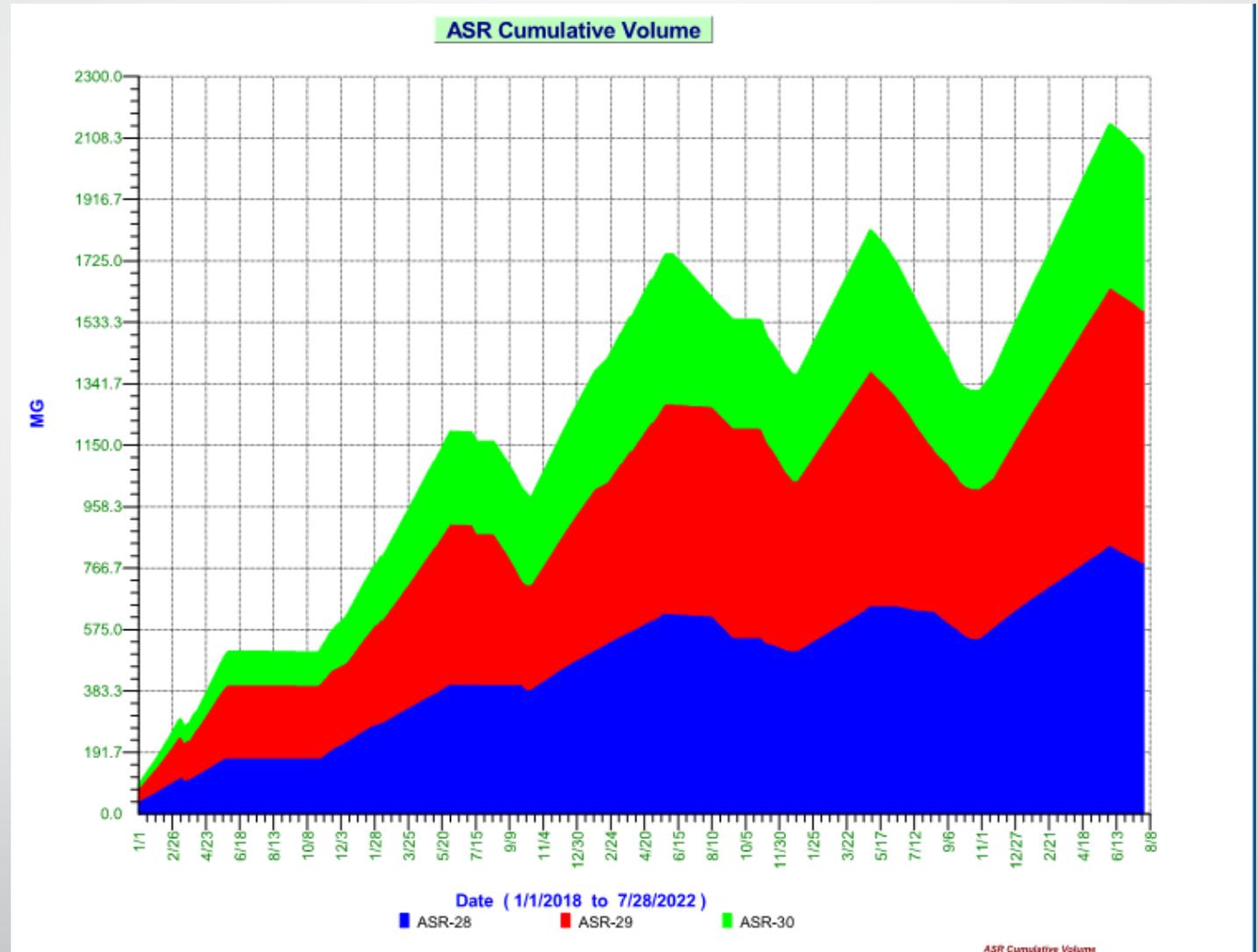
Volumetric – flow meters  
Hydraulic gradient tracking – monitoring wells  
Constituent tracking – boron, chlorides, specific conductance, and hardness



# Aquifer Storage & Recovery

## City of Woodland

- 3 wells constructed
- Stored 835 million gallons (2,150 AF) this past winter
- Peak storage was 2.1 billion gallons June 3, 2022 (6,600 AF)



# Questions?



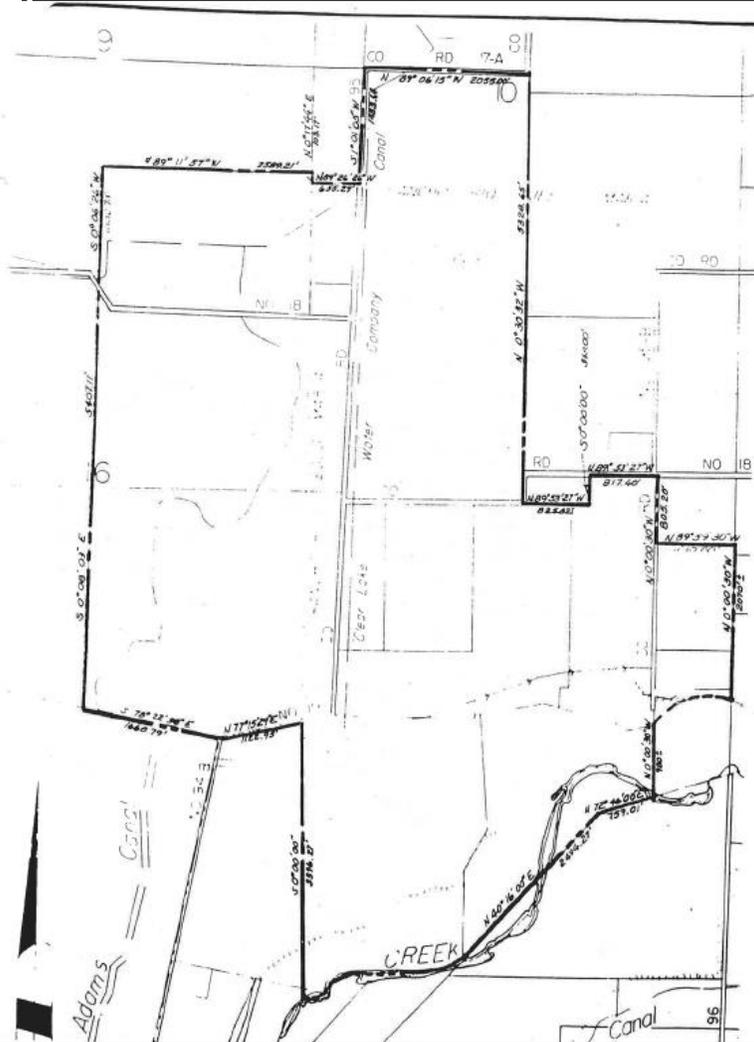
**Contact Information:**  
**Tim Busch**      [tim.busch@cityofwoodland.org](mailto:tim.busch@cityofwoodland.org)  
530.661.5963

## Agenda Item #5

Adopt Resolution 22.02 Requesting  
Collection of Charges on Tax Roll

# 1990 East Adams Annexation

## Historical Assessed Value Summary

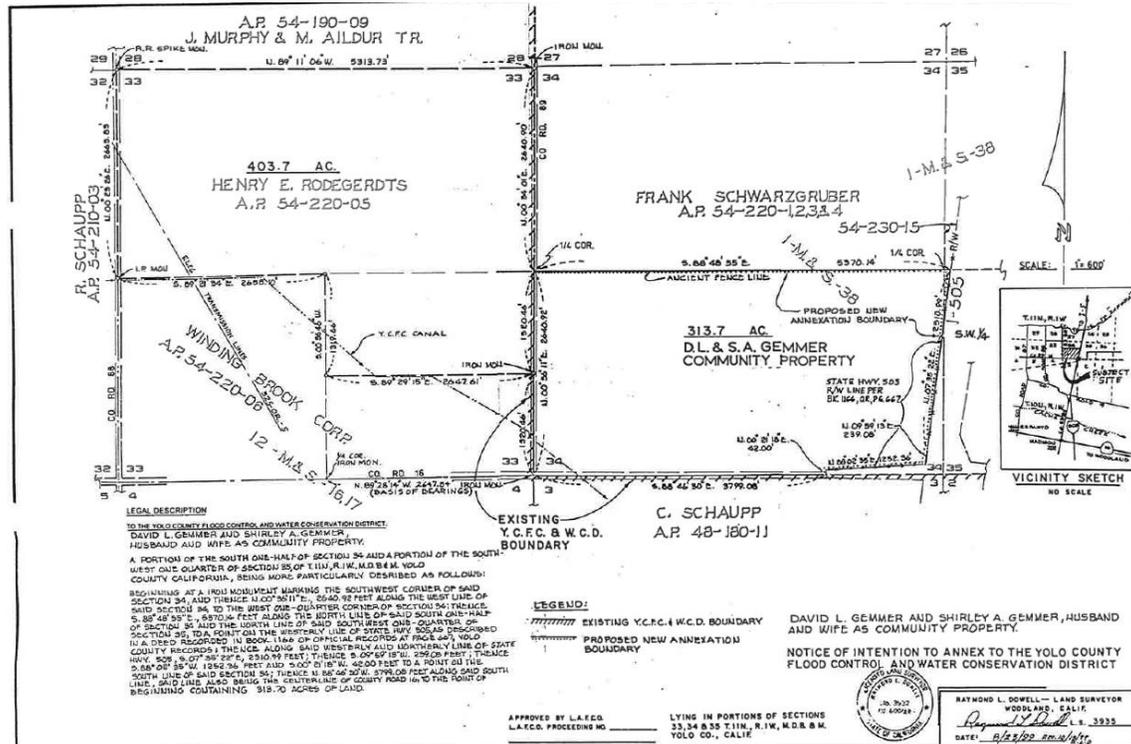


1,317.10 acres

Submittal Year	# of Parcels	Total A.V.	% Change in A.V.
2008	18	\$4,774,196	--
2009	18	\$5,276,008	10.51%
2010	18	\$5,500,318	4.25%
2011	18	\$5,748,882	4.52%
2012	18	\$5,880,809	2.29%
2013	18	\$6,641,028	12.93%
2014	18	\$7,056,102	6.25%
2015	18	\$7,084,339	0.40%
2016	18	\$8,580,312	21.12%
2017	18	\$9,059,733	5.59%
2018	18	\$9,180,456	1.33%
2019	18	\$8,916,433	-2.88%
2020	18	\$9,375,674	5.15%
2021	18	\$9,035,560	-3.63%
2022	18	\$9,355,585	3.54%

# 2000 Hungry Hollow Annexation

## Historical Assessed Value Summary

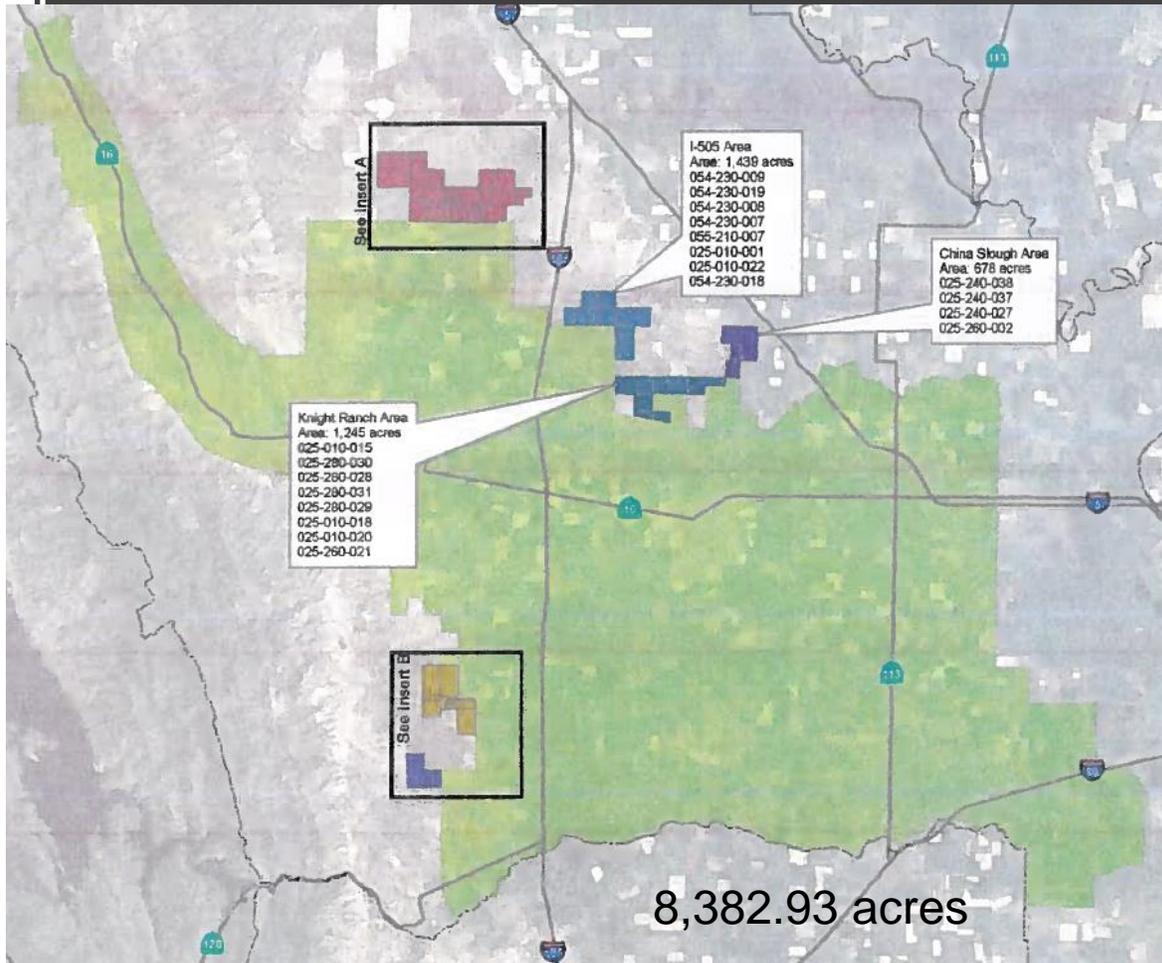


313.70 acres

Year	# of Parcels	Total A.V.	% Change
2008	3	\$2,375,586	--
2009	3	\$3,596,031	51.37%
2010	3	\$3,646,148	1.39%
2011	3	\$3,692,664	1.28%
2012	3	\$3,936,934	6.62%
2013	3	\$3,894,777	-1.07%
2014	3	\$4,284,566	10.01%
2015	3	\$4,260,498	-0.56%
2016	3	\$5,201,352	22.08%
2017	3	\$5,613,466	7.92%
2018	3	\$6,824,197	21.57%
2019	3	\$6,843,950	0.29%
2020	3	\$5,535,945	-19.11%
2021	3	\$5,858,150	5.82%
2022	3	\$2,957,473	-49.52%

# 2012 Annexation

## Historical Assessed Value Summary



Year	Number of Parcels	Total A.V.	Change in A.V.
2015	62	\$63,644,386	--
2016	62	\$71,263,355	11.97%
2017	62	\$80,304,190	12.69%
2018	62	\$84,828,009	5.63%
2019	62	\$70,439,142	-16.96%
2020	62	\$83,944,610	19.17%
2021	63	\$83,459,110	-0.58%
2022	63	\$86,152,474	3.23%

## Agenda Item #6

Receive Update from Finance Committee  
and Authorize Chair to Appoint Ad Hoc  
Outreach Committee

Plan to Recover  
Infrastructure Funds &  
Stabilize District  
Finances



Groundwater is critical to agriculture worldwide. Rungroj Youbang/Shutterstock

# LWA Schedule – Phase 1

- Task 1.1
  - **Kickoff Meeting** to review goals, criteria, and parameters: 3/3
  - Research and beneficiary identification – end of March
  - **Meeting 2:** 3/14 or 3/28
  - **TM Prep – draft to District on 4/25**
- Task 1.2
  - Research options / coordinate with YSGA (3-4 weeks): 5/18 (1 Meeting)
  - Evaluate options and coordinate with District – end of May (1 Meeting)
  - **TM Update – draft to District by 6/17**
- Task 1.3
  - Develop recommendations / coordinate / develop preliminary recommendations (2 Meetings): 6/30
  - Meeting to review recommendations – end of June
  - **TM Update Final – draft to District by 7/15**

**\*\* Schedule dependent on timeliness of coordination among all parties, expectations from District staff on the coordination element of work, and the information exchange process.**

# Phase 2 Implementation

- Expected to take 6-8 months
- LWA's Scope of Work to be developed based on District supported recommended actions identified in Phase 1
  - In Phase 1, the Board will define the External Committee (members/roles, etc.) for assisting with the evaluation process
- In Phase 2, the Board will utilize the External Committee to evaluate the preferred alternative
  - Outreach and Public Engagement Campaign with the Community as a whole
- Direct Bill to Customers versus Property Tax Collection
  - Proposition 218/26 Considerations (Water Exemption does not require ballot proceeding) – increase current structure, maintenance fees, groundwater pumping charge, etc.
  - Secured Property Tax Roll Collection (for collection on FY 22/23 property tax bills needs to be completed by 8/2022) – standby/water availability charge or groundwater recharge assessment

**\*\* Schedule dependent on timeliness of coordination among all parties, expectations from District staff on the coordination element of work, and the information exchange process.**

# Revenue Evaluation and Analysis

## Tech Memo Review of Funding Options and Next Steps

YCFC&WCD  
Board of Directors

August 2, 2022

# Problem Statement

- District's budget largely relies on agricultural water sales
- Current rate structure is limiting in the following ways:
  - Water Sales Volatility
  - Capital Investment Reserves
  - Groundwater Revenue Streams

# Evaluation Approach

## Problem Finding

- Stabilize Revenue, develop capital reserves, identify groundwater recharge benefits
- Identify constraints and important considerations wrt potential solutions

## Pro Forma - Expenses

- Review District's historical finances
- Develop expense pro forma using FY22/23, adjusting for atypical expenses (use a five-yr average instead)
- Classify expenditures into service areas (water, recreation, groundwater, flood control; Spread G&A proportionately)
- Remove depreciation expense; add new capital reserve fund
- Add basic escalation of 3%

## Pro Forma - Revenue

- Set water sales (AF) based on 10-yr average
- Set reservoir level based on a 10-yr average, which is sufficient storage to meet demand without allocations
- Other Revenue based on 10-yr average with some adjusted down or up based on future expectations. E.g. one-year flood grants are removed
- Includes the YC property tax apportionment, escalated at 2%.

# Evaluation Approach

## Est Ag Water Revenue Gap

- Apportion Non-Op Revenue: Non-operating revenue is primarily comprised of YC property tax apportionment. This was used to first offset non-operating expenses and then to operating expenses to determine how much could cover agricultural water-related expenses
- Combine all pro forma steps to determine the revenue gap
- Add a drought contingency calculation on top of pro-forma revenue gap.

## Alternatives Comparison

- Prepare a summary of the District's authority and regulatory requirements (e.g. under Prop 218)
- Prepare quantitative alternative for utilizing current water rate approach
- Prepare qualitative alternative comparison for various other approaches
- Consider constraints and objectives and Pros/cons

# Revenue Gap

**Table 8**  
**YCFCWCD Revenue Evaluation and Analysis**  
**Agricultural Water Sales Flow of Funds**

Flow of Funds - Ag Water	Pro Forma Base	Yr 1	Pro Forma Years			
			Yr 2	Yr 3	Yr 4	Yr 5
Ag Water Operating Expenses	\$ 5,388,214	\$ 5,549,860	\$ 5,716,356	\$ 5,887,847	\$ 6,064,482	\$ 6,246,416
Ag Water Rate Revenue	\$ 3,797,604	\$ 3,797,604	\$ 3,797,604	\$ 3,797,604	\$ 3,797,604	\$ 3,797,604
Net Ag Water Expense	\$ 1,590,609	\$ 1,752,256	\$ 1,918,751	\$ 2,090,242	\$ 2,266,877	\$ 2,448,812
Total Non-Operating Rev Avail to Offset						
Ag Water Expenses - from Table 7	\$ 1,178,682	\$ 1,172,024	\$ 1,164,849	\$ 1,157,137	\$ 1,148,864	\$ 1,140,008
<b>Net Ag Water Surplus/(Deficit)</b>	<b>\$ (411,927)</b>	<b>\$ (580,232)</b>	<b>\$ (753,902)</b>	<b>\$ (933,105)</b>	<b>\$ (1,118,013)</b>	<b>\$ (1,308,804)</b>
Begin Balance	\$ -	\$ (411,927)	\$ (992,159)	\$ (1,746,061)	\$ (2,679,166)	\$ (3,797,179)
End Balance	\$ (411,927)	\$ (992,159)	\$ (1,746,061)	\$ (2,679,166)	\$ (3,797,179)	\$ (5,105,983)
% of Ag Water Operating Revenue	-11%	-15%	-20%	-25%	-29%	-34%

# Revenue Gap – with Drought Contingency

**Table 9**  
**YCFCWCD Revenue Evaluation and Analysis**  
**Agricultural Water Sales Flow of Funds with Drought Contingency**

Flow of Funds - Ag Water	Pro Forma Base	Yr 1	Pro Forma Years			
			Yr 2	Yr 3	Yr 4	Yr 5
Ag Water Operating Expenses	\$ 5,388,214	\$ 5,549,860	\$ 5,716,356	\$ 5,887,847	\$ 6,064,482	\$ 6,246,416
Ag Water Rate Revenue	\$ 3,797,604	\$ 3,797,604	\$ 3,797,604	\$ 3,797,604	\$ 3,797,604	\$ 3,797,604
Net Ag Water Expense	\$ 1,590,609	\$ 1,752,256	\$ 1,918,751	\$ 2,090,242	\$ 2,266,877	\$ 2,448,812
Total Non-Operating Rev Avail to Offset						
Ag Water Expenses - from Table 7	\$ 1,178,682	\$ 1,172,024	\$ 1,164,849	\$ 1,157,137	\$ 1,148,864	\$ 1,140,008
Drought Contingency Reserve Expense	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000	\$ 300,000
<b>Net Ag Water Surplus/(Deficit)</b>	<b>\$ (711,927)</b>	<b>\$ (880,232)</b>	<b>\$ (1,053,902)</b>	<b>\$ (1,233,105)</b>	<b>\$ (1,418,013)</b>	<b>\$ (1,608,804)</b>
Begin Balance	\$ -	\$ (711,927)	\$ (1,592,159)	\$ (2,646,061)	\$ (3,879,166)	\$ (5,297,179)
End Balance	\$ (711,927)	\$ (1,592,159)	\$ (2,646,061)	\$ (3,879,166)	\$ (5,297,179)	\$ (6,905,983)
% of Ag Water Operating Revenue	-19%	-23%	-28%	-32%	-37%	-42%

# Authority/Limitations

- Funding authority from District supplied legal memos:
  - Under the District Act, the District is empowered to form zones within the district and **levy assessments on land within those zones**. (Water Code App., Sec 65-15-65-15.5)
  - The District may **levy taxes on real property within a zone created by the District** in order to raise revenue to pay any District obligation. (Water Code App. Sec 65-12, 65-13, 65-30.)
  - The District also **may fix rates and charges “...for water, service and benefit from its operations...”** to pay operating expenses, repairs and depreciation, interest on bonded debt, principal on bonded debt, and for constructing, maintaining, operating, and purchasing or leasing works that provide that water service and benefit. (Water Code App. Sec 65-27.5, subd. (a)-(e).)
  - Further, the District **may impose groundwater charges** (Water Code App, Sec 65-4.1 through 65-4.8) **and water standby and availability charges** (Water Code App, Sec 65-27.6).
  - The District Act defines the jurisdictional boundaries of the District. (Water Code App., Sec 65-1.) **The District may impose assessments, fees, charges, and special taxes only within its jurisdictional territory.**

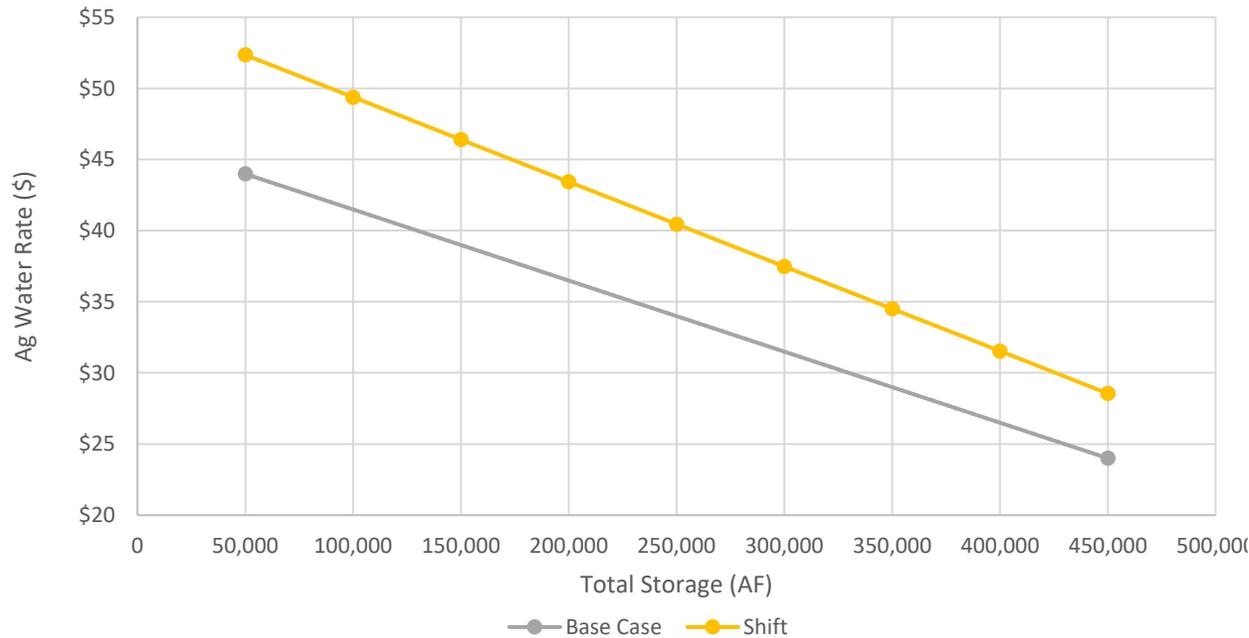
# Authority/Limitations

- Propositions 13, 218, and 26 provide the framework for which the District must comply when imposing any fees, charges, assessments, and special taxes.
  - **Proposition 218** lays out the constitutional limitations and requirements for implementing property-related charges, requiring noticing, protest proceedings or balloting.
  - Aside from Prop 218, other fees can be adopted by the governing agency, under **Proposition 26** given the applicability of certain exemptions.

# Funding Structure Options – OPTION 1

- Increase Current Rate Structure by Percentage

Ag Water Rate vs. Total Storage on April 1st



Pros:	Cons:
<ul style="list-style-type: none"> <li>• Simple approach that is currently employed so is understandable by growers/water users</li> </ul>	<ul style="list-style-type: none"> <li>○ Increase in rate may seem large given no recent historical increases in rates.</li> </ul>
<ul style="list-style-type: none"> <li>• Implementation timeline quickest as it follows similar methodology currently employed.</li> </ul>	
<ul style="list-style-type: none"> <li>• Approach is fair and reasonable as growers pay for surface water consumed</li> </ul>	<ul style="list-style-type: none"> <li>○ Does not account for groundwater use by growers</li> </ul>
<ul style="list-style-type: none"> <li>• Low legal risk due to current methodology use</li> </ul>	<ul style="list-style-type: none"> <li>○ Legal review of drought contingency charge as a separate line-item.</li> </ul>
<ul style="list-style-type: none"> <li>• Provides for better stability because developing a drought contingency</li> </ul>	<ul style="list-style-type: none"> <li>○ Even with a drought contingency, the rates during very low water years would still create revenue uncertainty, especially during periods of prolonged, multi-year droughts.</li> </ul>

# Funding Structure Options – OPTION 1B

- Flat rate across all storage levels
- Not in TM but added here for comparison purposes

Ag Water Rate vs. Total Storage on April 1st



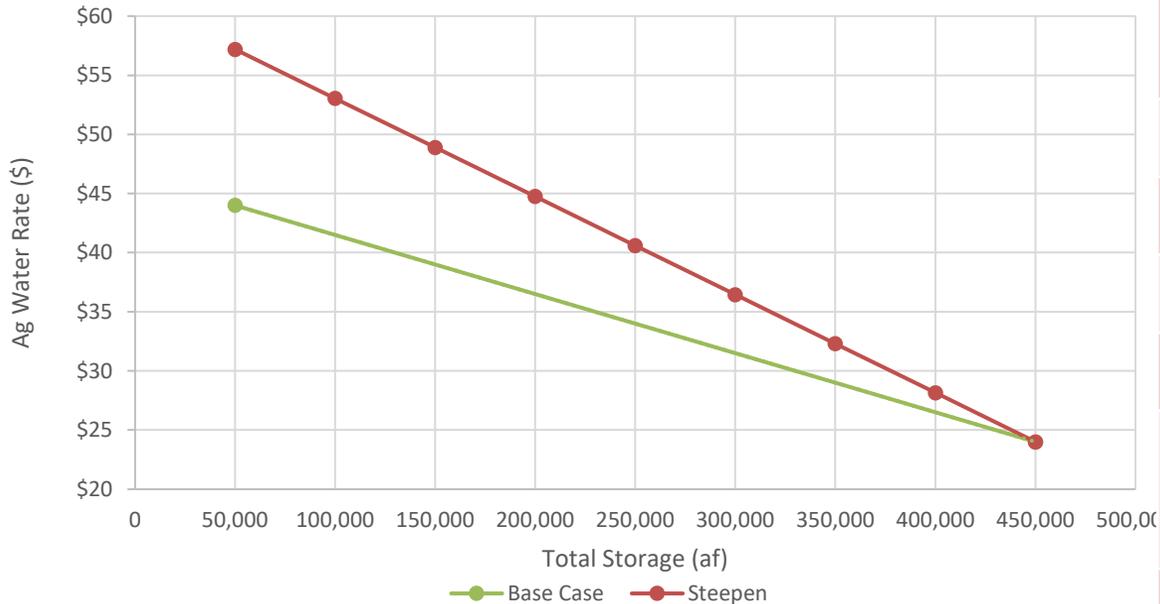
*\*NOTE: Rates are for qualitative comparison; more detailed assessment may be required for this option.*

Pros:	Cons:
<ul style="list-style-type: none"> <li>• Simple approach</li> </ul>	<ul style="list-style-type: none"> <li>○ Perception of much higher rates than current during season with high total storage.</li> </ul>
<ul style="list-style-type: none"> <li>• Implementation timeline quickest as it follows similar rate study methodology.</li> </ul>	
<ul style="list-style-type: none"> <li>• Approach is fair and reasonable as growers pay for surface water consumed.</li> </ul>	<ul style="list-style-type: none"> <li>○ Does not account for groundwater use by growers.</li> </ul>
	<ul style="list-style-type: none"> <li>○ Legal review of drought contingency charge as a separate line-item.</li> </ul>
<ul style="list-style-type: none"> <li>• Provides for better stability because developing much higher revenues during periods of high storage</li> </ul>	<ul style="list-style-type: none"> <li>○ Even with a drought contingency, the rates during very low water years would still create revenue uncertainty, especially during periods of prolonged, multi-year droughts.</li> </ul>

# Funding Structure Options – OPTION 2

- Increase Rate at Low Storage Pools

Ag Water Rate vs. Total Storage on April 1st



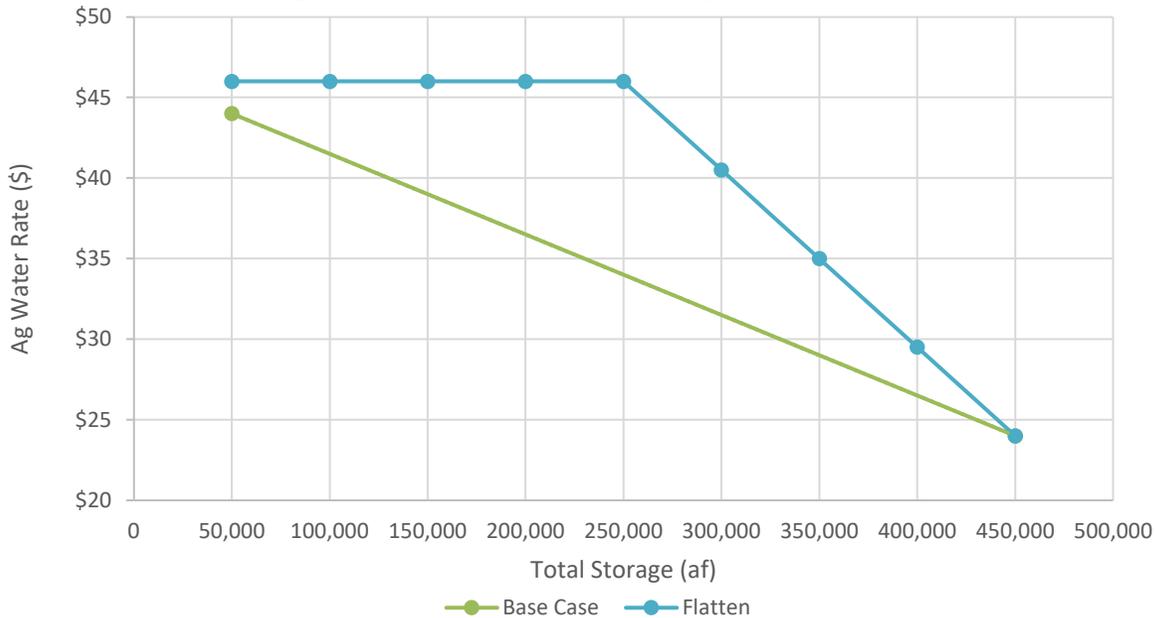
*\*NOTE: Rates are for qualitative comparison; more detailed assessment may be required for this option.*

Pros:	Cons:
<ul style="list-style-type: none"> <li>• Implementation timeline is relatively quick given it will follow a rate change.</li> </ul>	<ul style="list-style-type: none"> <li>○ May require additional explanation to growers/stakeholders because rate adjustments could differ along the range of storage availability.</li> </ul>
<ul style="list-style-type: none"> <li>• Approach is fair and reasonable as growers pay for surface water consumed</li> </ul>	<ul style="list-style-type: none"> <li>○ Does not account for groundwater use by growers</li> </ul>
<ul style="list-style-type: none"> <li>• Low legal risk due to current methodology use</li> </ul>	<ul style="list-style-type: none"> <li>○ Legal review of drought contingency charge as a separate line item</li> </ul>
<ul style="list-style-type: none"> <li>• Provides for better stability because developing a drought contingency</li> </ul>	<ul style="list-style-type: none"> <li>○ Ultimately, financial stability still a concern when water availability is low.</li> </ul>
<ul style="list-style-type: none"> <li>• High rates at lower total available storage in the upstream reservoirs would generate more revenue than the base case during low water years.</li> </ul>	<ul style="list-style-type: none"> <li>○ Increase in rate may seem large given no recent historical increases in rates.</li> </ul>
	<ul style="list-style-type: none"> <li>○ Even with a drought contingency, the rates during very low water years would still create revenue uncertainty, especially during periods of prolonged, multi-year droughts.</li> </ul>
	<ul style="list-style-type: none"> <li>○ Rate structure may push more water users to pull groundwater during periods of low water availability due to the steam cost/AF.</li> </ul>

# Funding Structure Options – OPTION 3

- Flatten Rates During Low Storage Pools

Ag Water Rate vs. Total Storage on April 1st

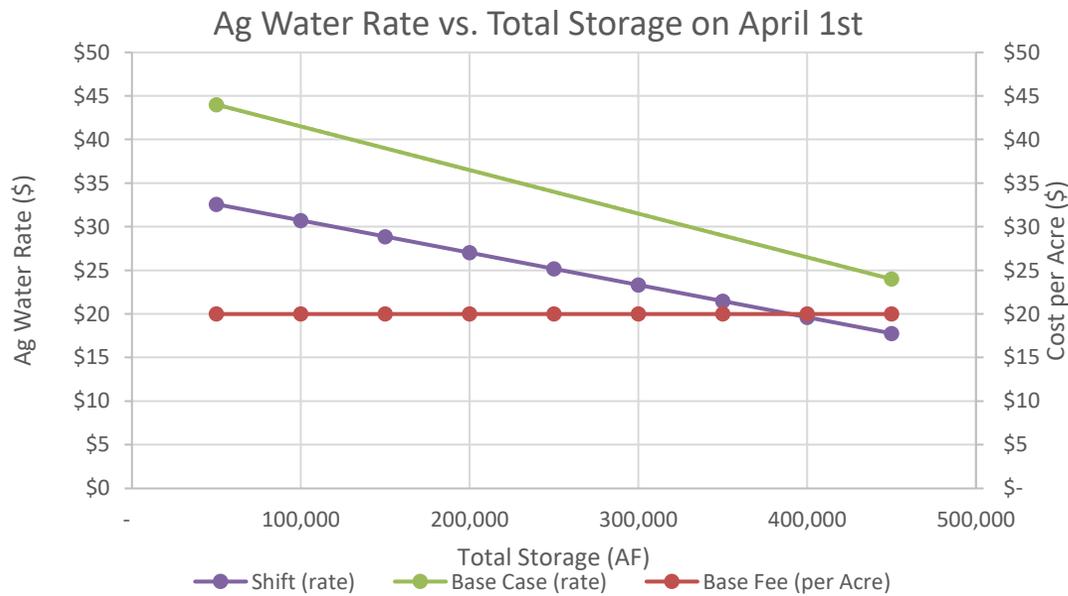


*\*NOTE: Rates are for qualitative comparison; more detailed assessment may be required for this option.*

Pros:	Cons:
<ul style="list-style-type: none"> <li>Implementation timeline is relatively quick given it will follow a rate change.</li> </ul>	<ul style="list-style-type: none"> <li>May require additional explanation to growers/stakeholders because rate adjustments could differ along the range of storage availability.</li> </ul>
<ul style="list-style-type: none"> <li>Approach is fair and reasonable as growers pay for surface water consumed</li> </ul>	<ul style="list-style-type: none"> <li>Does not account for groundwater use by growers</li> </ul>
<ul style="list-style-type: none"> <li>Low legal risk due to current methodology use</li> </ul>	<ul style="list-style-type: none"> <li>Legal review of drought contingency charge as a separate line item</li> </ul>
<ul style="list-style-type: none"> <li>Provides for better stability because developing a drought contingency</li> </ul>	<ul style="list-style-type: none"> <li>Ultimately, financial stability still a concern when water availability is very low.</li> </ul>
<ul style="list-style-type: none"> <li>Sloping rate down more quickly during wet years may promote use of groundwater, depending on per AF cost</li> </ul>	<ul style="list-style-type: none"> <li>Increase in rate may seem large given no recent historical increases in rates.</li> </ul>
<ul style="list-style-type: none"> <li>Flattened rates at lower total available storage in the upstream reservoirs would generate more revenue than the base case.</li> </ul>	<ul style="list-style-type: none"> <li>Even with a drought contingency, the rates during very low water years would still create revenue uncertainty, especially during periods of prolonged, multi-year droughts.</li> </ul>

# Funding Structure Options – OPTION 4

- Combined Fixed Amount and Water Toll



*\*NOTE: Rates are for qualitative comparison; more detailed assessment may be required for this option.*

Pros:	Cons:
<ul style="list-style-type: none"> <li>• If fixed charge is considered part of the water fee and falls under a Prop 218 fee, implementation could be relatively quick</li> </ul>	<ul style="list-style-type: none"> <li>○ If fixed charge is considered a Standby Fee and falls under a Prop 218 special benefit assessment, implementation would require a 50% approval threshold which would require more extensive outreach.</li> </ul>
	<ul style="list-style-type: none"> <li>○ Requires further analysis to define fixed amount and water toll; will require more complicated methodology and engineer's report.</li> </ul>
<ul style="list-style-type: none"> <li>• Approach keeps water toll low because spreads the base costs across beneficiaries whether utilize surface water or not. Captures revenue from some properties benefitting from groundwater augmentation without imposing groundwater fee.</li> </ul>	<ul style="list-style-type: none"> <li>○ Approach requires payment of a base fee which may be seen as unfair to those not utilizing surface water</li> </ul>
<ul style="list-style-type: none"> <li>• Provides more stability during years of low water availability</li> </ul>	
<ul style="list-style-type: none"> <li>• Stakeholder support may be more favorable because variable rate of water would be lower</li> </ul>	<ul style="list-style-type: none"> <li>○ Legal risk could be higher given 218 requirements to only pay for services provided</li> </ul>

# Funding Structure Options – OPTION 5

- Impose Special Taxes

Pros:	Cons:
<ul style="list-style-type: none"><li>• Approach doesn't require as much analytical rigor and data is easily obtainable from county assessors</li></ul>	<ul style="list-style-type: none"><li>○ Implementation requires a much higher approval threshold, requiring extensive outreach</li></ul>
<ul style="list-style-type: none"><li>• Benefits provided support the entire population, even if only indirectly, given economic necessity of agriculture in Yolo County.</li></ul>	<ul style="list-style-type: none"><li>○ Charges for non-water users and/or non-irrigatable land would be met with resistance</li></ul>
<ul style="list-style-type: none"><li>• Provides the highest level of financial stability</li></ul>	<ul style="list-style-type: none"><li>○ Less fair approach due to broad charges</li></ul>
<ul style="list-style-type: none"><li>• Surface water users and current payors would benefit because costs are distributed across a larger payor base</li></ul>	<ul style="list-style-type: none"><li>○ Higher taxes for all may be unaffordable</li></ul>
<ul style="list-style-type: none"><li>• Low legal risk under constitutional requirements set forth under Prop 218</li></ul>	

# Funding Structure Options – Groundwater Considerations & YSGA

- No re-occurring groundwater related revenue; current projections assumed from property tax apportionment.
- Lost revenue due to canal seepage not considered in rate options
- Groundwater related revenue options:
  - YSGA related:
    - Fees/Charges for regulatory requirements under SGMA
    - Fees/Charges/Assessments for YSGA-related project implementation
    - Not part of evaluation as requires further alignment with YSGA; doesn't affect ag water rates/assessments
  - Groundwater charge
    - Not to exceed \$2/acre-foot in accordance with District Act
    - In accordance with the benefits to the ground water supply of the various lands and zones

# Funding Structure Options

- Preliminary Funding Approach Comparison

		Parameters						
		Implementation Timeline	Revenue Administration	Equity	Financial Stability	Affordability	Stakeholder Support	Legal Risk [2]
Funding Approaches	Option 1: Increase Current Water Toll Structure (Base Case)							
	Option 2: Single Water Toll / Steepend Rate Line	o	o	o	o/+	(-)	(-)	o
	Option 3: Single Water Toll / Flatten Rate Curve	o	o	o	o/+	o	(-)	o
	Option 4: Fixed Amount & Water Toll (218 Fee)	o	(-)	+	+	+	(-)	(-)
	Option 4: Fixed Amount & Water Toll (218 Assessment)	(-)	(-)	+	+	+	(-)	+
	Option 5: Special Property Tax (218)	(-)	(-)	(-)	+	+	(-)	+

[1] Scale Compared to Base Case: + (more advantageous), o (neutral), (-) (less advantageous), o/+ (slightly more advantageous)

[2] Subject to methodology and legal coordination

# Recommended Funding Structure

Improve revenue stability through three-prong structure:

1. Fixed annual standby charge on property that can receive water from the District
  - Baseline revenue to align with annual costs incurred regardless of water supply conditions
2. Variable water rate fee based on current rate structure
  - Variable revenue aligned with variable expenses to deliver water
3. Groundwater augmentation charge
  - Offset revenue loss from canal seepage

# Recommended Funding Structure

## Standby Charge

- Long-term revenue security, especially during prolonged periods of drought.
- Based on engineer's report of special benefit from ability to supply
- Likely charged across all irrigable acreage in the service area with access to surface water deliveries.
- Methodology, report and 218 approval process required.

## Ag Water Rate

- Use-based fee/charge for services
- Consistent with current sliding rate structure
- Set in accordance with cost of service
- Cost of service reduced if standby charge approved by growers
- Change to rate setting method from total available upstream storage to total water availability

## Groundwater Fee

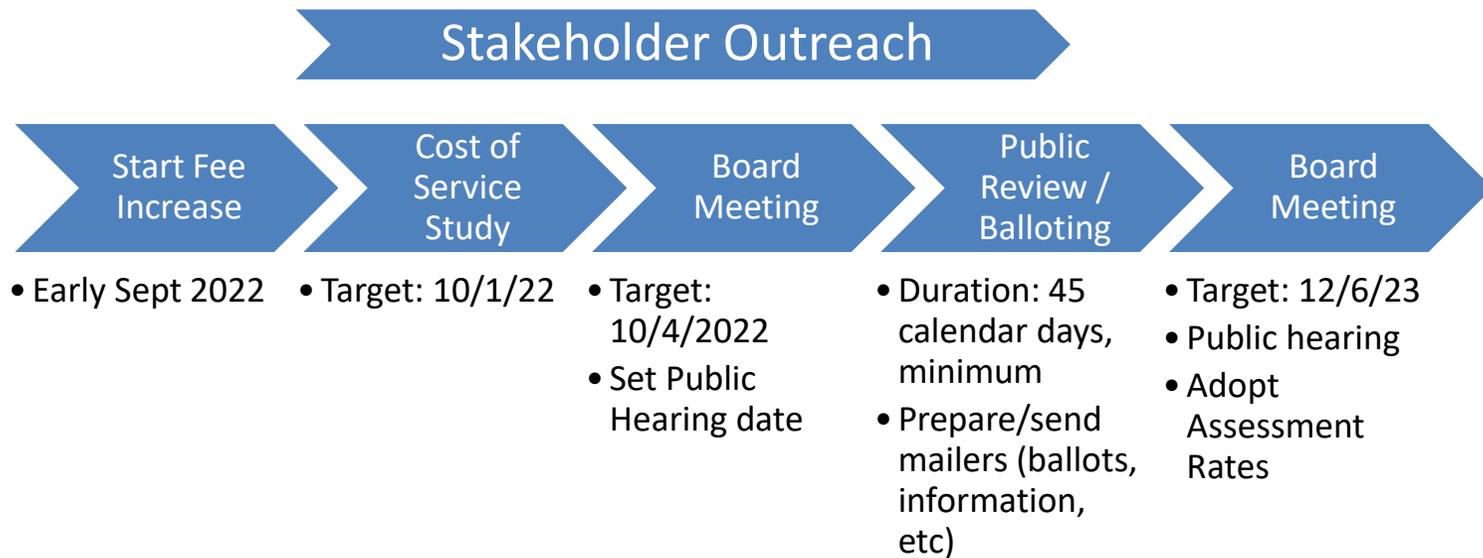
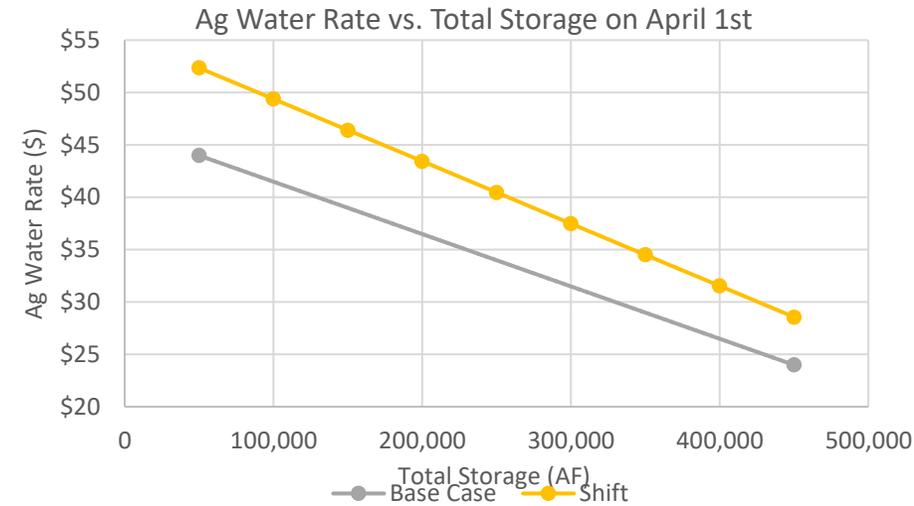
- Possibly based on estimate or measurement of pumping
- In accordance with production of ground water supplies, benefit afforded
- Use of current groundwater authority and not to exceed \$2 per acre-foot
- Promotes use of surface water when available

# Recommended Implementation Approach

1. Ag Water revenue must be increased to cover current cost of service regardless of which rate structure is chosen.
2. Propose new Ag Water rate based on current rate structure (Option 1)
  - Prepare cost of service study (Fall 2022) and conduct Prop 218 protest hearing (Fall/Winter 2022)
  - Can be adopted if there is not a majority protest
3. Propose Standby Charge with reduced Ag Water Rate (Option 4)
  - Prepare Engineer's Report (Fall/Winter 2022) and conduct Prop 218 ballot proceeding (Winter/Spring 2023)
  - Can be adopted if weighted votes approve
4. Adopt new Ag Water rate based on grower approvals (March 2023)
  - If Standby Charge approved, adopt annual charge and associate Ag Water rate
  - If Standby Charge is not approved, adopt new Ag Water rate based on existing structure
5. Groundwater augmentation charge (Defer until after March 2023)
  - Perform further analyses and develop basis for charge
  - Consider adoption in March 2024

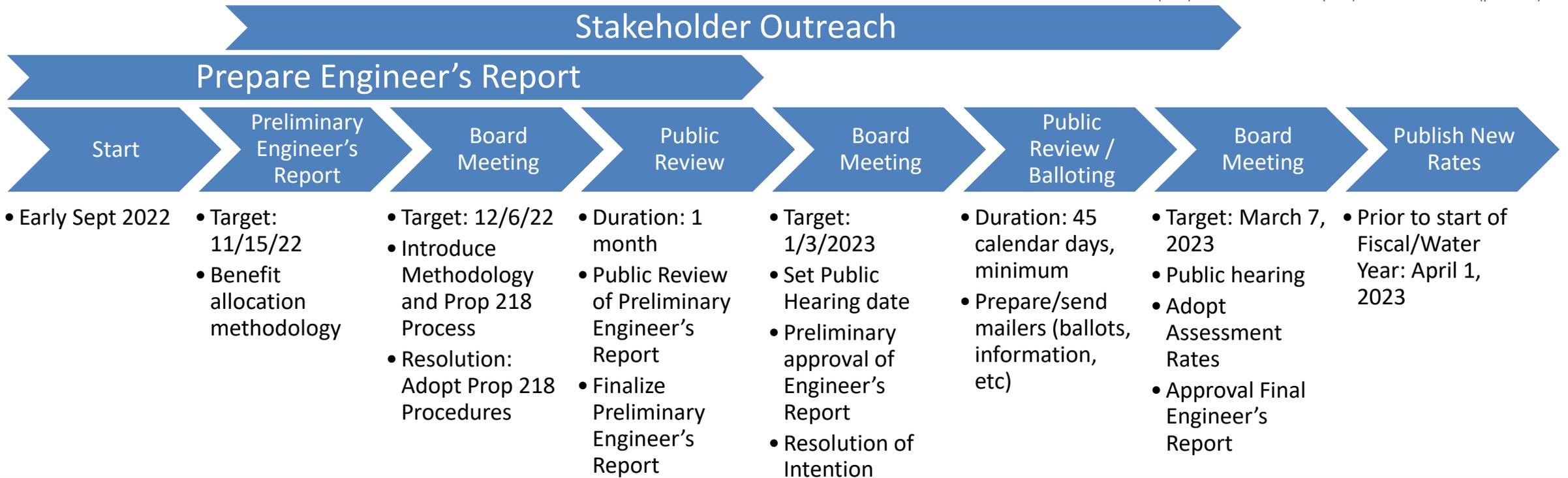
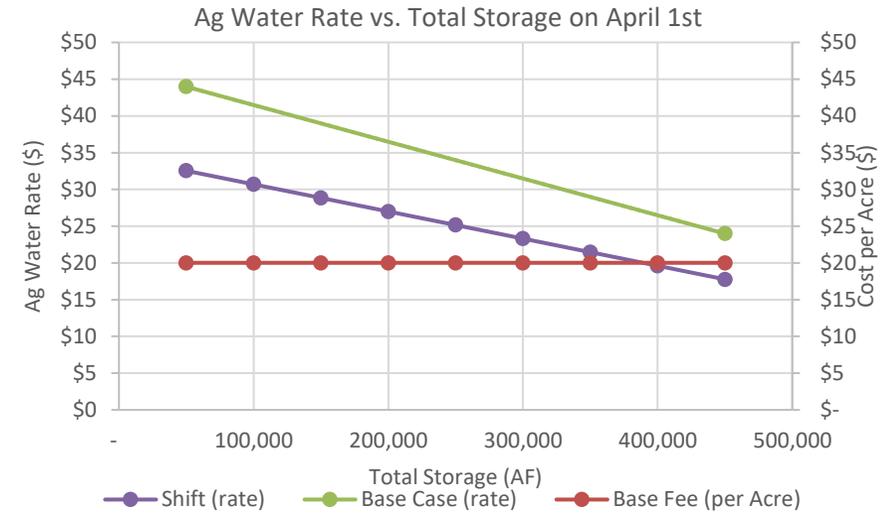
# Funding Structure Potential Path Forward

- Prop 218 water rate fee protest vote process/timeline



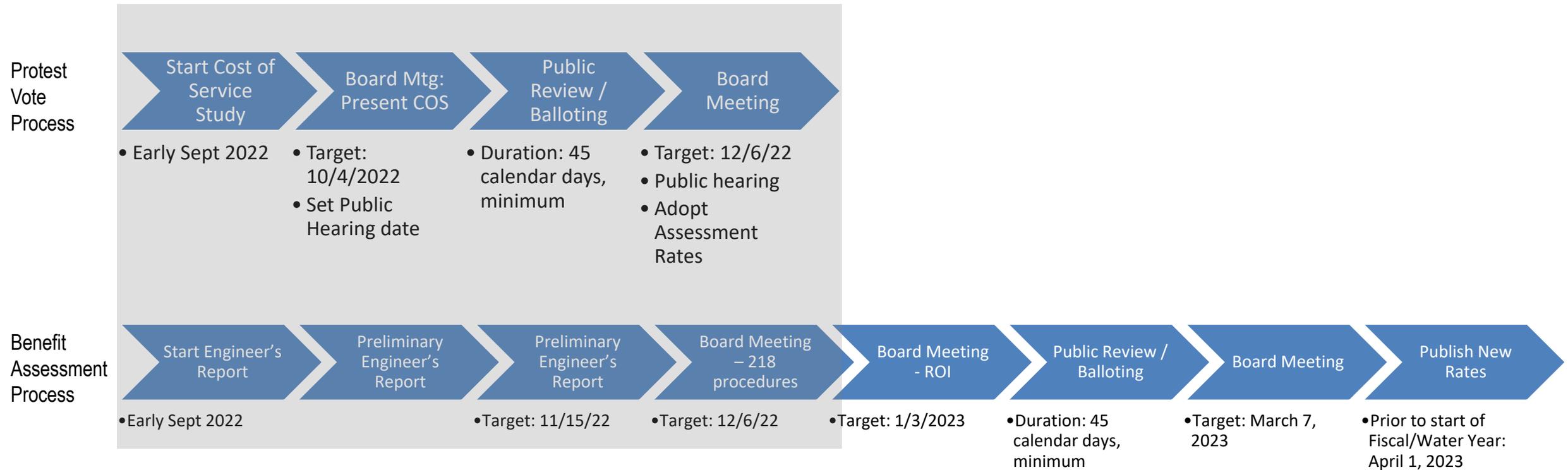
# Funding Structure Potential Path Forward

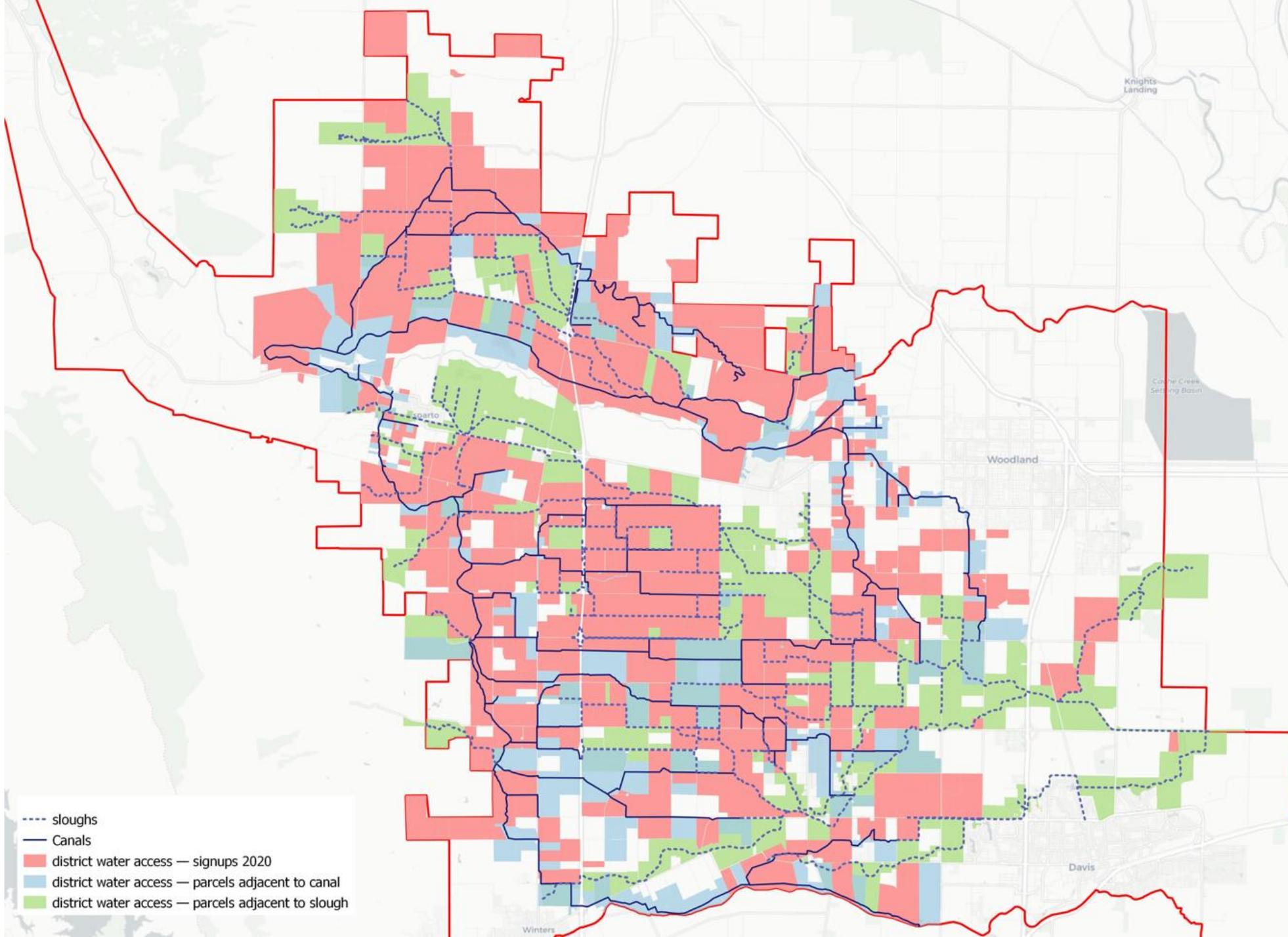
- Special benefit assessment process/timeline



# Funding Structure Potential Path Forward

- Protest vote & special benefit assessment processes/timeline overlap





- sloughs
- Canals
- district water access — signups 2020
- district water access — parcels adjacent to canal
- district water access — parcels adjacent to slough

# Agenda Item #7

## Directors' Reports

### Report on Meetings and Conferences Attended During the Prior Month on Behalf of the District

- i. Finance Committee Meeting (July 20)
- ii. Meeting with Congressman Thompson (July 25)
- iii. NCWA Meetings

# Agenda Item #8

## Attorney's Reports

Report on Legal Matters of Concern to the District

# Agenda Item #9

## General Manager's Report

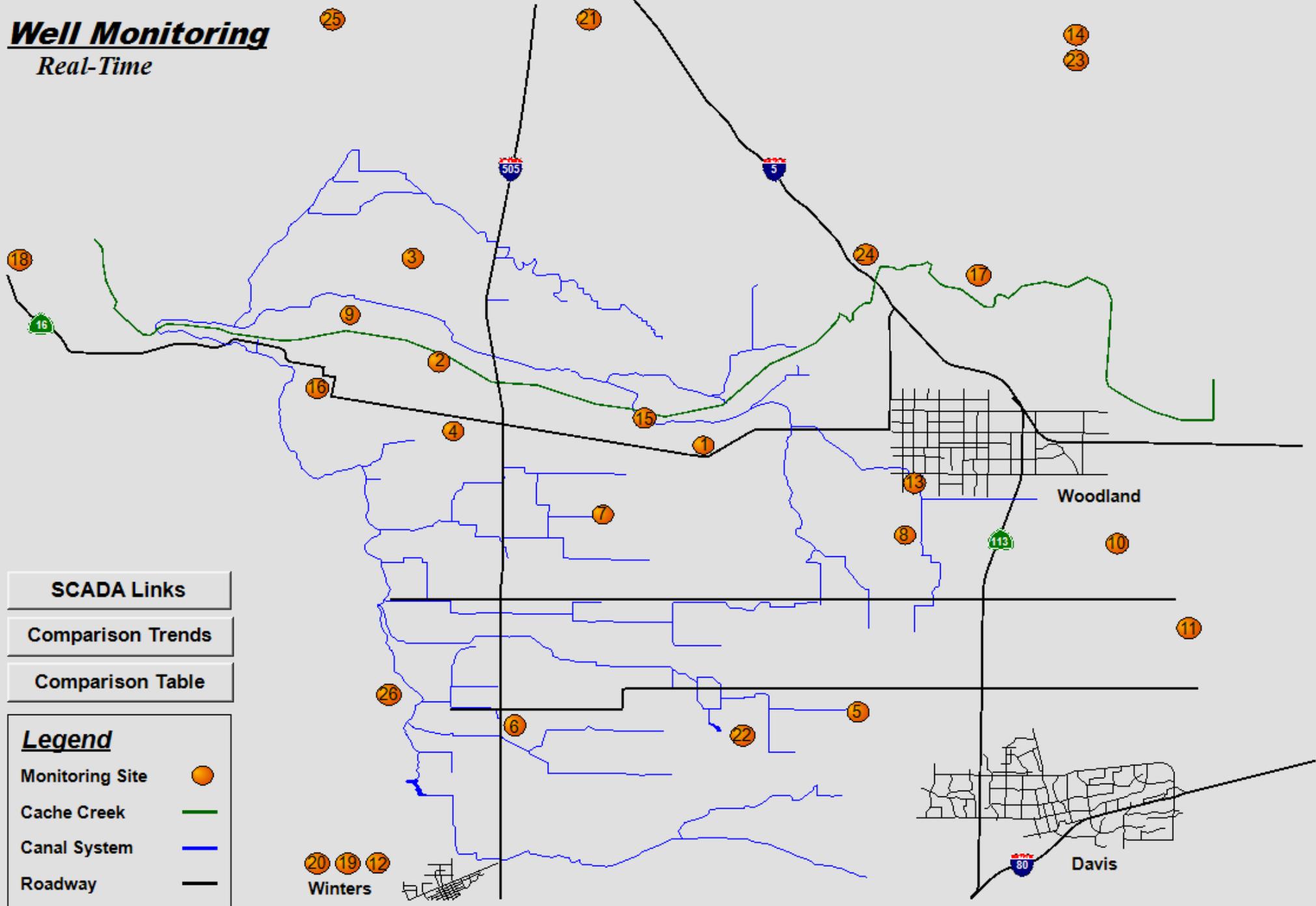
- **Water Conditions Report**
- **Financial Report Summary**
- **Capital Improvement Program**
- **General Activities**
- **YSGA Update**
- **Upcoming Events**

# Current Water Conditions (08-02-22)

	<u>Elevation</u>	<u>Available</u>	<u>2021</u>
Clear Lake			
• August 2	-1.19'	0 AF	-1.00' (0 AF)
• July 2	-0.63'	0 AF	
• Total Loss	-0.56'	0 AF	
Indian Valley Reservoir			
• August 2	1,392.39'	48,100 AF	1,361.64' (19,490 AF)
• July 2	1,393.29'	49,270 AF	
• Total Loss	-1.00'	-1,170 AF	

# Well Monitoring

Real-Time

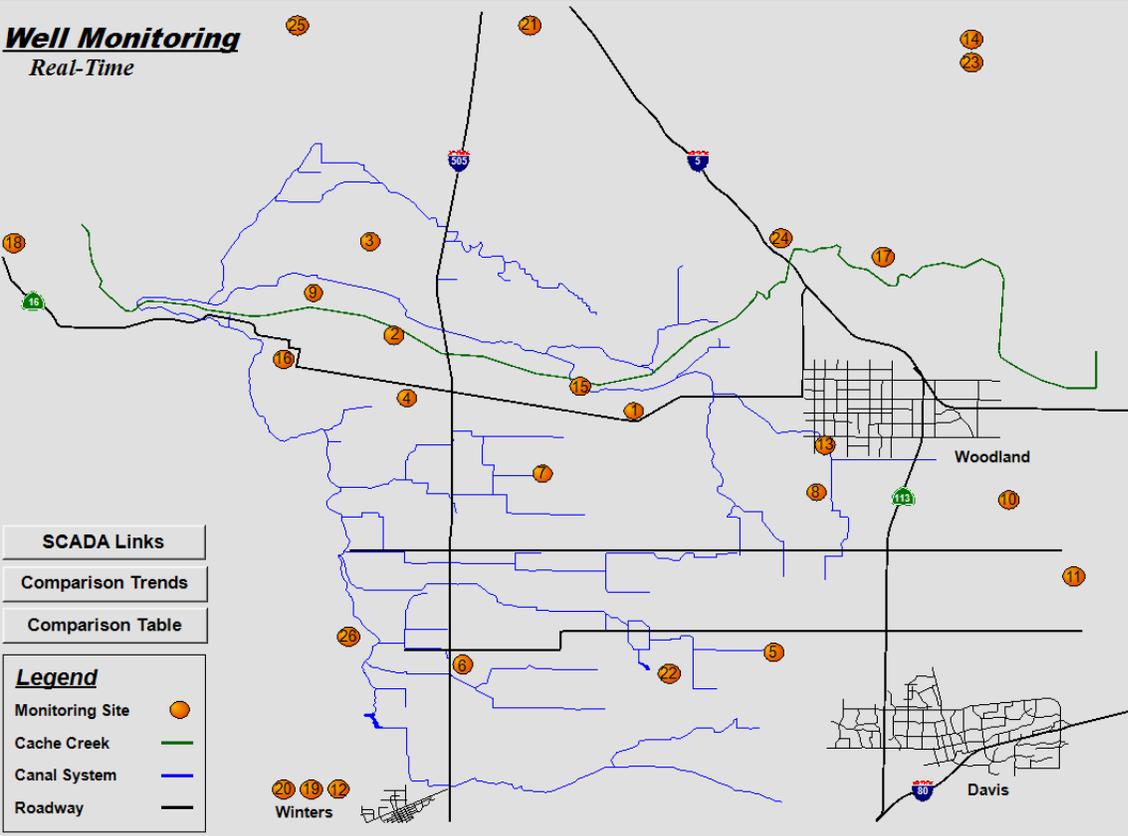


- SCADA Links
- Comparison Trends
- Comparison Table

**Legend**

- Monitoring Site 
- Cache Creek 
- Canal System 
- Roadway 

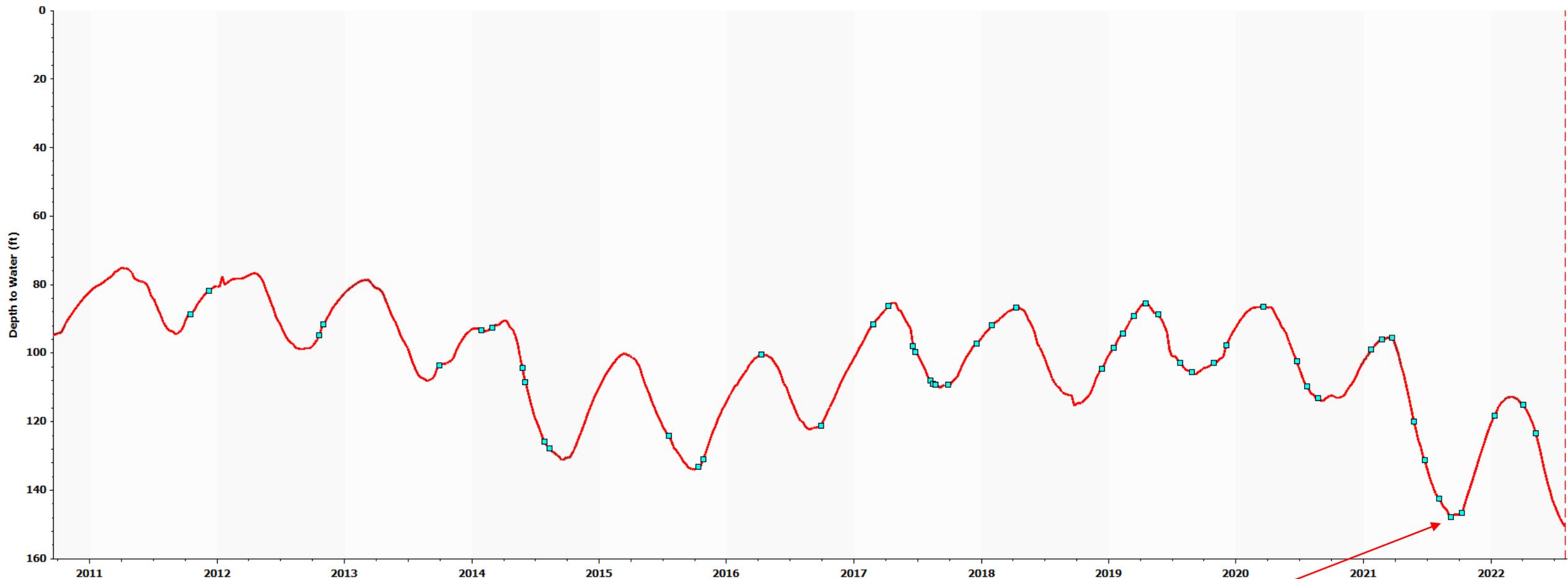
**Well Monitoring**  
Real-Time



**Well Monitoring**  
Depth to Water Historical Comparison  
(Daily Average DTW in feet)

Well	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Δ 2021 - 2022	Δ 2015 - 2022
1.	95.7	93.8	97.4	107.0	127.7	128.1	120.9	108.3	110.3	104.7	112.2	142.4	150.8	-8.4	-22.8
2.	44.6	45.4	41.4	54.3	53.7	54.8	49.3	29.7	33.9	30.3	32.0	42.2	53.6	-11.4	1.3
3.		40.0	46.0	52.4	82.3	73.4	62.4	39.3	44.5	37.8	43.5	70.3	88.0	-17.7	-14.7
4.		32.1	39.2	46.0	57.6	61.5	52.1	33.9	33.6	35.1	33.9	56.2	63.3	-7.1	-1.8
5.		15.6	15.3	18.6	34.1	35.3	36.3	22.5	25.8	17.3	21.1	35.3	42.1	-6.8	-6.8
6.			55.2	69.0	93.1	73.5	62.4	48.2	47.1	42.2	42.7	71.1	89.5	-18.4	-16.0
7.					39.9	47.1	26.0	17.3	21.5	17.8	24.3	47.3	47.3	.0	-.2
8.					91.3	88.5	85.0	65.0	73.9	57.5	67.1	86.5	94.0	-7.4	-5.5
9.					73.4	69.2	57.9	41.8	45.0	40.6	44.0	63.0	78.3	-15.3	-9.1
10.						115.3	129.0	77.4	131.2	98.1	127.0	133.6	141.0	-7.4	-25.7
11.						33.6	33.2	18.6	32.4	20.6	30.9	35.9	37.0	-1.1	-3.4
12.											125.2	136.5	145.0	18.0	
13.									125.8	95.2	112.8	137.7	173.0	-35.3	
14.									10.1	9.4	10.3	13.8	13.8	.0	
15s.									41.3	35.7	38.5	50.1	48.3	1.8	
15d.									157.2	143.6	162.5	252.3	273.1	-20.9	
16.										39.0	40.9	50.7	58.9	-8.2	
17.										21.0	23.6	32.9	36.4	-3.5	
18.										58.7	73.7	118.6	107.9	10.7	
19.										174.6	181.4	197.2	207.6	-10.4	
20.										198.8	199.0	199.1	198.6	.5	
21.											127.4	137.3	142.0	-4.7	
22.												120.2	128.1	-7.9	
23.												96.3	83.0	13.3	
24.													84.3		
25.													102.4		
26.													123.8		

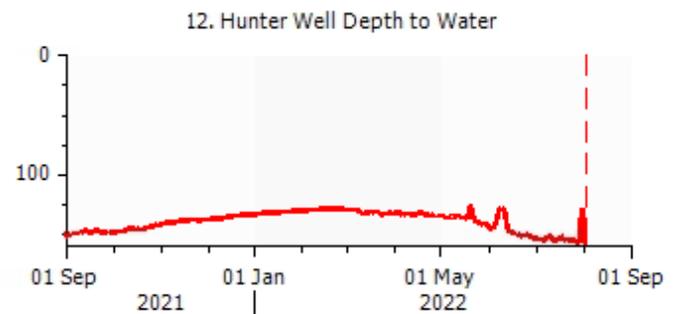
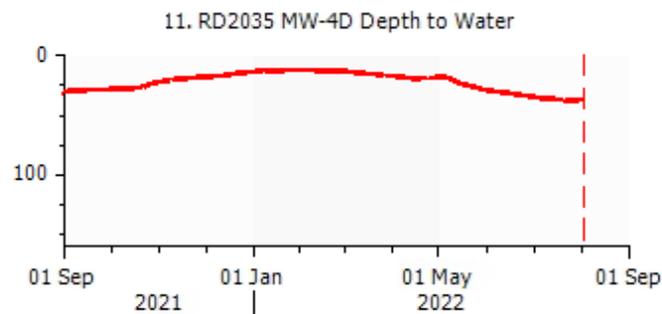
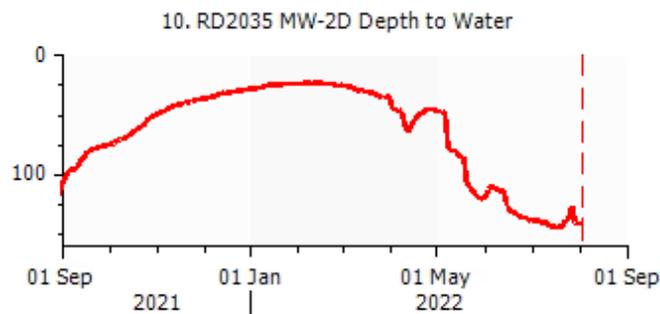
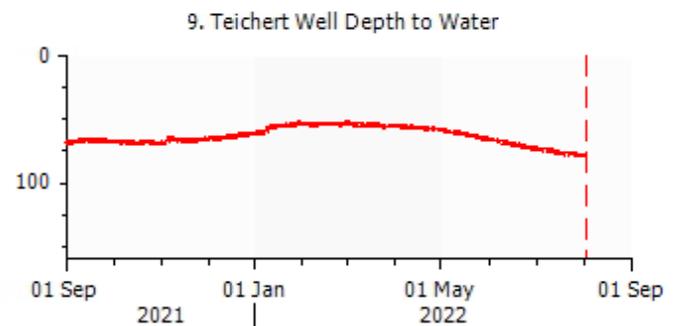
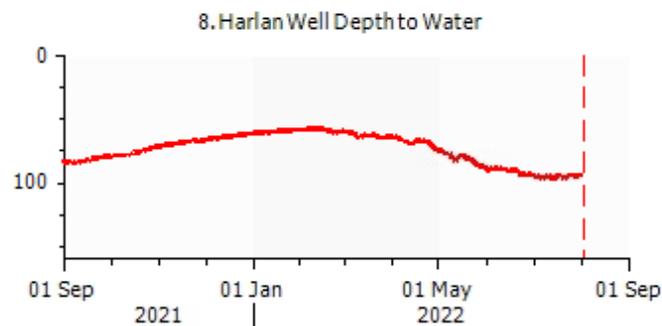
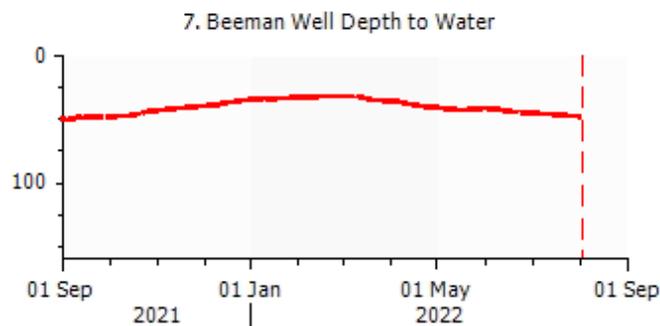
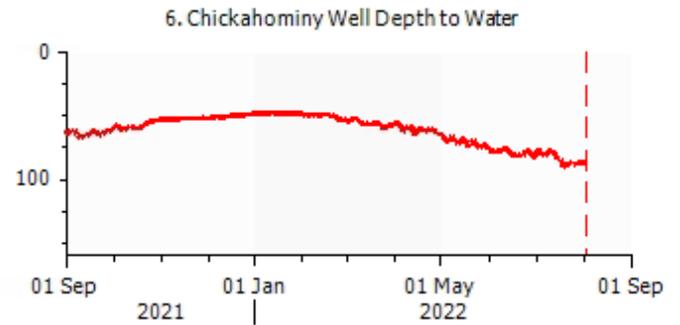
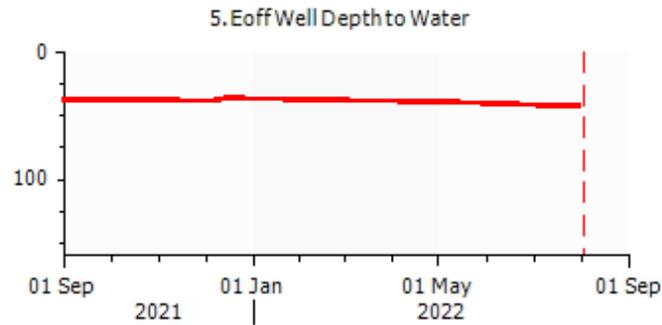
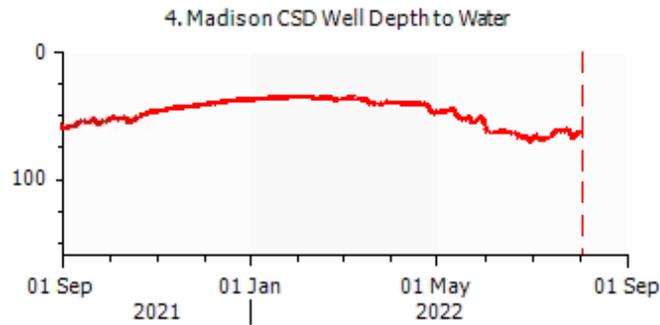
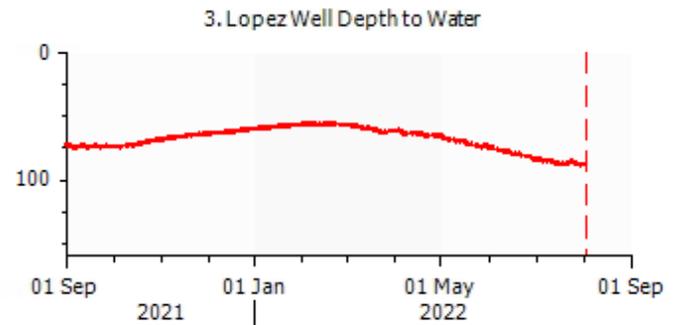
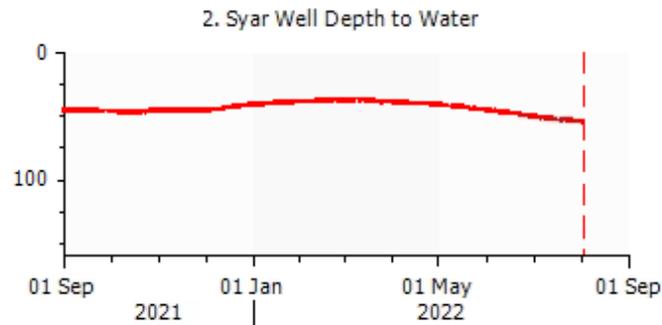
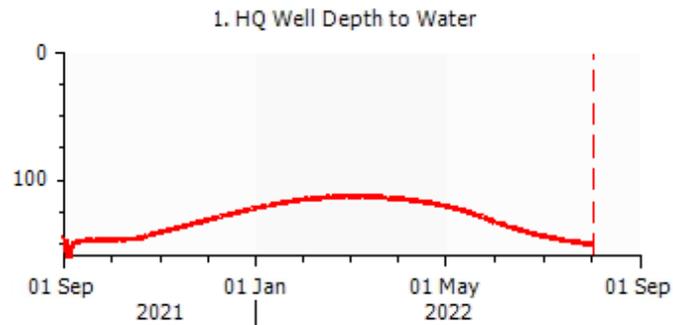
# 1. HQ Well Depth to Water

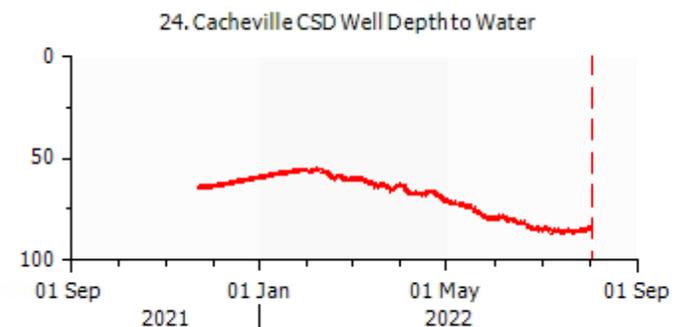
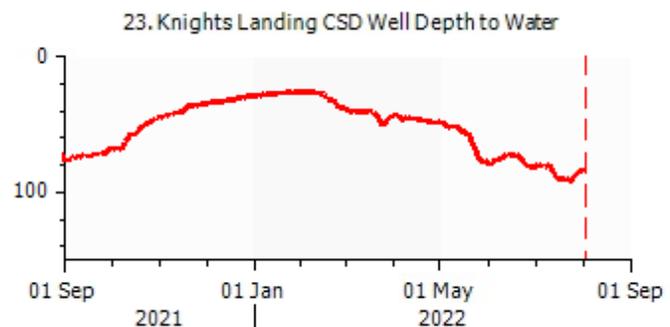
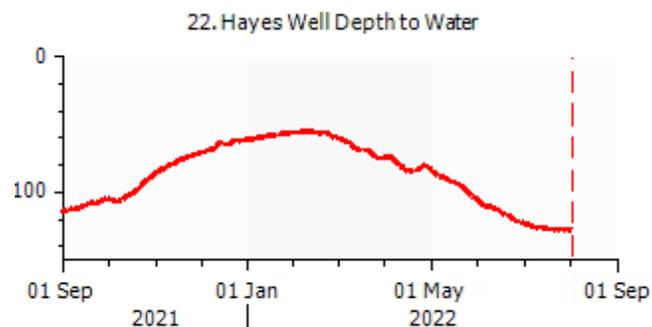
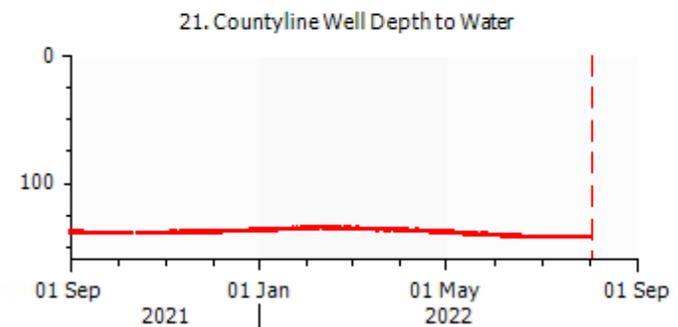
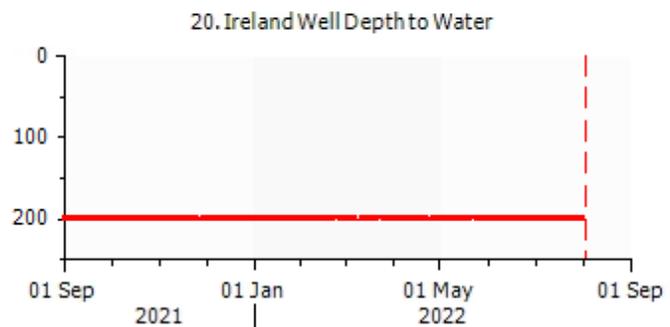
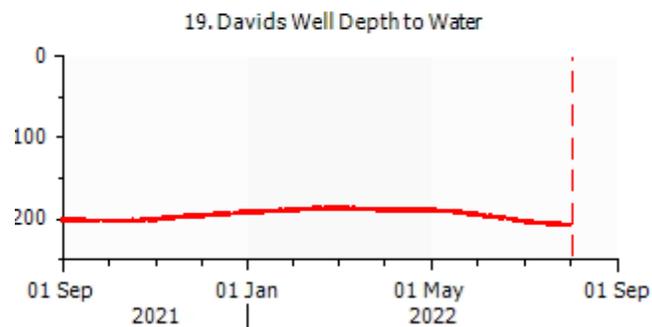
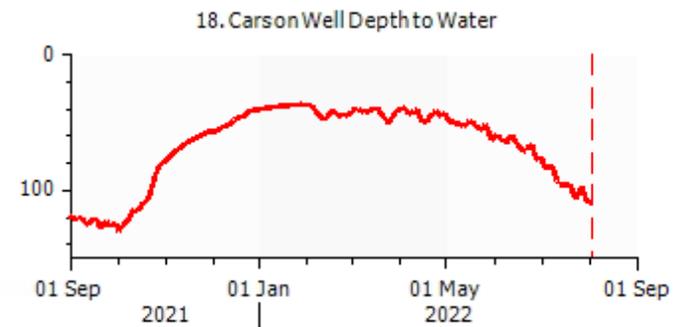
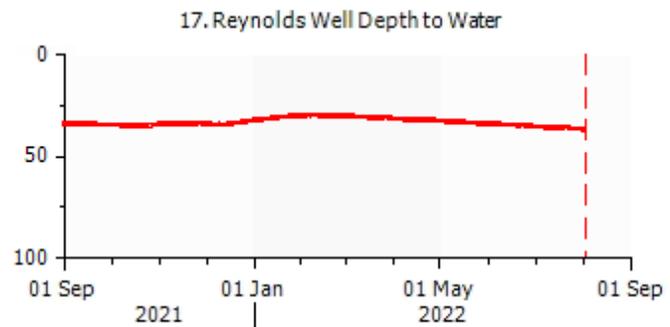
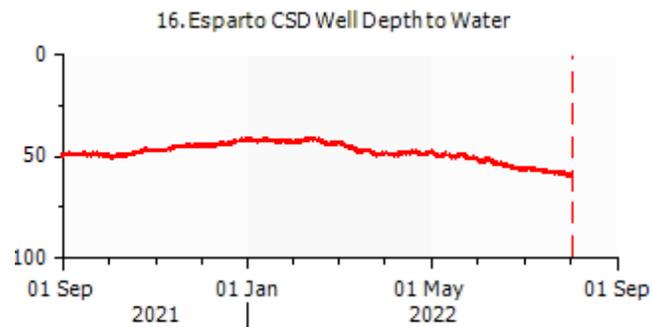
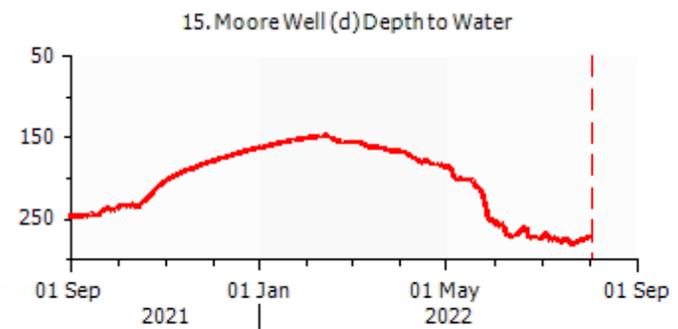
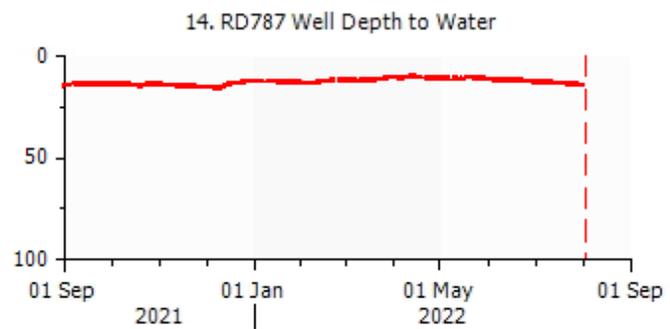
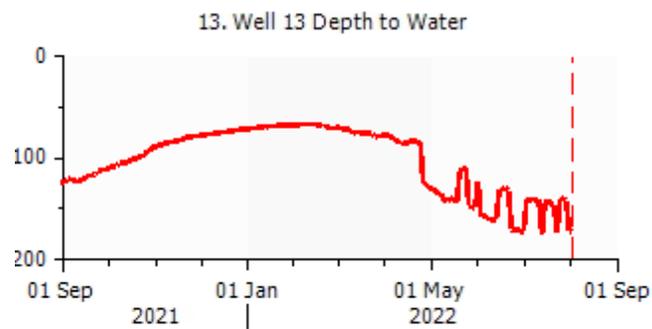


Depth to Water  
7/2/21: 133.9 feet  
8/2/21: 142.1 feet  
 $\Delta$  -8.2 feet

2021 Low: 9/8/21 = 148.1

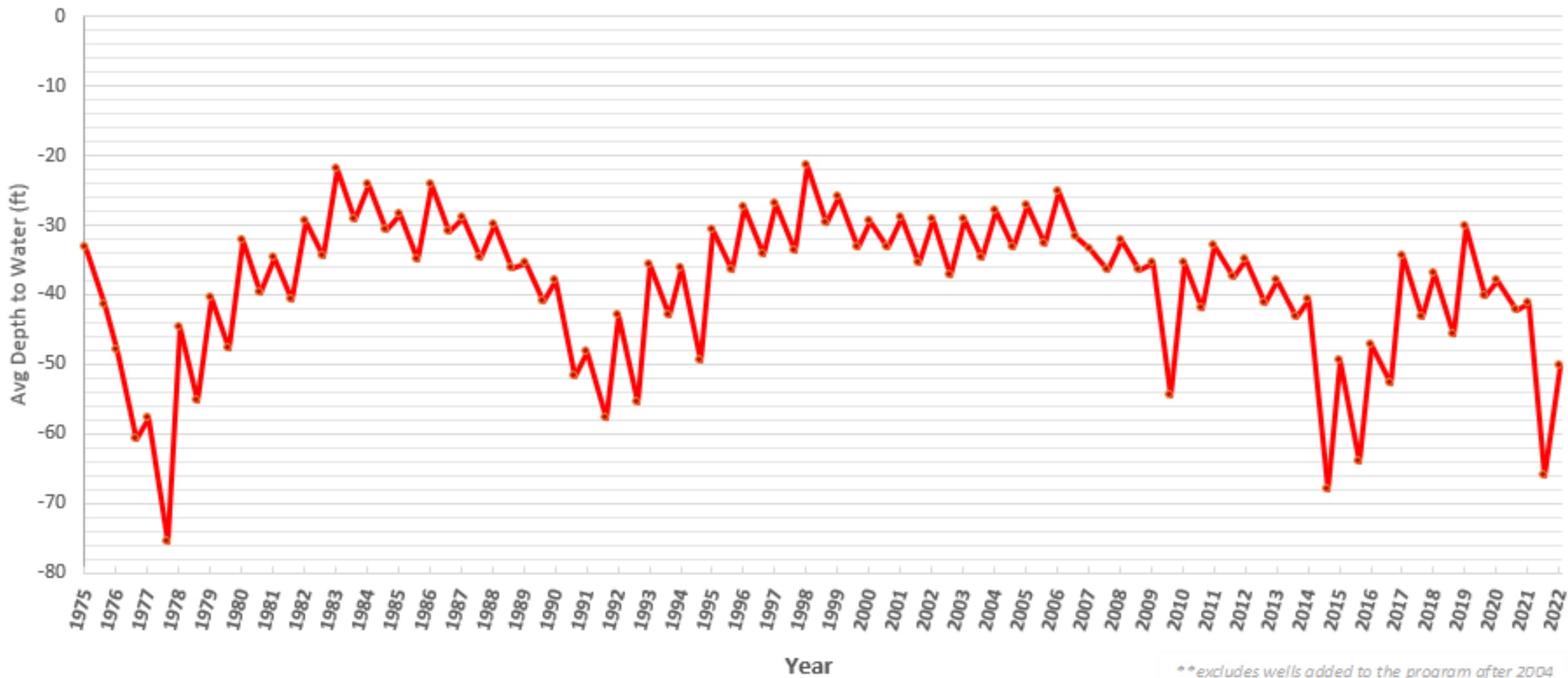
Depth to Water  
7/2/22: 144.1 feet  
8/2/22: 150.8 feet  
 $\Delta$  -6.7 feet





# YCFCWCD Average Groundwater

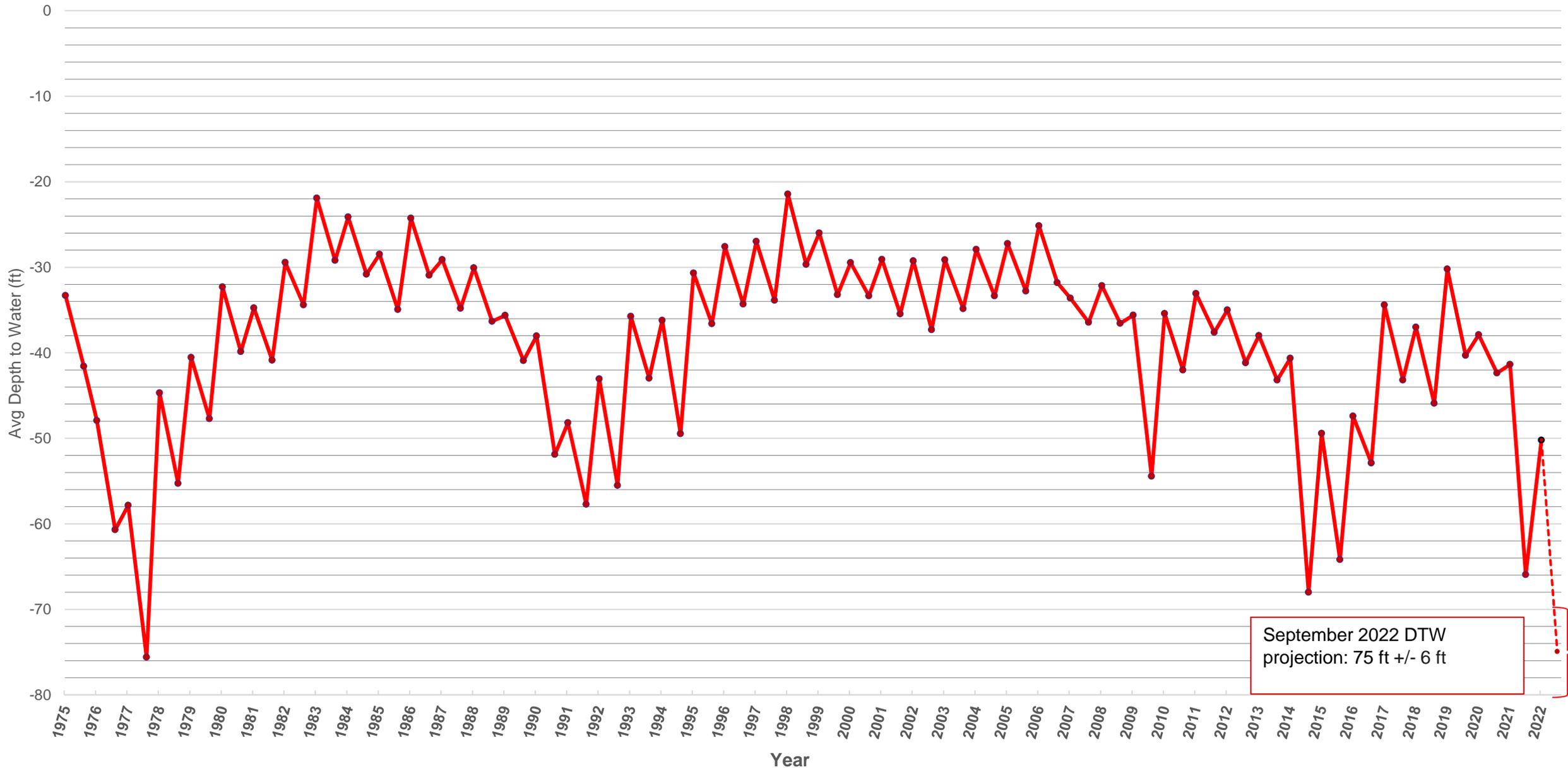
*Depth by Season (Spring 2022 is 131 wells)\*\**



*\*\*excludes wells added to the program after 2004*

# YCFCWCD Projected Average Groundwater

Depth by Season (Spring 2022 is 131 wells)\*\*



September 2022 DTW  
projection: 75 ft +/- 6 ft

# Curtailments Expanded throughout the Delta Watershed

*From the State Water Resources Control Board:*

**This email contains important information about the curtailment status of water rights and claims of right within the Sacramento-San Joaquin Delta (Delta) watershed** pursuant to Initial Orders Imposing Water Right Curtailment and Reporting Requirements in the Delta Watershed ([Order for water rights/claims under 5,000 acre-feet](#) and [Order for water rights/claims over 5,000 acre-feet](#)).

The following water rights are curtailed, effective June 8, 2022, unless and until the State Water Board advises that this determination has been updated:

1. Water rights and claims on the following [Sacramento River](#) tributaries:
  1. Post-1914 appropriative water rights and pre-1914 appropriative water right claims in the [Putah Creek](#) subwatershed outside of the Legal Delta with a priority date of 1850 or later;
  2. Post-1914 appropriative water rights and pre-1914 appropriative water right claims in the [Cache Creek](#) subwatershed with a priority date of 1859 or later;
  3. Post-1914 appropriative water rights in the [Bear River](#) subwatershed with a priority date of 1942 or later; and
  4. Post-1914 appropriative water rights in the [Stony Creek](#) subwatershed with a priority date of 1957 or later.

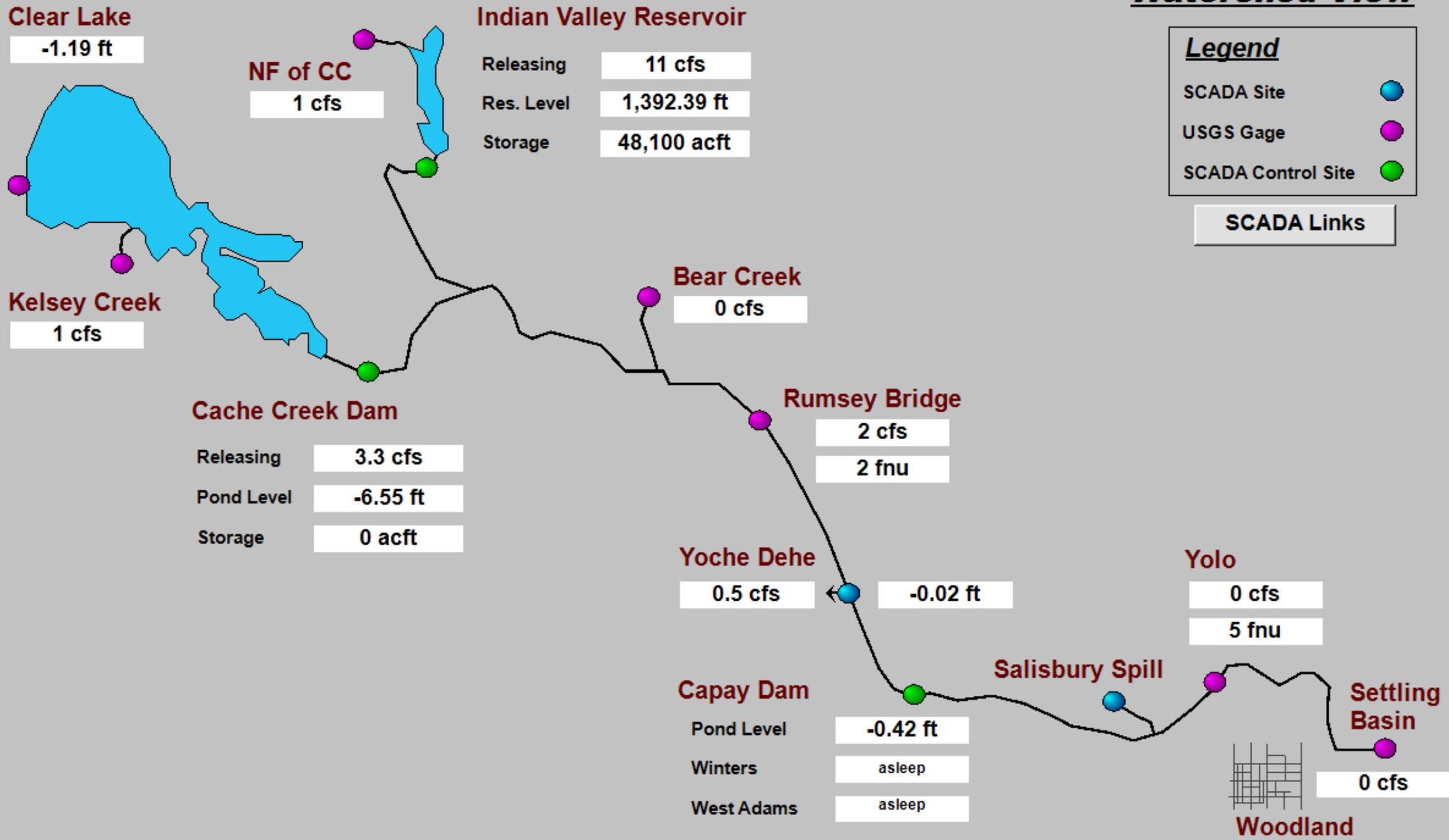
The above curtailments consider the following technical and policy inputs to the Water Unavailability Methodology for the Delta Watershed (methodology):

1. **Reimposition of curtailments based on the subwatershed-scale analysis.** As opportunities to divert limited snowmelt pass, the Deputy Director for Water Rights has determined in the exercise of his discretion under section 876.1, subdivision (d) of the [Drought Emergency Regulation](#) that the curtailments imposed today will account for both local water unavailability in headwater subwatersheds and watershed-wide conditions.
2. **Modification of demands for water rights and claims associated with contractual agreements with the U.S. Bureau of Reclamation (Reclamation) and the California Department of Water Resources.** Sacramento River Settlement Contractor and Feather River Contractor demands were reduced consistent with contractual agreements applicable this year and San Joaquin River Exchange Contractor demands were increased to account for demands for San Joaquin River water due to reduced deliveries of water from the Sacramento River watershed provided by Reclamation.
3. **No curtailment of rights and claims within the Legal Delta.** In coordination with the Office of the Delta Watermaster, Division of Water Rights staff are in the process of updating several technical assumptions regarding water unavailability within the Legal Delta. Pending completion of those updates, rights and claims within the Legal Delta will not be curtailed pursuant to the Drought Emergency Regulation. [Term 91](#) curtailments will continue to apply to rights within the Legal Delta containing Term 91.

The above curtailments factor in estimated agricultural and municipal return flows based on [CalSim 3](#) results for 1976 and reduced demands associated with [Central Valley Project](#) and [State Water Project](#) exports from the Delta under the State Water Board's April 4, 2022 [Order Approving Temporary Urgency Changes to Water Right License and Permit Terms Relating to Delta Water Quality](#).

<https://mavensnotebook.com/2022/06/07/this-just-in-curtailments-expanded-through-out-the-delta-watershed/>

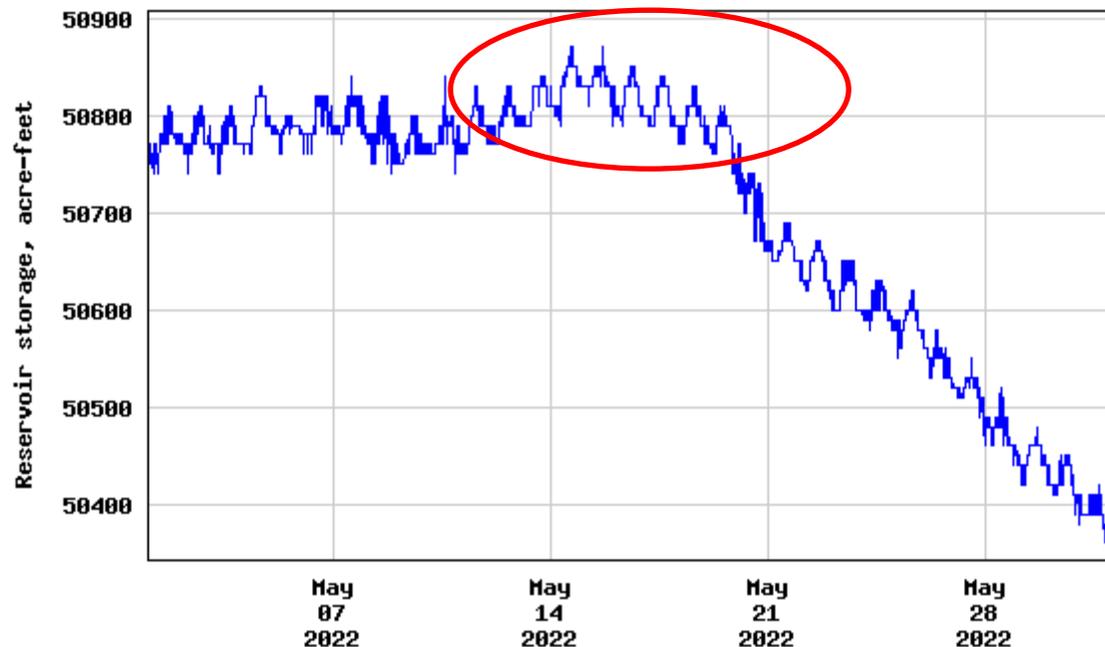
# Watershed View



# Reservoir storage, acre-feet

Most recent instantaneous value: 48090 08-02-2022 17:00 PDT

USGS 11451290 INDIAN VALLEY RES A CLEARLAKE OAKS CA



----- Provisional Data Subject to Revision -----

Gross Storage: 300,600 AF

\*\*\*DAILY READINGS ARE ON MIDNIGHT TO MIDNIGHT BASIS\*\*\*

Bottom of Pool: 1463.00 MSL

Day	Pool Elevation (MSL)	Storage (AF)	Mean In (CFS)	Mean Out (CFS)	Precip. @ Dams (In)			Hydro Unit #1		Hydro Unit #2		Hydro Unit #3
					IV	B.SPG	CCK	CFS	TIME RESET	CFS	TIME RESET	
1	1394.36	50,704	13	12.8	0.00	DIS	0.00					
2	1394.36	50,704	13	12.7	0.00	DIS	0.00					
3	1394.36	50,704	13	12.7	0.00	DIS	0.00					
4	1394.37	50,718	20	12.7	0.00	DIS	0.00					
5	1394.36	50,704	6	12.7	0.00	DIS	0.00					
6	1394.36	50,704	13	12.8	0.00	DIS	0.00					
7	1394.36	50,704	13	12.9	0.00	DIS	0.00					
8	1394.34	50,676	-1	12.9	0.00	DIS	0.02					
9	1394.34	50,676	13	12.9	0.01	DIS	0.01					
10	1394.42	50,788	69	12.8	0.00	DIS	0.07					
11	1394.41	50,774	6	12.8	0.01	DIS	0.01					
12	1394.42	50,788	20	12.9	0.00	DIS	0.00					
13	1394.44	50,816	27	12.9	0.00	DIS	0.00					
14	1394.45	50,830	20	13.1	0.00	DIS	0.00					
15	1394.44	50,816	6	13.1	0.00	DIS	0.00					
16	1394.43	50,802	6	13.1	0.00	DIS	0.00					
17	1394.42	50,788	6	13.2	0.00	DIS	0.00					
18	1394.41	50,774	6	13.2	0.00	DIS	0.00					
19	1394.44	50,816	34	13.2	0.00	DIS	0.00					
20	1394.34	50,676	-58	13.2	0.00	DIS	0.00					
21	1394.31	50,634	-8	13.2	0.00	DIS	0.00					
22	1394.30	50,620	7	13.6	0.00	DIS	0.00					
23	1394.29	50,606	6	13.5	0.00	DIS	0.00					
24	1394.27	50,578	-1	13.5	0.00	DIS	0.00					
25	1394.26	50,564	6	13.5	0.00	DIS	0.00					
26	1394.23	50,522	-8	13.5	0.00	DIS	0.00					
27	1394.21	50,494	-1	13.5	0.00	DIS	0.00					
28	1394.18	50,452	-8	13.2	0.00	DIS	0.00					
29	1394.17	50,438	6	13.2	0.00	DIS	0.00					
30	1394.13	50,382	-15	13.2	0.00	DIS	0.00					
31	1394.11	50,354	-2	12.2	0.00	DIS	0.00					
<b>Sum</b>			215.13	391.9	0.02	0.00	0.11					



KEEP AWAY

KEEP AWAY

# Preliminary Financial Report

Highlights as of July 31, 2022

# Preliminary Budget Summary as of 07/31/2022

Key Revenue Drivers	Year-to-Date	Budget	Difference
Agricultural Water Sales	\$28,400	\$84,500	(\$56,100)
Non-Agricultural (M&I) Water Sales	\$46,400	\$334,200	(\$287,800)
Property Taxes	\$104,200	\$1,657,600	(\$1,553,400)
IV Dam Hydro (less fees)	\$0	\$0	\$0
Other Revenue	\$204,600	\$716,000	(\$511,400)
<i>Shared Services Revenue</i>	<i>\$101,800</i>	<i>\$300,000</i>	<i>(\$198,200)</i>
<i>YSGA Reimbursements</i>	<i>\$70,800</i>	<i>\$275,000</i>	<i>(\$204,200)</i>
<i>Interest</i>	<i>\$12,000</i>	<i>\$20,000</i>	<i>(\$8,000)</i>
<i>Other</i>	<i>\$20,000</i>	<i>\$121,000</i>	<i>(\$101,000)</i>
<b>TOTAL REVENUE</b>	<b>\$383,600</b>	<b>\$2,792,300</b>	<b>(\$2,408,700)</b>

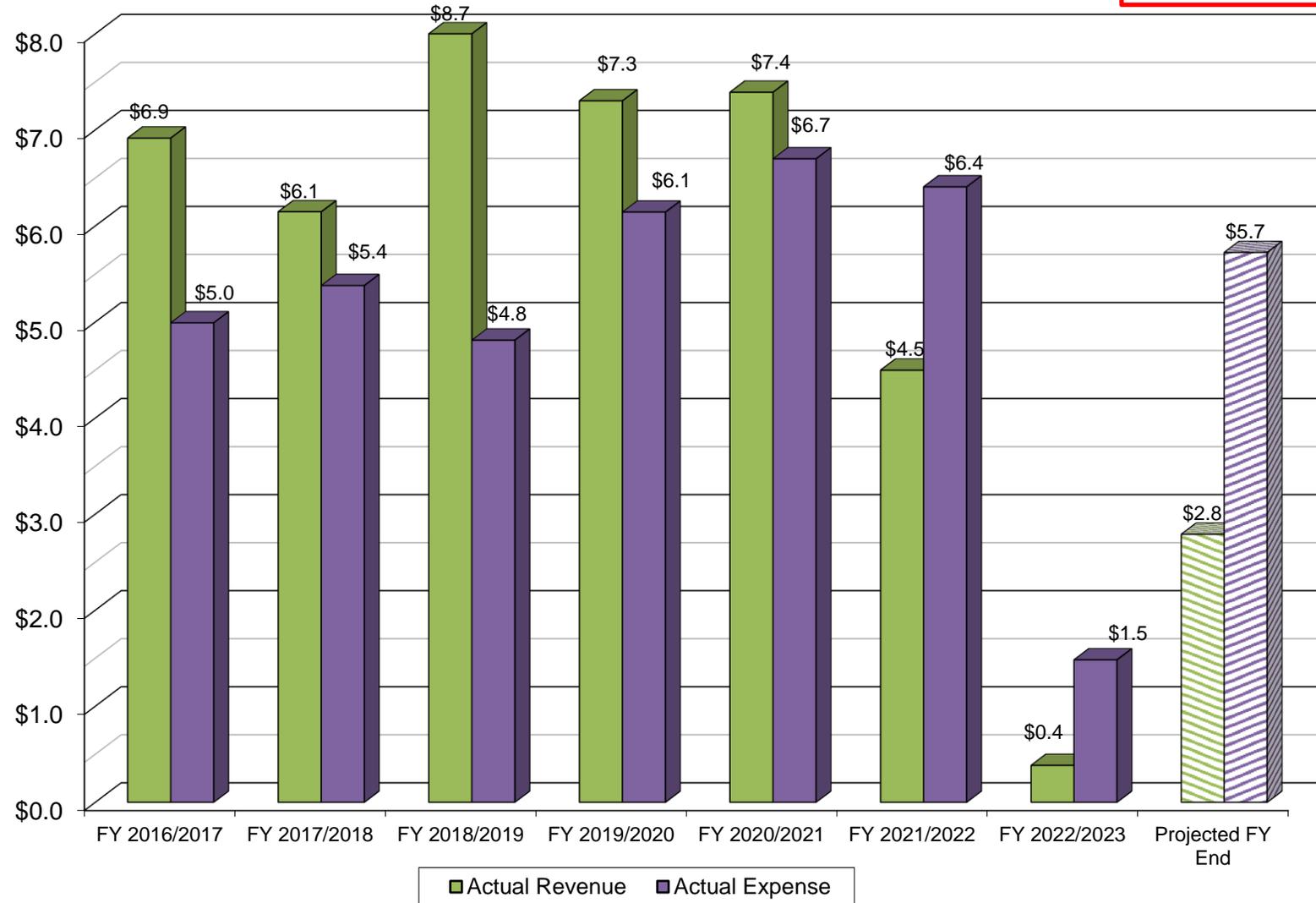
Key Expense Drivers	Year-to-Date	Budget	Difference
Transmission and Distribution (O&M)	\$179,600	\$1,060,200	(\$880,600)
General Administration	\$629,800	\$2,147,200	(\$1,517,400)
Other Expenses	\$673,300	\$2,652,700	(\$1,979,400)
<b>TOTAL EXPENSES</b>	<b>\$1,482,700</b>	<b>\$5,860,100</b>	<b>(\$4,377,400)</b>

# Preliminary Financial Report

Comparison of Actual Revenue vs. Actual Expense

Original Budget  
\$2.8 / \$5.9

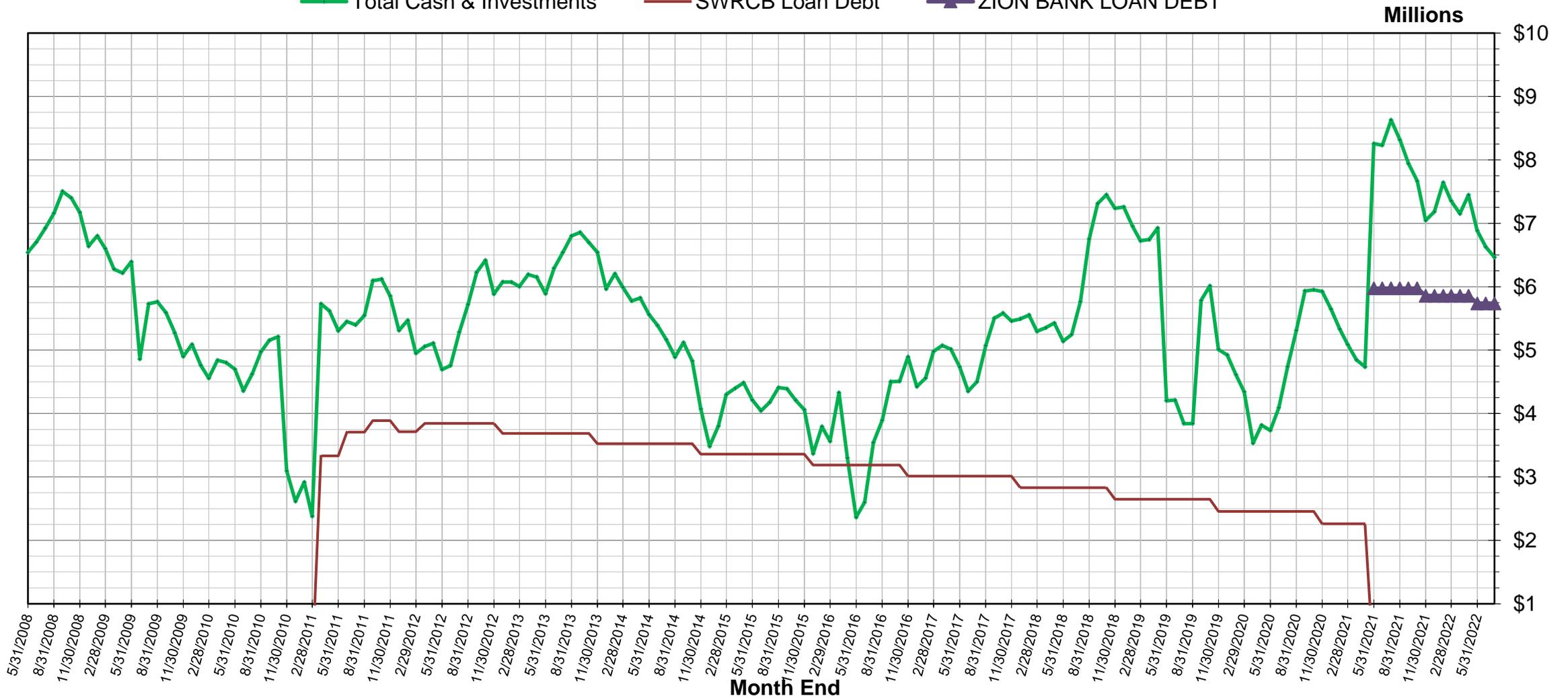
Millions



# Preliminary Financial Report

## Cash History

— Total Cash & Investments    — SWRCB Loan Debt    ▲ ZION BANK LOAN DEBT



# Capital Improvement Program

# Planning for Capital Jobs

## Capay Dam Alternatives Assessment

- Reliable, cost-effective solution with same operational flexibility
- Proposals for Replacement Alternatives Analysis (2/3 received)
- Quotes from HTE Engineering and Obermeyer for Cost of Installation of Replacement Bladder
- Reviewed Proposals with Infrastructure Committee on 3/30

## FY 22/23 Planning Activities Related to Large Capital Jobs

### Hungry Hollow Canal – Pipeline Extension Project



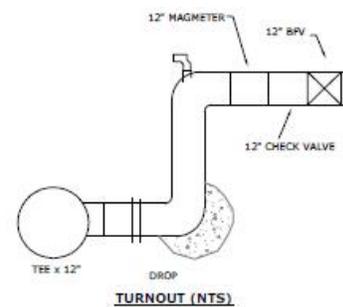


KEEP AWAY

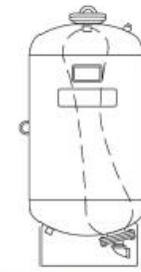
# Discussion of FY 22/23 Planning Activities Related to Large Capital Jobs

- Indian Valley Reservoir – 60” Hollow-Jet Valve Rebuild: ~\$200k
- FERC Part12D Recommendations
  - Photogrammetric Topo Survey of Eastern Ravine: ~\$30k
  - Potential Failure Mode Analysis Investigations: ~\$100k
  - Spillway Repair Project: ~\$300k (FY 23/24)
  - Dam Seepage Monitoring: ~\$500k (FY 23/24, maybe pushback)
  - Penstock and Spillway Gates Recoating Project: ~\$800k (FY 24/25)

# Update on Hungry Hollow Canal Pipeline Extension Project

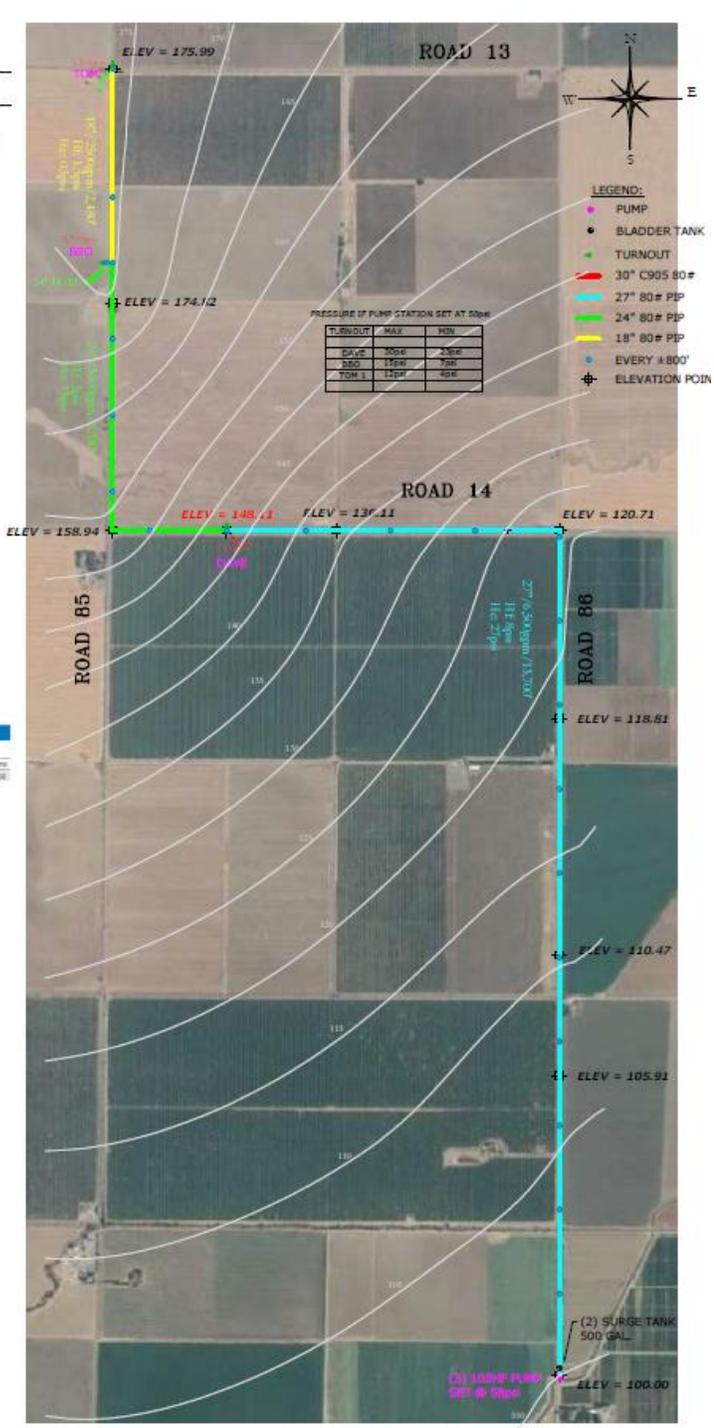
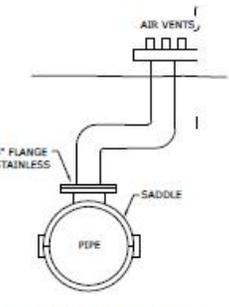
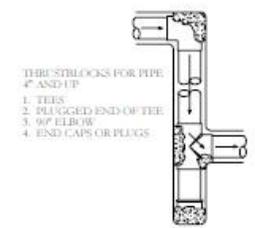


**BLADDER TANK**



**ASME Full Acceptance Bladder Series Specifications**

Model	TPA (Pounds)	Max. Allow. Working Pressure (PSI)	Max. Working Pressure (PSI)	Max. Working Volume (Gallons)
BLADDER	500	80	80	1,200
	800	80	80	1,500
	1,000	80	80	1,800
	1,500	80	80	2,200
	2,000	80	80	2,400



# General Activities (July 6-August 2)

## PROJECTS:

- **Personnel Issues**
- **LWA Assessment of Long-Term Funding Opportunities**
- **State Water Board Curtailment Inspection**
- **Maintenance on Canal System and Various Private Jobs**
  - **Creek Spraying for CCC and Chipper Program for Yolo RCD**
- **Capital Projects – small infrastructure projects and USBR WaterSMART Grant**
- **Paradise Valley Littoral Rights Review**
- **Weed Management (MERCOSA, NDM and Wild Wings CSAs, Madison and Knights Landing CSDs)**
- **Drought Assistance – Dry well checks (Contract with Yolo County OES)**
- **YSGA – Outreach; Well Permitting Procedures; GSP Grant Management; Groundwater Monitoring Program Improvements; Grant Opportunities; Neighboring Subbasin Coordination; Grey Area Projects and Outreach**
- **Shared services opportunities: Cacheville CSD (part-time GM), private jobs, spraying, etc.**
- **Voluntary Agreement Process/Dry Year Scenario Planning**
- **Grant Opportunities – Review of Solicitation Packages**
- **Wild Wings CSA and Madison/Knights Landing/Cacheville CSDs Groundwater Assistance and Drought Contingency Planning**
- **Encroachment Permits, Easement Research, Misc. Water Rights Investigations**

# General Activities (July 6-August 2)

## **OUTREACH:**

1. Meeting with SWB: Water Avail. Analysis for Winter Water Right (July 7)
2. WRA TC Ad Hoc Drought Task Force (July 8)
3. Meeting with DWR to Discuss TSS – New Monitoring Wells (July 13)
4. Westside IRWM CC Meeting (July 13)
5. Cacheville CSD Board of Directors Meeting (July 13)
6. CII Board of Directors Meeting (July 14)
7. Meeting with County CAO Gerardo Pinedo (July 14)
8. NCWA Voluntary Updates, Coordination Meeting (July 18)
9. YSGA: Coordination Meeting with CAFF (July 19)
10. Meeting with Supervisor Barajas Regarding Hungry Hollow Area (July 19)
11. YSGA: Hungry Hollow Groundwater Subcommittee Meeting (July 19)
12. Water Data Acctg. Platform Meeting with CA Water Data Con. (July 20)
13. Meeting with Assemblymember Bennett's Office (July 21)
14. YSGA: Collaboration with VCE (July 22)
15. Shared Services Opportunity with SCWA (July 22)
16. NCWA Recharge Discussion with DWR (July 22)
17. WRA / YSGA Executive Committees' Meetings (July 25)
18. Tour of Capay Dam with Congressman Thompson (July 25)
19. ACWA Water Management Committee (July 26)
20. YSGA: N. Winters/GB Area of Special Concern Planning (July 27)
21. WRA TC Ad Hoc Drought Task Force (July 29)

# **YSGA UPDATE**

# YSGA 2022 Q3 Activities

- Well Permitting Process
- GSP Implementation – *Special Projects Advisor*
  - Management Area Advisory Committees
  - Reconsideration of Voting and Fees (Ad Hoc Meeting 8/8)
  - WRA Merger into YSGA
  - Prioritizing projects / preparing grant applications (YSGA WG Meetings: 8/3 and 8/31)
- Ad Hoc Drought Contingency Planning Committee Meeting (8/10)
  - Groundwater Communications Plan
  - Local planning strategies; MA for drought conditions; coordination with Yolo County (well permitting procedures)
- FY 2021 Audit
- WRA TC Ad Hoc Drought Task Force Meetings (SB 552: Drought/Water Shortage Planning)

# Upcoming Meetings & Events

1. YSGA: Working Group Meetings ([August 3 and 31](#))
2. WRA TC Ad Hoc Drought Task Force ([July 8](#))
3. YSGA: Coordination Meeting with North American Subbasin ([August 4](#))
4. Lower Cache Creek Reserve Unit Management Plan ([August 5](#))
5. NCWA: North State Drinking Water Solutions Network Meeting ([August 5](#))
6. YSGA: Ad Hoc Committee Meeting to Reconsider Voting and Dues (and WRA Merger to YSGA) ([August 8](#))
7. NCWA Coordination Meeting ([August 9](#))
8. Woodland Chamber Water Committee Meeting ([August 10](#))
9. YSGA: Ad Hoc Drought Contingency Planning Committee ([August 10](#))
10. Yolo County Financial Oversight Committee Meeting ([August 11](#))
11. Meeting with Paradise Valley Ranch Property Owner ([August 11](#))
12. NCWA: VA Updates, Coordination ([August 15](#))
13. Coordination Meeting with CAO Pinedo ([August 18](#))
14. Nitrate Management Zone Planning for Yolo County ([August 18](#))
15. WRA TC Ad Hoc Drought Task Force ([August 18](#))
16. CSDA Annual Leadership Conference ([August 22-25](#))
17. Yolo Land Trust's A Day in the Country: River Garden Farms ([September 25](#))

# Agenda Item #10

## General Discussion

**Opportunity for Board Members to ask questions for clarification, provide information to staff, request staff to report back on a matter, or direct staff to place a matter on a subsequent agenda.**

# Agenda Item #11

## Payment of Bills

Consider the approval and payment of the bills  
(Checks #61428-61437)



# Agenda Item #12

## Closed Session: Bay-Delta

Conference with legal counsel for existing administrative proceeding and anticipated litigation/significant exposure to litigation pursuant to Government Code 54956.9, subsections (d)(1) and (d)(2) – State Water Resources Control Board Bay/Delta Plan update proceeding.

# Closed Session Report

Agenda Item #13

Adjourn