

EKI TECHNICAL PRESENTATION #27

WHITE WOLF GSA BOARD OF DIRECTORS

7 MARCH 2023

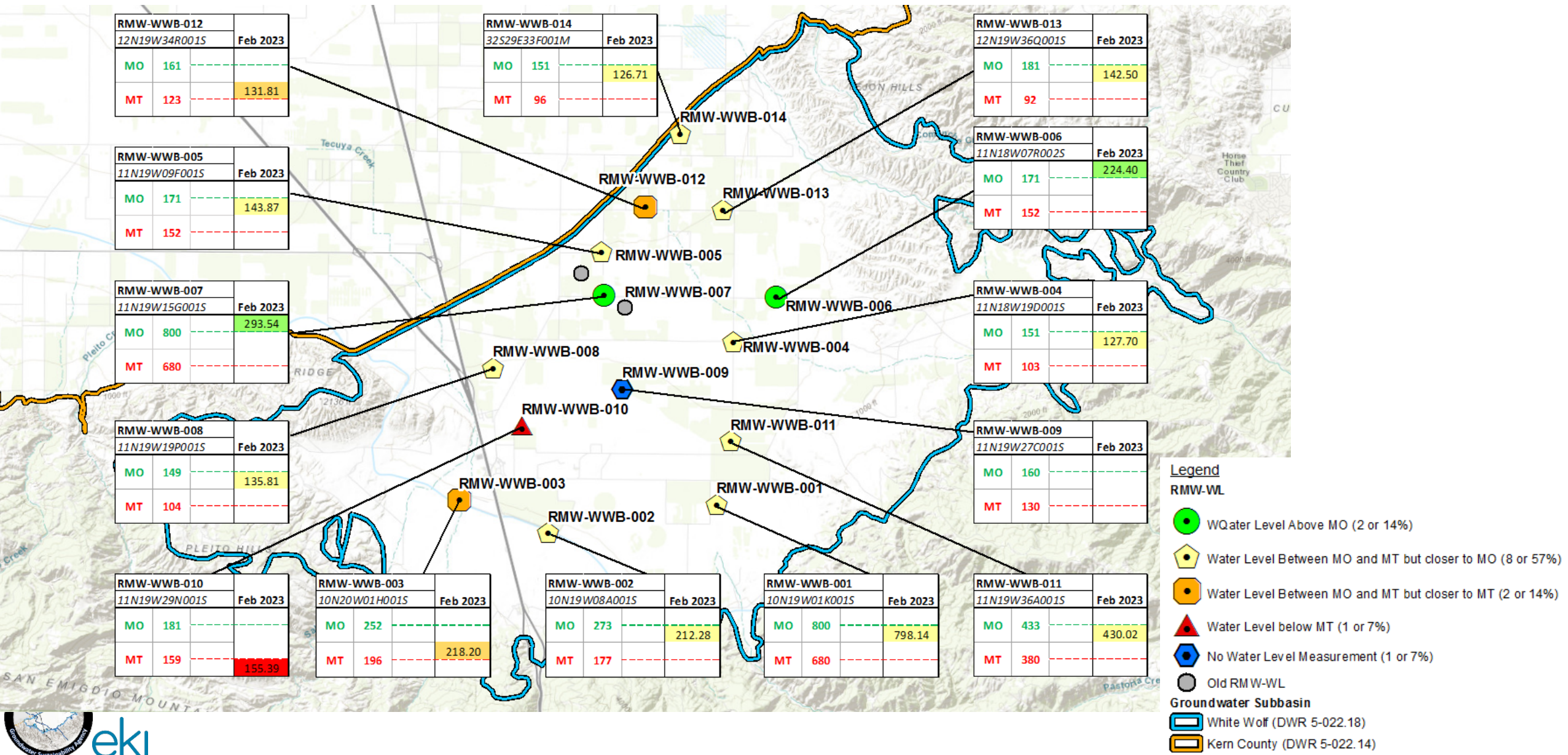


OUTLINE – AGENDA ITEM #4

- Update on Groundwater Sustainability Plan (GSP) implementation activities
 - February 2023 groundwater levels
 - Water Year (WY) 2022 Annual Report
- Round 2 Multibenefit Land Repurposing Program Grant Application
- Projects/Management Actions (P/MAs) Committee

4a. GSP IMPLEMENTATION UPDATES

FEBRUARY MEASUREMENTS COMPARED TO SMCS



WY 2022 ANNUAL REPORT

- 1 October 2021 through 30 September 2022
- Awaiting forthcoming evapotranspiration (ET) data from Land IQ, expected to be received on March 10th.
 - WY 2021 ET has been repeated for WY 2022 to estimate agricultural pumping and change in groundwater storage reported herein.

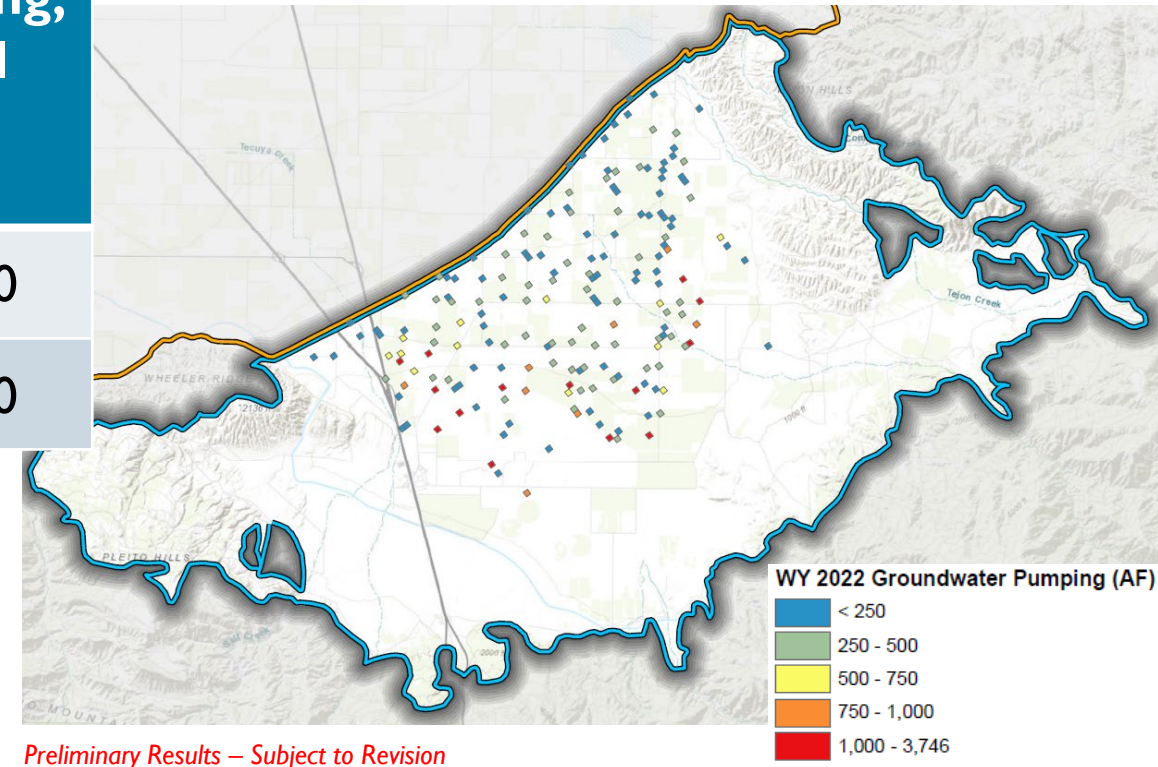
GROUNDWATER USE BY SECTOR AND SOURCE

Table 1. Summary of Groundwater Extraction Data by Sector and Source

Water Year	Pumping, Agricultural (AF)		Pumping, Municipal & Industrial (AF)	Pumping, Total (AF)
	Metered	Estimated		
2021	21,627	51,154	619	73,400
2022	19,412	48,719	569	68,700

- Agricultural pumping is estimated by the Basins’ Soil Moisture Budget (SMB) accounting model
- Municipal & Industrial (M&I) pumping for January – September 2022 is estimated, as reported values are not yet available
- Does not include domestic de minimus (< 2 AFY) pumping

Figure 6. General Location of Groundwater Extractions, WY 2022



Preliminary Results – Subject to Revision

TOTAL WATER USE BY SECTOR AND SOURCE

Table 3. Total Water Use by Sector

Water Year	Agriculture (AF)				M&I (AF)		
	Metered Pumping	Estimated Pumping	Imported Water	Stream Diversions	Pumping	Imported Water	Recycled Water
2021	21,627	51,154	34,061	1,128	619	3,777	77
2022	19,412	48,719	33,625	2,751	569	3,022	83

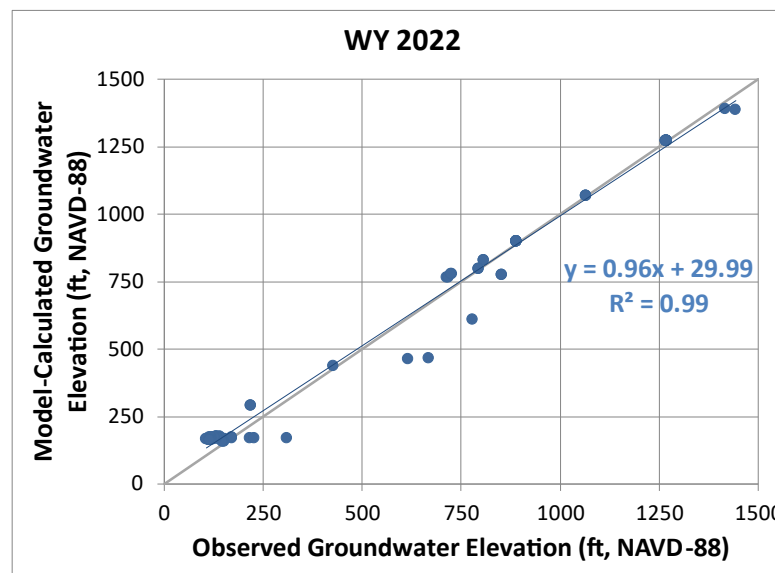
Preliminary Results – Subject to Revision

- Total water use in WY 2022: 108,182 AFY
 - 97% is for agricultural use
 - 64% is from groundwater pumping

CHANGE IN GROUNDWATER STORAGE

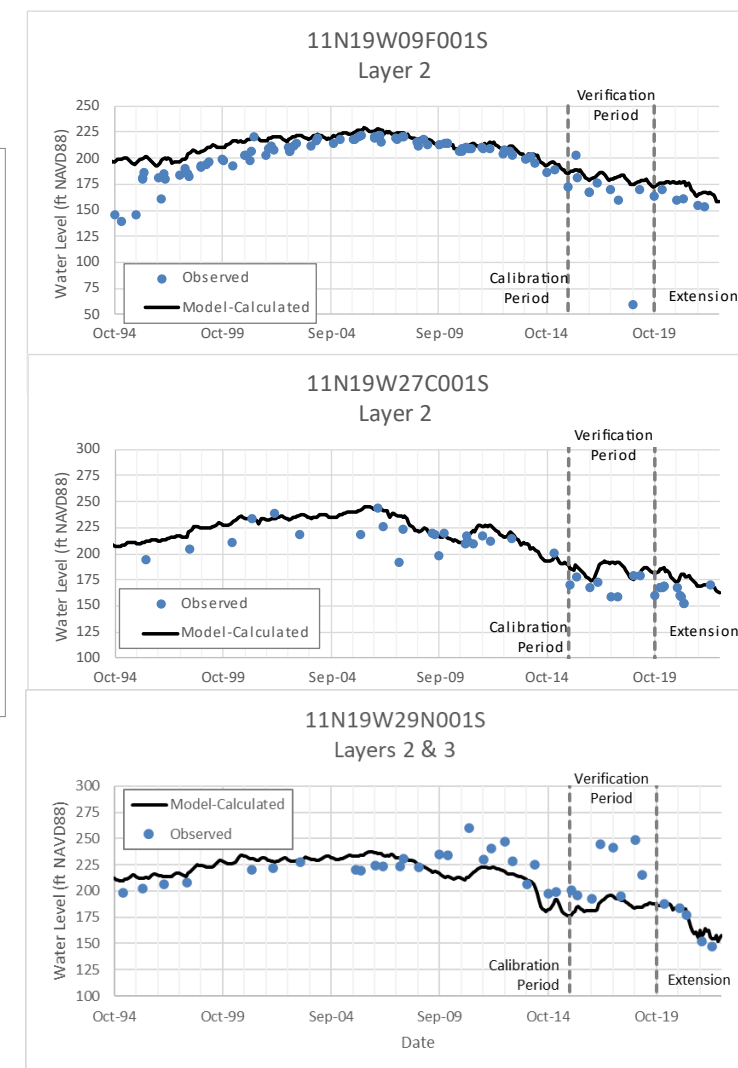
- Extended the White Wolf Groundwater Flow Model through WY 2022
 - Precipitation
 - Water delivery / pumping
 - ET:
 - Metric ET repeated from WY 2021 for this meeting
 - Land IQ ET to be used for report, anticipated March 10th
 - Seasonal land use
 - Boundary conditions
 - Confirmed model performance against measured water levels

Figure 7. Modeled versus Observed Water Level Elevation in Wells



Preliminary Results – Subject to Revision

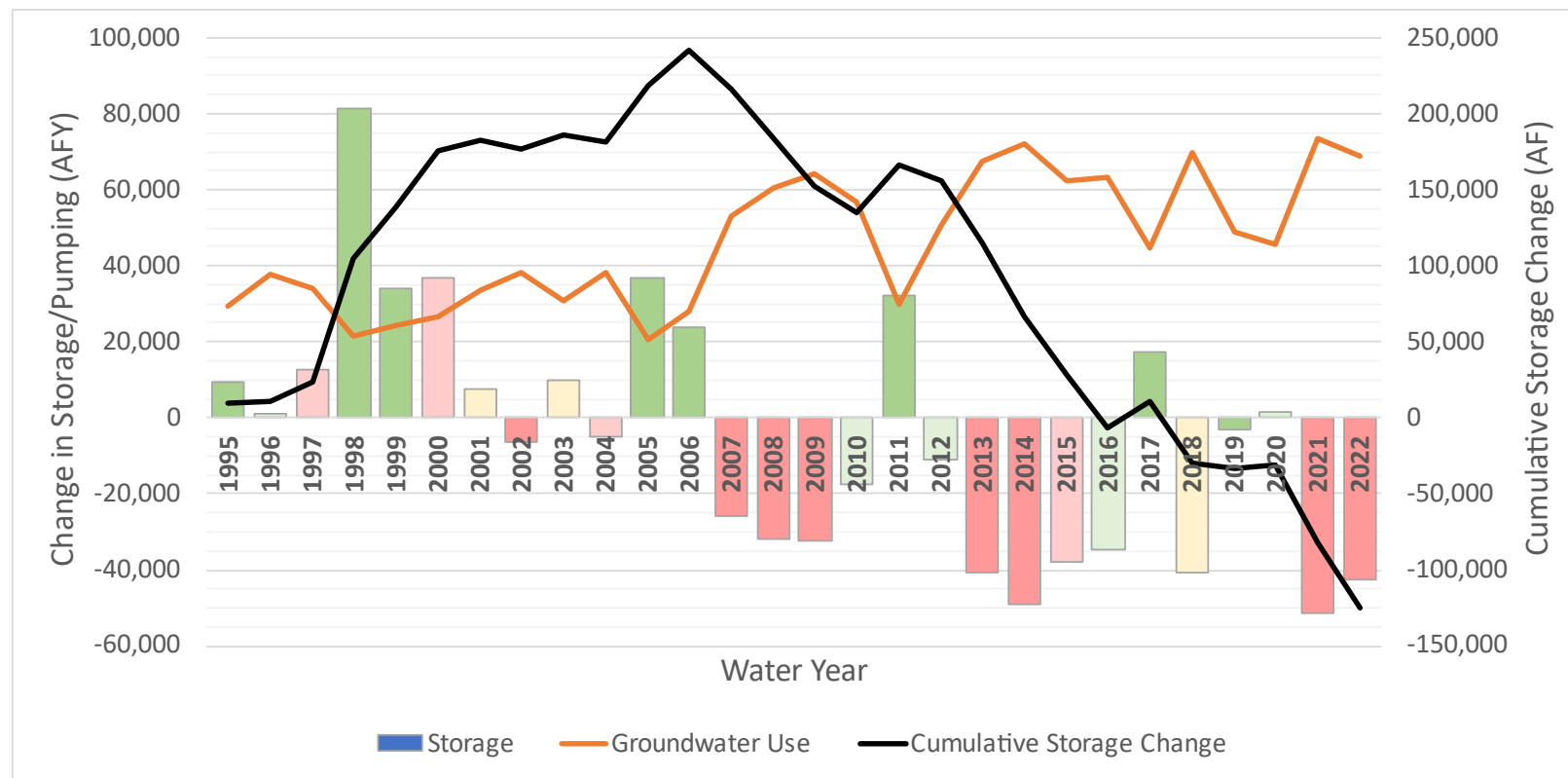
Example hydrographs:



CHANGE IN GROUNDWATER STORAGE

- WY 2022 Basin-wide change in storage: **-42,600 AF**

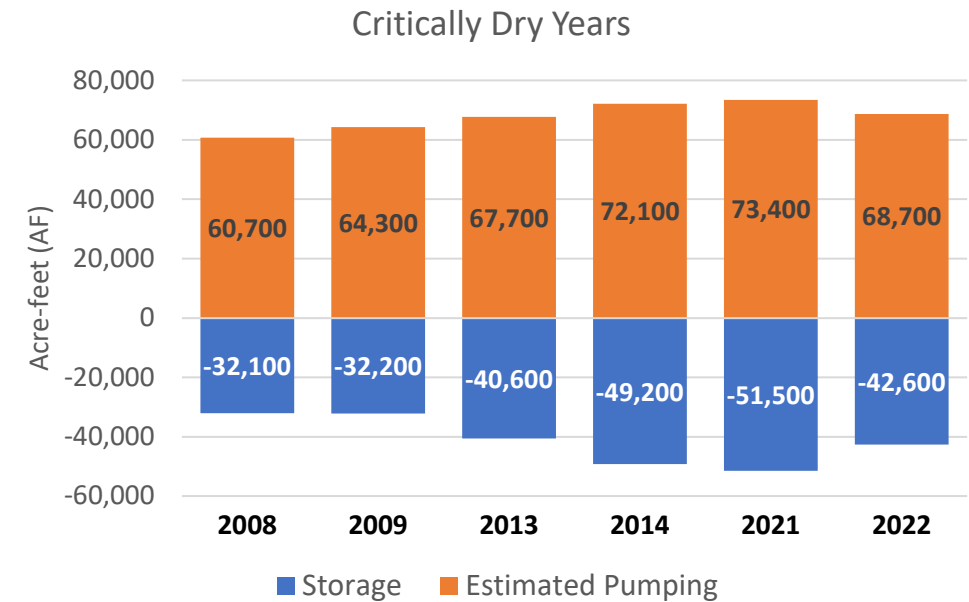
Figure 9. Annual Change in Groundwater Storage and DWR Water Year Type



Preliminary Results – Subject to Revision

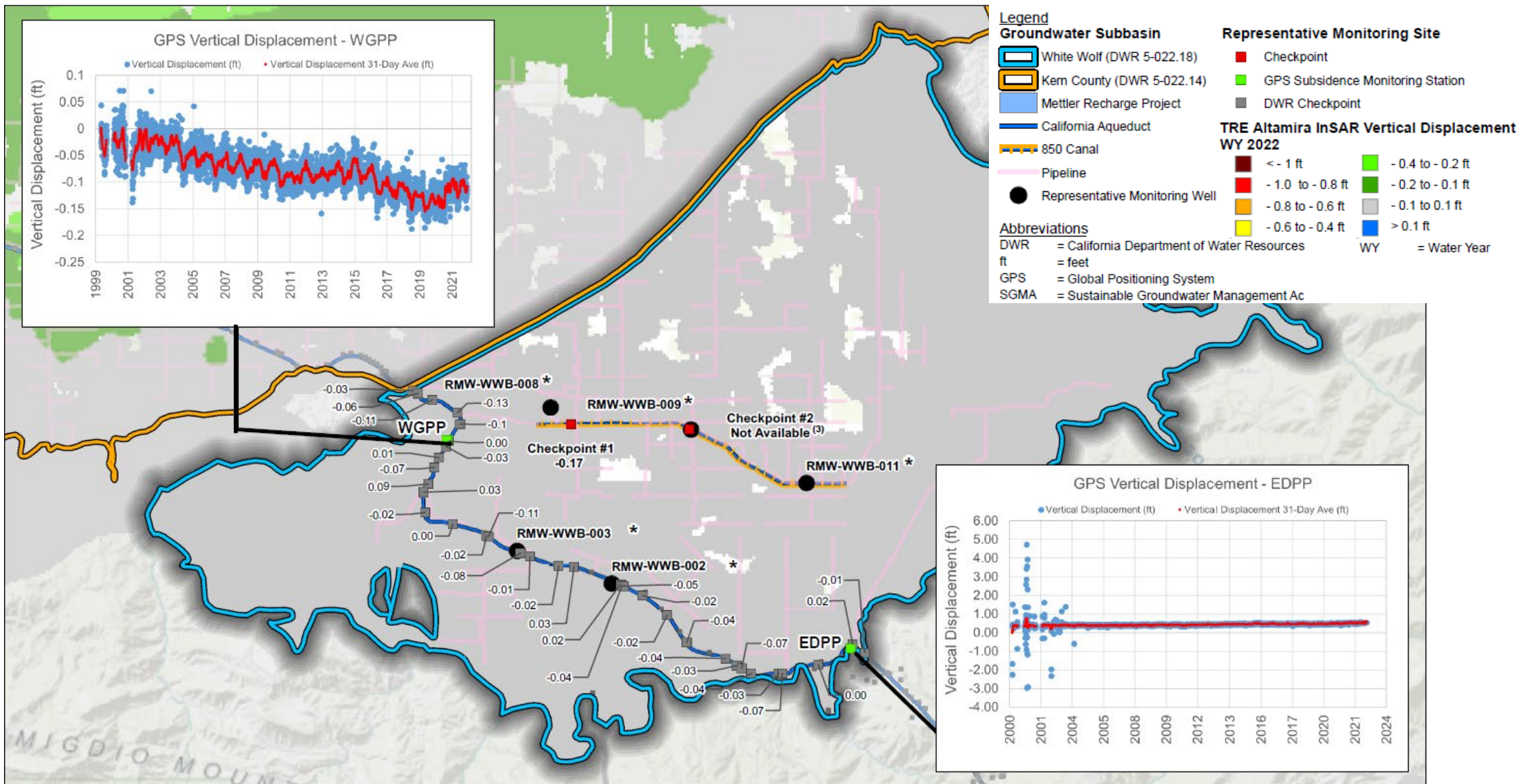
CHANGE IN GROUNDWATER STORAGE

- In the past 15 years, six years are critical dry years (CDY)
- Change in storage in WY 2022, a CDY, is comparable to change in storage in other CDYs (ranged from -32,100 to -51,500 AFY)



Preliminary Results – Subject to Revision

LITTLE SUBSIDENCE MEASURED DURING WY 2022



EXECUTIVE ORDER N-3-23 (SIGNED 13 FEBRUARY)

- Continued support for expedited recharge project permitting:
 - “2. To maximize the extent to which winter precipitation recharges underground aquifers, the Department of Water Resources, the State Water Resources Control Board (Water Board), and the Department of Fish and Wildlife shall continue to collaborate on expediting permitting of recharge projects and shall work with local water districts to facilitate recharge projects.”
- Updates to well permit language:
 - “This Paragraph shall not apply to permits for wells (i) that will provide less than two acre-feet per year of groundwater for individual domestic users, (ii) that will exclusively provide groundwater to public water supply systems as defined in section 116275 of the Health and Safety Code, or (iii) that are replacing existing, currently permitted wells with new wells that will produce an equivalent quantity of water as the well being replaced when the existing well is being replaced because it has been acquired by eminent domain or acquired while under threat of condemnation.”

4b. ROUND 2 MULTIBENEFIT LAND REPURPOSING PROGRAM (MLRP) GRANT APPLICATION

ROUND 2 MLRP APPLICATION STATUS UPDATE

- Working with the PMA Committee to update the Round 1 application
- Key take-aways from DOC and applicant workshop on 2/22
 - Program benefits must last at least 10 years
 - Recharged water must stay in ground for this time
 - Does not eliminate transitional overdraft allocations (like LandFLex would)
 - Grant funds can be used for incentive payments to farmers for repurposing land, though another funding source will be required post-2027

ROUND 2 MLRP TIMELINE

Applications Due	29 March 2023
Decisions announced	June 2023
Enter grant agreement with DOC	July/ August 2023
Last reimbursable expenditures	March 2027
End of program	June 2027

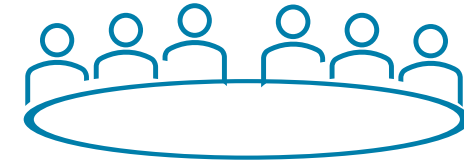
4c. P/MAS COMMITTEE

P/MA COMMITTEE KICK-OFF

- TAC kickoff meeting held 9 February
 - Three landowner participants
- Initial priorities
 - Landowner recharge
 - Finalize and submit the Round 2 MLRP application
- Feedback received included uncertainty in TAC objective
 - Will include key meeting objective at top of future agendas
- Conducted successful direct outreach to additional landowners following the kickoff meeting
- Next meeting will be held **this Thursday 9 March 2023**

COMMITTEE CONSOLIDATION

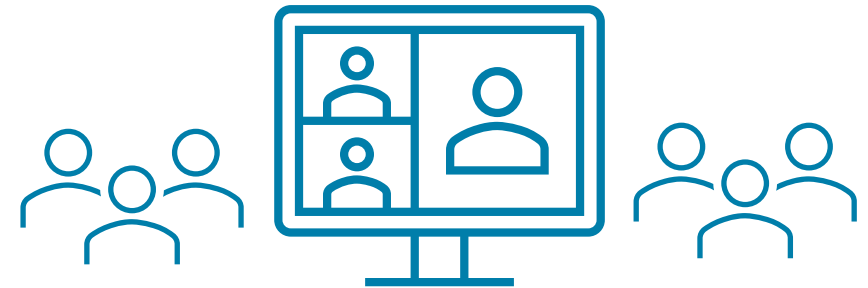
- Inefficiencies in holding multiple duplicative meetings
- Technical Committee proposes to consolidate Board Ad-hoc Committee meeting into the 3rd monthly meeting so that Board Ad-hoc members have opportunity to hear directly from landowners
- ***Agenda Item #5 – Board Action Item to re-consider Committee structure***



Board Ad-hoc Committee to provide policy recommendations to WWGSA Board



TAC to provide detailed review and technical guidance to Board Ad-hoc Committee



AGENDA ITEM #6 – GSP IMPLEMENTATION SUPPORT

- EKI Task Order for WY 2023
GSP Implementation
Support through 1 April
2024
- Goal is to transition all field-based work to GSA-member district staff by end of WY 2023
- Does not include grant-contingent tasks

Task	Cost Estimate
Task 1 – GSP Implementation	\$ 137,000
Task 2 – Reporting	\$ 58,000
Task 3 – Stakeholder Outreach and Coordination	\$ 99,000
Task 4 – As needed Support	\$ 30,000
TOTAL:	\$ 324,000
<i>Per District Total:</i>	<i>\$108,000</i>