



DIRECTORS
NICK BRUNO, PRESIDENT
JEFFREY D. COULTHARD, VICE PRESIDENT
AMBER MENDOZA, TREASURER
ERIC BREAM
DANNY HOFFMAN
LYNN HOFFMAN
BRICE JONES

JULIA D. BERRY, GENERAL MANAGER/SECRETARY
MIKE CUTTONE, ASSISTANT TREASURER
BRIAN EHLERS, DISTRICT ENGINEER
LAUREN D. LAYNE, LEGAL COUNSEL

**REGULAR MEETING OF THE
ROOT CREEK WATER DISTRICT
GROUNDWATER SUSTAINABILITY AGENCY**

AGENDA

will be held on

Monday, April 11, 2022

11:00 a.m.

**(or immediately following the Root Creek Water District Board of
Directors meeting)**

at the Lodge at Riverstone
370 Lodge Road
Madera, CA 93638

1. CALL TO ORDER

REGULAR MEETING OF THE BOARD OF DIRECTORS

2. ADDITIONS TO THE AGENDA

(The Board may add an item to the agenda if, upon a two-thirds vote, the Board finds that there is a need for immediate action on the matter and the need came to the attention of the District after the posting of this Agenda).

3. PUBLIC COMMENT

Members of the public may address the Board on any matter related to the District that is not included on the Agenda. Comments are limited to five (5) minutes per person.

4. POTENTIAL CONFLICT(S) OF INTEREST

(Any Board member who has a potential conflict of interest may now identify the item and recuse himself or herself from discussing and voting on the matter).

5. MINUTES

- a. Review and consider action to accept the minutes from the meeting on March 14, 2022.

6. CORRESPONDENCE

(Members of the Board or Staff may provide comment on any timely matter related to the District that is not included on the agenda).

7. STAFF REPORT

- a. **General Manager** – The Board may take action on any of the following items:
 - i. Madera Subbasin Status Update
 - ii. Governors Executive Order RE: Well Permitting
 - iii. GSP Annual Reports Overview
 - iv. Other items as needed

8. ADJOURN

- Items on the Agenda may be taken in any order.
- Action may be taken on any item listed on the Agenda.
- Writings relating to open session Agenda items that are distributed to members of the Board of Directors will be available for inspection at the District office, excluding writings that are not public records or are exempt from disclosure under the California Public Records Acts.
- **ACCOMMODATIONS FOR PERSONS WITH DISABILITIES**
A person with a qualifying disability under the Americans With Disabilities Act of 1990 may request the District to provide a disability-related modification or accommodation in order to participate in any public meeting of the District. Such assistance includes appropriate alternative formats for the agendas and agenda packets used for any public meetings of the District. Requests for such assistance and for agendas and agenda packets shall be made in person, by

telephone, or by written correspondence to the District at (559) 970-8778 or P.O. Box 27950, Fresno, California 93729, at least 48 hours before a District meeting.



MANAGING RESOURCES FOR A BETTER FUTURE

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**Minutes of the Meeting of the Board of Directors
Root Creek Water District
Groundwater Sustainability Agency (GSA)
held on
March 14, 2022**

1. Call to Order:

The regular meeting for the Root Creek Water District GSA was called to order at 11:48 a.m. at the Lodge at Riverstone by President Nick Bruno. Board members present were Nick Bruno, Jeff Coulthard, Amber Mendoza, Lynn Hoffman, Dan Hoffman, Eric Bream, and Brice Jones. Members of the public included Julia Berry, Gabriel Delgado, Al Solis, Jason Staicer, and Angela Perez.

2. Additions to the Agenda:

There were no additions to the agenda.

3. AB 361 Resolution:

There was a motion by Director L. Hoffman, seconded by Director Coulthard, and the motion carried to approve the AB 361 Resolution.

4. Public Comment:

There was no public comment.

5. Potential Conflicts of Interests:

There were no conflicts identified.

6. Approval of GSA Meeting Minutes:

Director Coulthard made a motion to approve the minutes from January 24, 2022, GSA board meetings, seconded by Director D. Hoffman. The motion carried.

7. Correspondence

There was no correspondence to report.

8. New Business New Business

a. 2021 SGMA Implementation Grant Program Resolution

Director Jones made a motion to allow the district to be the administrator and recipient of the SGMA Implementation Grant Program to represent all 7 GSAs in Madera County. Director L. Hoffman seconds the motion and the motion passes.

9. Staff Report

There is no report.

10. Adjournment:

The meeting was adjourned by general consensus at 11:52 a.m.

Julia D. Berry, District Secretary

DRAFT



Drought Well Permitting Requirements

Drought Executive Order N-7-22

On March 28, 2022 Governor Newsom issued [Drought Executive Order N-7-22](#) that included new well permitting requirements for local agencies to prepare for and lessen the effects of drought conditions (Action 9).

Well Permitting Authority and Groundwater Management Oversight

In California, regulatory authority over well construction, alteration, and destruction activities resides with local agencies (cities, counties, or water agencies), who have the authority to adopt a local well ordinance. Well permits are administered and enforced by local agencies (or local enforcing agencies, [LEAs](#)), often the Department of Environmental Health within a given county.

With the enactment of the Sustainable Groundwater Management Act ([SGMA](#)) in 2014, local public agencies – called [groundwater sustainability agencies](#) or GSAs – formed to provide specific oversight and management of groundwater resources, and to achieve sustainable groundwater management within 20 years through the development and implementation of groundwater sustainability plans (GSPs) and associated projects and management actions. The local GSAs are required to include in their GSPs a discussion of how they will coordinate these efforts with local land use authorities, including local well permitting agencies.

Drought Well Permitting Requirements

Local well ordinances authorize the conditions for agencies to issue a well permit or permit modification. Given the record drought conditions the state has faced over the last three years, Drought Executive Order N-7-22 requires additional actions be taken by local well permitting agencies prior to issuing a well permit.

Excerpt of Action 9 from Drought Executive Order N-7-22:

9. To protect health, safety, and the environment during this drought emergency, a county, city, or other public agency shall not:

a. Approve a permit for a new groundwater well or for alteration of an existing well in a basin subject to the Sustainable Groundwater Management Act and classified as medium- or high-priority without first obtaining written verification from a Groundwater Sustainability Agency managing the basin or area of the basin where the well is proposed to be located that groundwater extraction by the proposed well would not be inconsistent with any sustainable groundwater management program established in any applicable Groundwater Sustainability Plan adopted by that Groundwater Sustainability Agency and would not decrease the likelihood of achieving a sustainability goal for the basin covered by such a plan; or

b. Issue a permit for a new groundwater well or for alteration of an existing well without first determining that extraction of groundwater from the proposed well is (1) not likely to interfere with the production and functioning of existing nearby wells, and (2) not likely to cause subsidence that would adversely impact or damage nearby infrastructure.

This paragraph shall not apply to permits for wells that will provide less than two acre-feet per year of groundwater for individual domestic users, or that will exclusively provide groundwater to public water supply systems as defined in section 116275 of the Health and Safety Code.

Local well permitting agencies retain existing well permitting authorities, including reviewing and administering well permits. Under the Executive Order Action 9, local well permitting agencies must take the following steps during the well permitting process for wells intending to extract groundwater:

1. Consultation with the GSA – If the proposed well would be in a high or medium priority groundwater basin, the well permitting agency must consult with the GSA and receive written verification from the GSA that the proposed well location is generally consistent (not inconsistent) with the applicable GSP and will not decrease the likelihood of achieving the sustainability goals that the GSAs have developed under SGMA.
2. Permit Evaluation – For every well permit application, the local well permitting agency must determine before issuing a well permit that extraction of groundwater from the proposed well is not likely to interfere with the production and functioning of existing nearby wells and is not likely to cause subsidence that would adversely impact or damage nearby infrastructure.

These requirements do not apply to wells that pump less than 2 acre-feet per year (de minimus users) and wells that exclusively provide groundwater to public water supply systems as defined in [section 116275](#) of the Health and Safety Code.

State Resources Available to Local Agencies

The California Department of Water Resources (DWR) provides technical and other support services to local agencies to support decision-making. The following resources are available to help local agencies navigate the well permitting requirements in this Drought Executive Order:

- To find the **groundwater basins subject to SGMA** and classified as medium or high priority: [Basin Prioritization Dashboard](#)
- To find the **Groundwater Sustainability Agency** managing the applicable basin or area of the basin: [GSA Map Viewer](#)
- To find the **Groundwater Sustainability Plan** adopted by the local Groundwater Sustainability Agency: [GSP Map Viewer](#)
- To view **existing nearby wells** (domestic, irrigation, public supply and reported dry wells): [California's Groundwater Live – Well Infrastructure](#)
- To view **groundwater levels and trends**: [California's Groundwater Live – Groundwater Levels](#)
- To view **subsidence data** and nearby infrastructure: [California's Groundwater Live – Subsidence Data](#)

For more information or questions, please contact DWR's Sustainable Groundwater Management Office at: SGMPS@water.ca.gov.

For more information about the State's Drought Response and Assistance, please visit drought.ca.gov.

Root Creek Water District
Groundwater Sustainability Agency

Groundwater Sustainability Annual Report
(2015-2021)

March 2022

Surface Water

Lateral 6.2

RCWD completed the construction of an in-lieu pipeline in 2014 to serve surface water to the Northern part of the district with a service area of approximately 2,500 acres. All surface water brought into RCWD is directed through the MID Lateral 6.2 which distributes water from the Madera Canal and ultimately the San Joaquin River. As mentioned, RCWD has surface water contracts with MID, Wonderful, and the USBR. The contract with MID allows RCWD to buy excess surface water at a contracted price, while the surface water from the contract with Wonderful is always available at a higher cost. The contract with USBR only allows RCWD to purchase section 215 flow which is classified as flood flow, and only occurs once every few years on average. In the 2021 water year, RCWD purchased 1,250 AF of surface water from Wonderful. Table 7 shows the amount of water into the District as measured at the turnout on MID Lateral 6.2. Included as Table 9 is District purchased or contracted surface water lost or percolated in the canal system included within the County GSA area that the RCWD has intentionally recharged.

Table 7. Surface Water Supply through Lateral 6.2 for RCWD from 2015-2021

Year	Agricultural Use (AF)	Municipal Use (AF)	Intentional Recharge (AF)	Total (AF)	Five Year Average (AF)	Average (AF)
2014	502	-	-	502		502
2015	-	-	-	-		251
2016	-	-	-	-		167
2017	6,636	-	178	6,814		1,734
2018	1,361	-	-	1,361	1,735	1,670
2019	7,607	-	601	8,208	3,277	2,684
2020	0	-	0	0	3,277	2,301
2021	1250	-	0	1,250	3,371	2,170

Table 8 Root Creek Surface Water Recharged in Madera County GSA

Year	Recharged Amt (AF)
2014	15
2015	0
2016	0
2017	199
2018	41
2019	228
2020	0
2021	34
TOTAL	517

San Joaquin River

The RCWD does not directly divert surface water from the San Joaquin River. However, a number of landowners have riparian rights and divert surface supplies to water their crops. Additionally, a number of other landowners adjacent to the river entered into holding contracts with the United States Bureau of Reclamation for diversion of surface supplies in place of their right to pump and use their riparian rights. These supplies are currently not measured in their totality and estimates of the total diversions are found in **Table 10**.

Change in Water Budget

Total water use in RCWDGSA is changing on an annual basis due to the land use conversion of farmland to residential development in the Riverstone Development area. As mentioned, at build-out Riverstone will consist of approximately 2,000 acres of residential space including houses, parks, and commercial zones. Municipal water use is generally lower than agricultural water use on a per acre basis. Furthermore, municipal wastewater is treated, and a portion of this water then reenters the groundwater system through percolation ponds. **Table 9** documents the estimated change to the water budget for Riverstone based on actual municipal demand and estimated agricultural reduction in demand from fallowed land.

Table 9. Water Use Changes for Riverstone

Year	Reclaimed Water		Change in Land Use					Change in Water Budget
	Ponds	Reuse	Irrigated Lands	Fallowed Land	Change in Irrigation Demand	Municipal Area	Municipal Demand	(AF)
	(AF)	(AF)	(acres)	(acres)	(AF)	(acres)	(AF)	
2014	-	-	1,885	1	(27)	-	-	(27)
2015	-	-	1,798	88	(252)	-	-	(252)
2016	-	-	1,638	248	(562)	-	-	(562)
2017	1	-	1,538	348	(936)	30	70	(867)
2018	22	-	1,490	396	(1,115)	82	186	(951)
2019	46	-	1,421	465	(1,288)	254	238	(1,096)
2020	85	-	1,176	510	(1,412)	411	290	(1,208)
2021	119	-	1,176	690	(1,910)	411	389	(1,640)

Approximately 315 acres annexed into the RCWD and Riverstone Development

Groundwater Extraction

Groundwater extraction for RCWDGSA is estimated by the total water demand minus the volume of water supplied by surface water sources. Water demand and surface water supply have been discussed separately in the preceding sections. **Table 10** presents water demand, surface water supply, and groundwater extraction by water use sector for the years 2015 to 2021. This table includes the volume of surface water used for intentional recharge.

Water demand for agricultural use from groundwater pumping was estimated as discussed previously and has an approximate accuracy of about $\pm 20\%$. Municipal water use was directly measured by electromagnetic flow meters at each of the wells and have an accuracy of about $\pm 0.5\%$. Lastly, surface water deliveries were measured by propeller flow meter at the diversion point into RCWD on Lateral 6.2 and has an associated accuracy of about $\pm 2\%$ and estimates of supply from the San Joaquin River are thought to be similar to the estimates of agricultural demand at $\pm 20\%$.

Chapter 3 – GSP Implementation Progress

Projects and Management Actions

Since the adoption of the RCWDGSA GSP, the RCWDGSA has continued to operate and implement the projects and management actions in the GSP. The in-lieu pipeline was built in 2014 to increase the ability of the RCWD to implement conjunctive use in wet years. Benefits of the pipeline have been seen in 2014, 2017, 2018, 2019 and 2021. Furthermore, the tiered pricing structure for groundwater pumping set by the Board of Directors in December 2020 at \$95/AF and surface water use at \$138/AF will encourage growers to use surface water when available. Over the past eight years the District has imported 18,135 AF of surface water. This relates to an average annual import of 3,371 AF since 2017. The conversion of agricultural land to municipal uses is occurring and contributes as of this date about 660 AF reduction in groundwater pumping annually.

Included as Table 11 is the associated costs with the projects and management actions taken by the District.

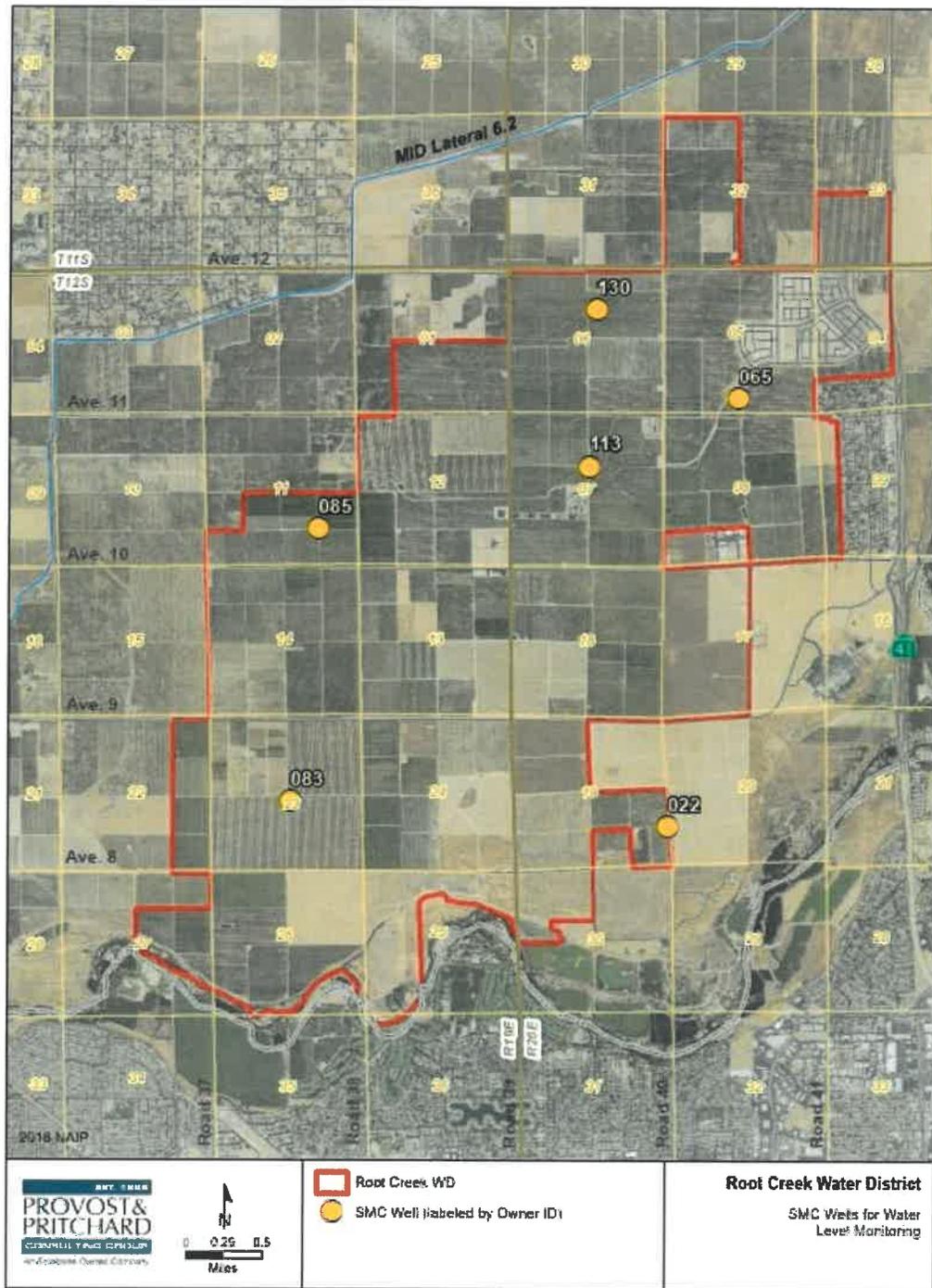
Table 11 Associated Costs

Year	Capital Cost	Water Purchase	Note
2002-2013	650,000		MID Contract
2006-2017	1,122,822		Westside Mutual Contract
2014	5,376,008		In-Lieu Pipeline
2015			
2016			
2017		923,060	Water Purchases
2018		793,360	Water Purchases
2019		2,544,750	Water Purchases
2020		1,118,393	Water Purchases
2021		1,380,247	Water Purchases
TOTALS	\$ 7,148,830.00	\$ 6,759,810.00	

Sustainable Management Criteria

Groundwater Levels

Seasonal groundwater elevation contour maps for the 2021 water year are presented as **Figure 3** and **Figure 4** below. Historical groundwater contour maps for Spring 2015 – Spring 2021 are shown in



10/11/2021 9:10 AM Root Creek WD-1249 GIS Map. GSA Annual Reporting Monitoring Network Groundwater RCWD GSA SMC Wells.mxd

Figure 5. Location of Water Level SMC Wells in RCWDGSA

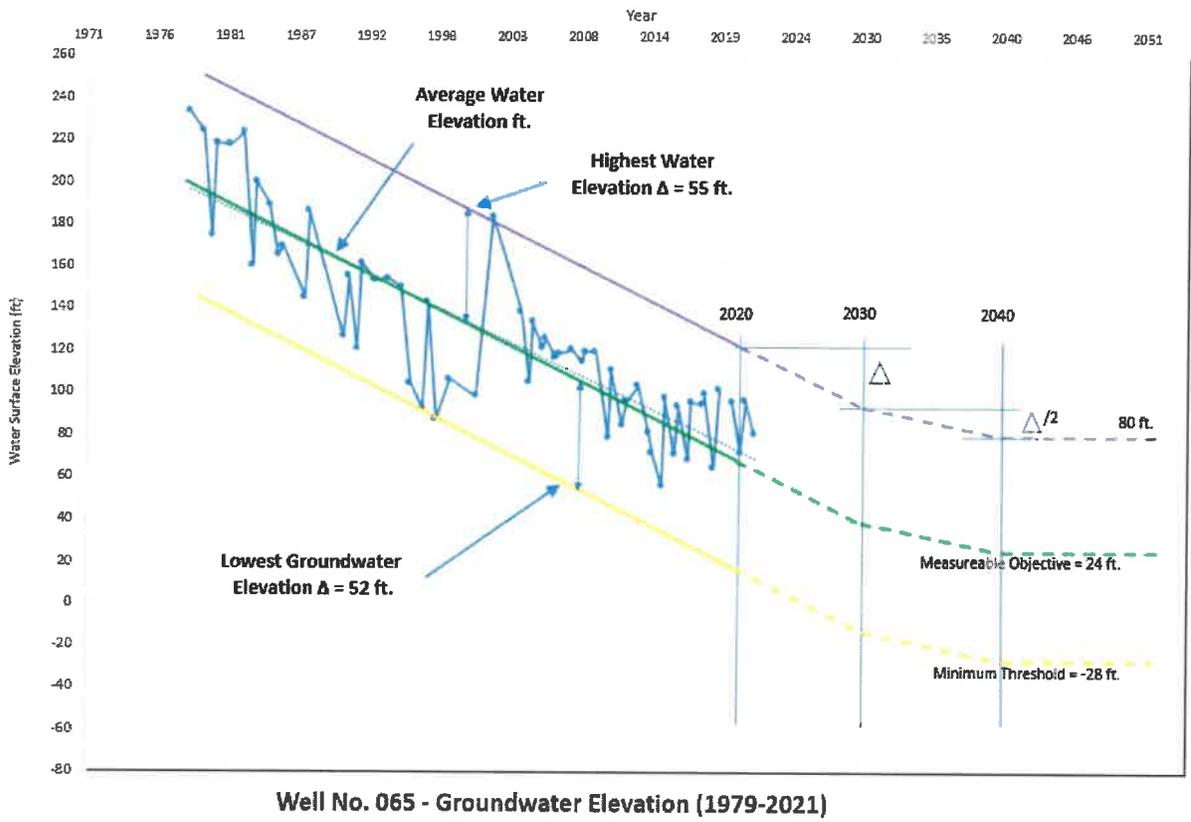


Figure 7. Well 65 Hydrograph (1979-2021)

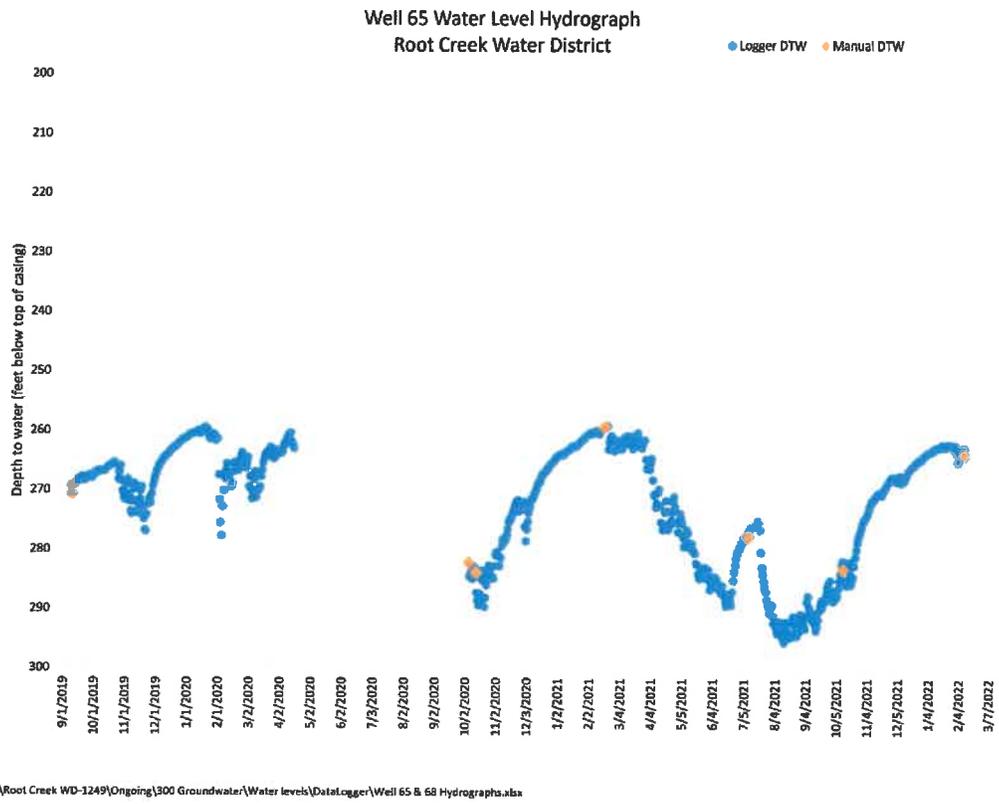


Figure 12. Well 65 Hydrograph from Transducer

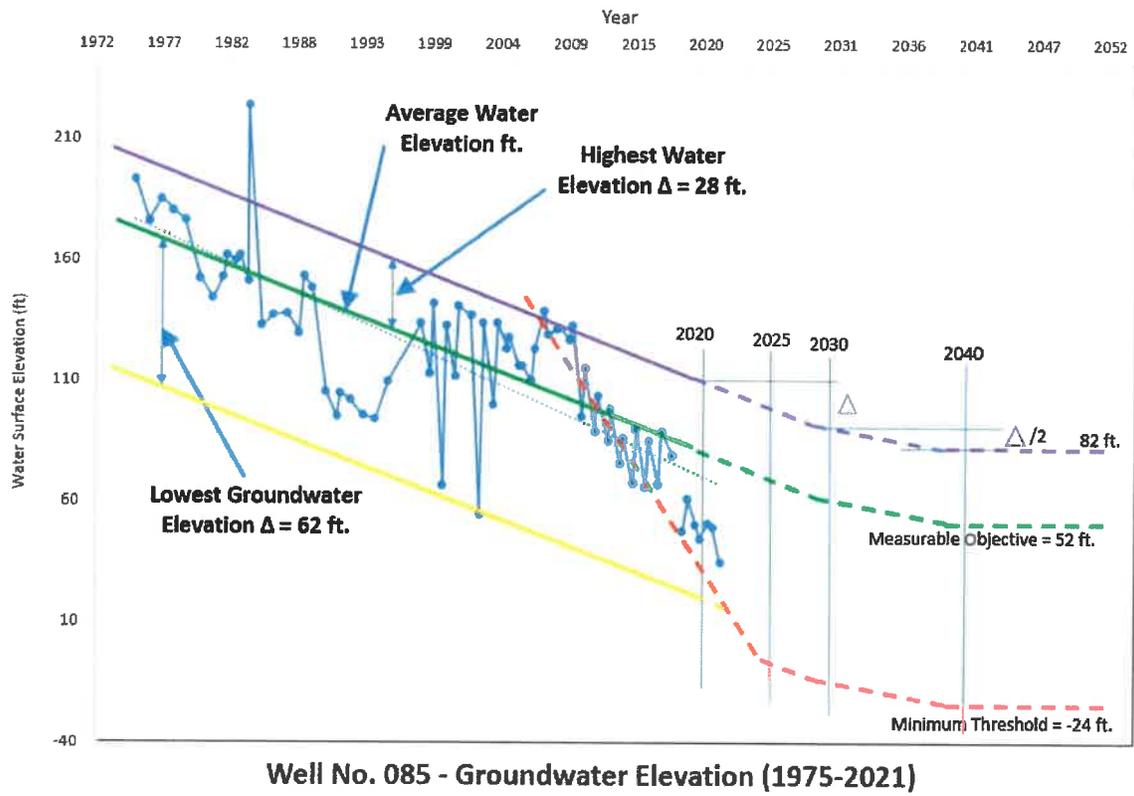


Figure 9. Well 85 Hydrograph (1975-2021)

implements programs for recharge the resulting change in storage is expected to provide positive results. This data strongly indicates that RCWDGSA is on track to meet its interim milestones and overall sustainability goal set in the GSP.

Table 14. Groundwater Storage Change from 2015-2021

Time Period	Average Change (ft)	Surface Area of Analysis (ac)	Assumed Specific Yield	Acre Feet Change	Cumulative Storage Change
Fall 2014-Fall 2015	10.5	7,569	0.12	9,537	9,537
Fall 2015-Fall 2016	-13.2	7,601	0.12	-12,039	-2,502
Fall 2016-Fall 2017	18.8	7,601	0.12	17,147	14,645
Fall 2017-Fall 2018	-25.0	7,598	0.12	-22,793	-8,148
Fall 2018-Fall 2019	10.9	7,598	0.12	9,938	1,790
Fall 2019-Fall 2020	0.7	7,728	0.12	603	2,392
Fall 2020-Fall 2021	-8.4	7,732	0.12	-7,794	-5,402
Average	-0.8			-772	
Spring 2014-Spring 2015	7.8	7,596	0.12	7,110	7,110
Spring 2015-Spring 2016	-4.8	7,596	0.12	-4,375	2,735
Spring 2016-Spring 2017	-4.5	7,598	0.12	-4,103	-1,368
Spring 2017-Spring 2018	10.2	7,598	0.12	9,300	7,932
Spring 2018-Spring 2019	-10	7,598	0.12	-9,117	-1,186
Spring 2019-Spring 2020	-5.7	8,860	0.12	-6,060	-7,246
Spring 2020-Spring 2021	2.1	8,852	0.12	2,231	-5,015
	-0.7			-725	

Figure 14 shows the annual change in groundwater storage next to groundwater use as a bar graph along with cumulative storage change within RCWDGSA boundaries since the 2015 water year. The corresponding water year type is shown below the year.

Figure 15 displays the groundwater storage change throughout the area between Spring 2020-2021, while Figure 16 displays the groundwater storage between Fall 2020 and Fall 2021.

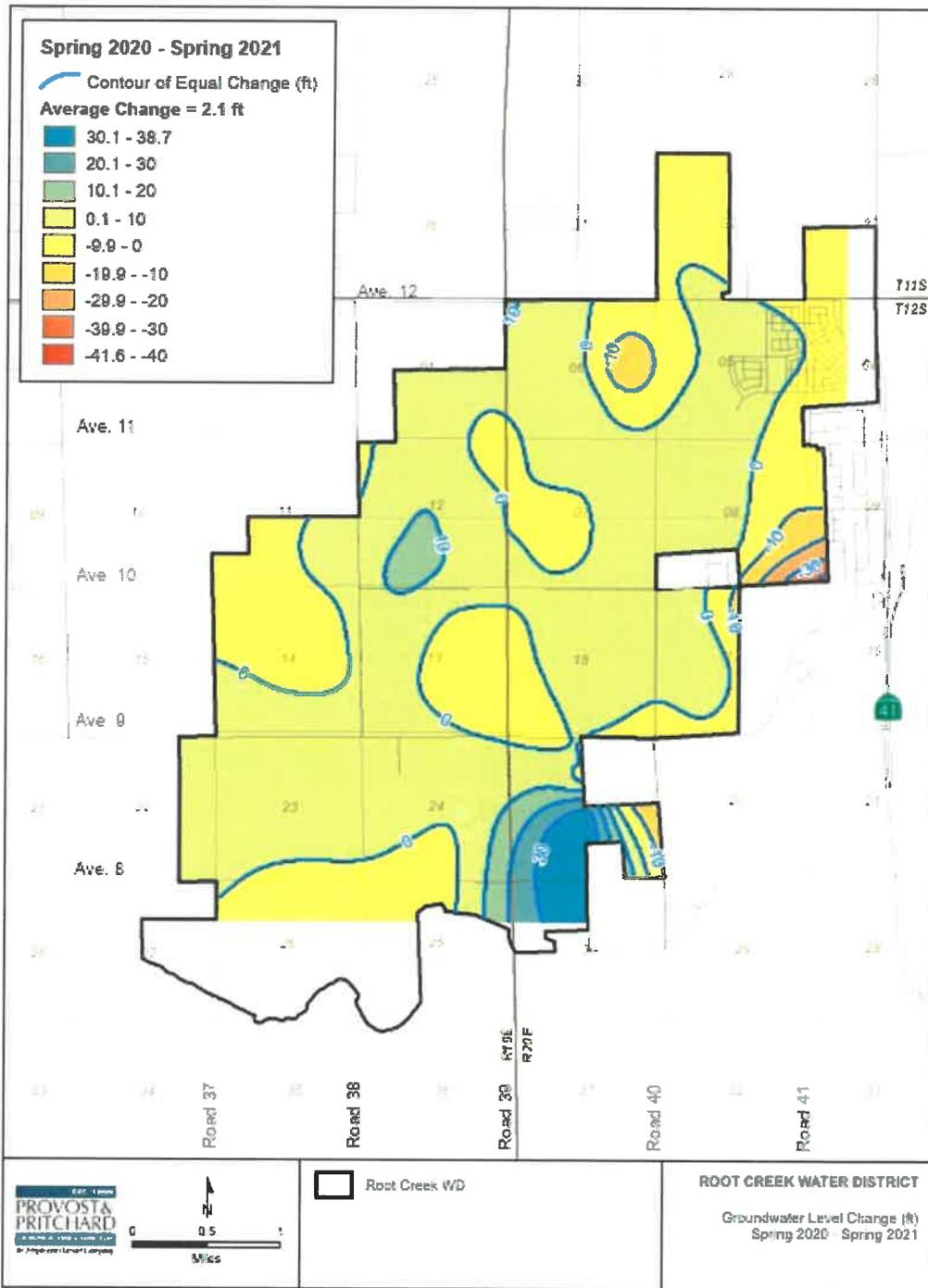


Figure 15. Change in Groundwater Storage in RCWDGSA - Spring 2020 to Spring 2021

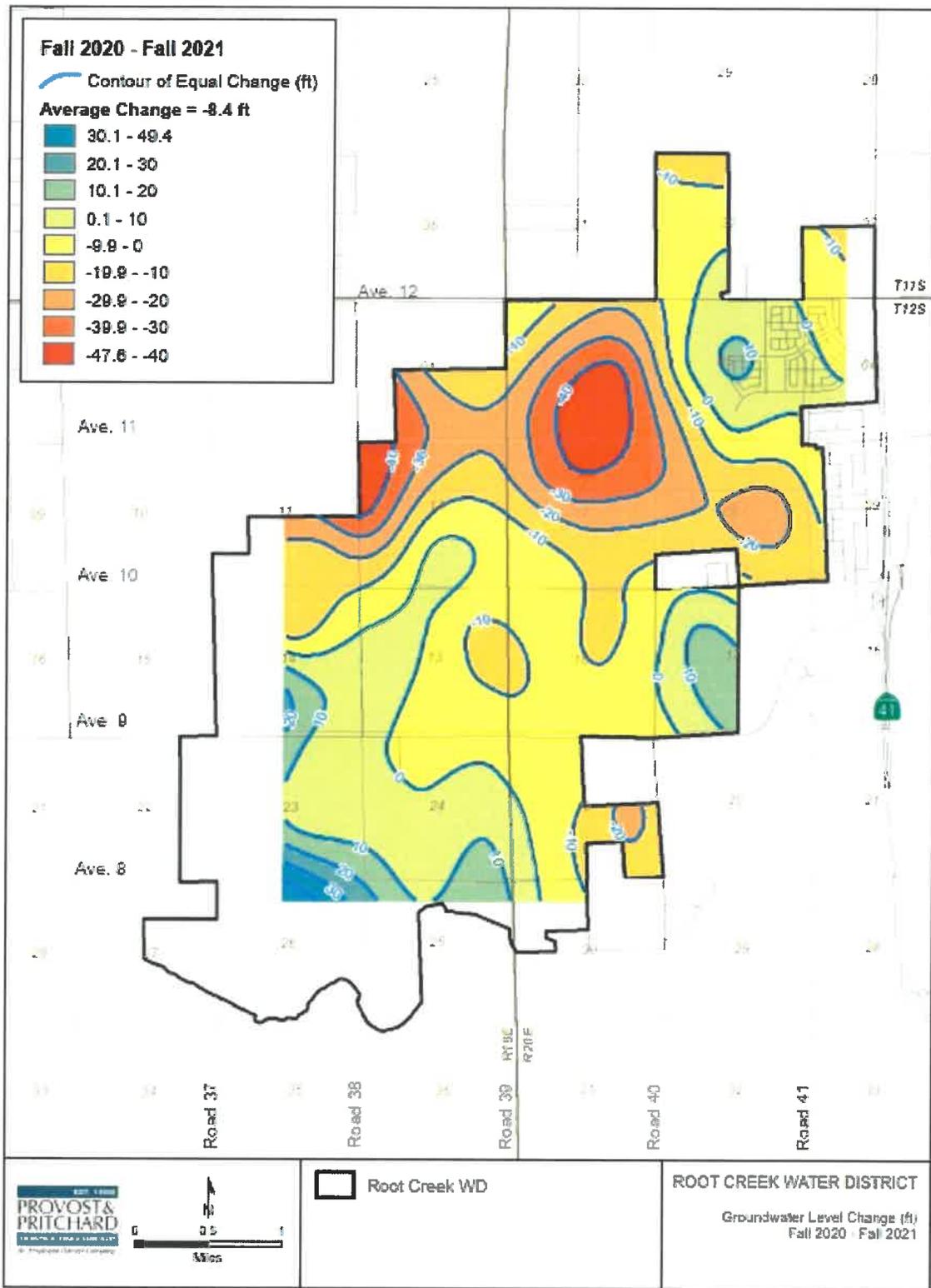


Figure 16 Change in Groundwater Storage in RCWDGSA - Fall 2019 to Fall 2021

MADERA SUBBASIN

Sustainable Groundwater
Management Act (SGMA)

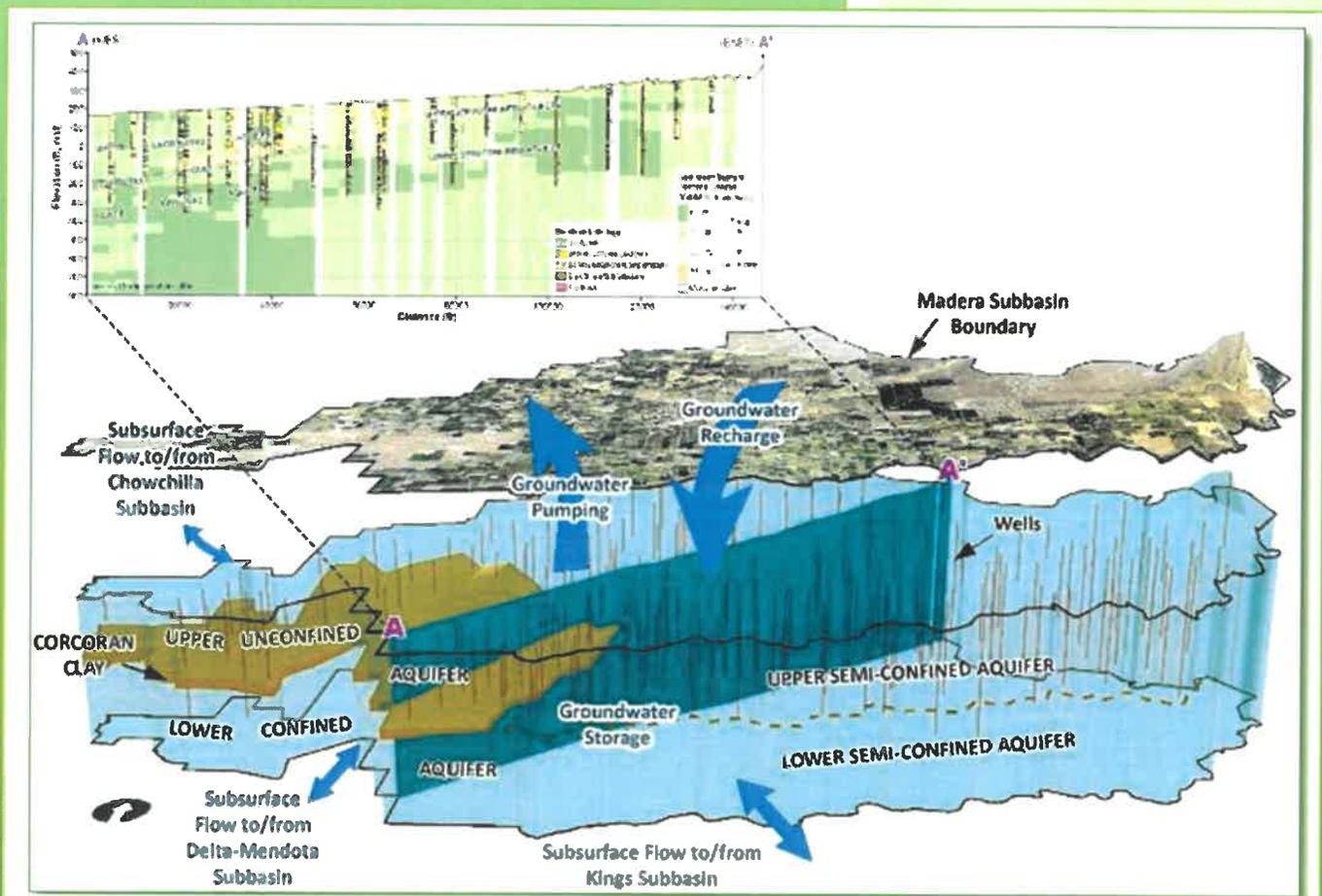
Annual Report

April 2022



Prepared by

Dauids Engineering, Inc
Luhdorff & Scalmanini



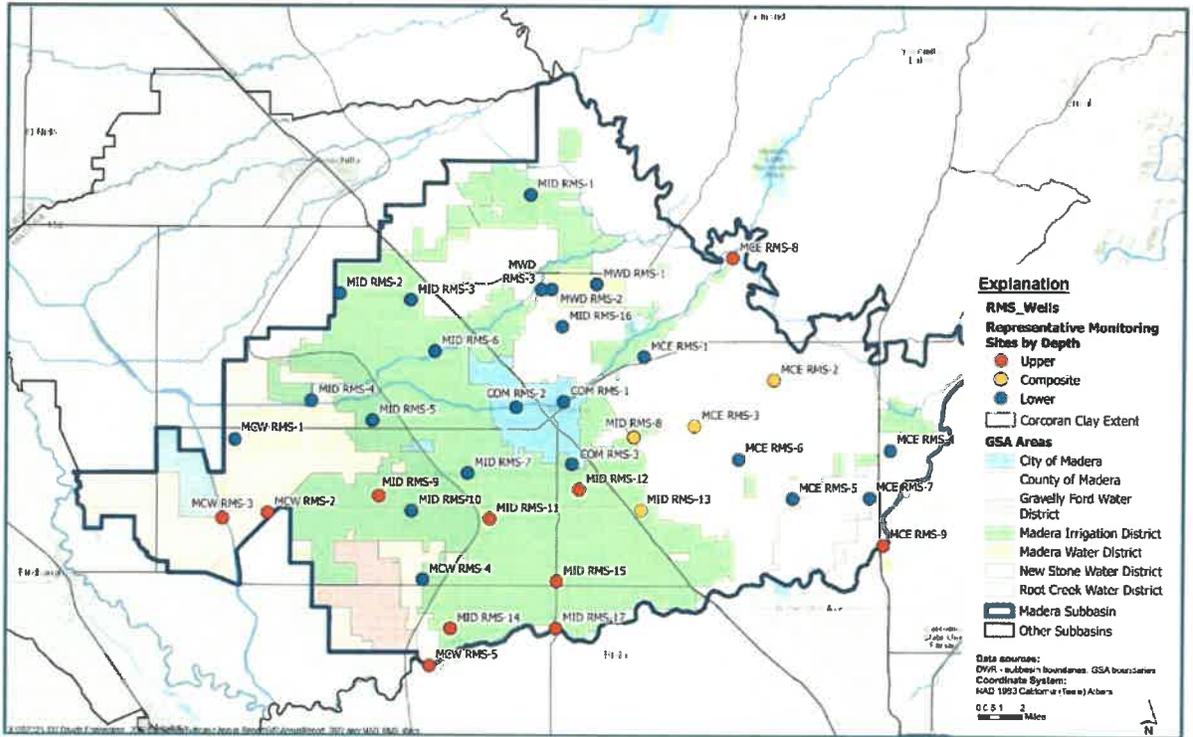


Figure 1-2. Groundwater Levels Sustainable Indicator Well.

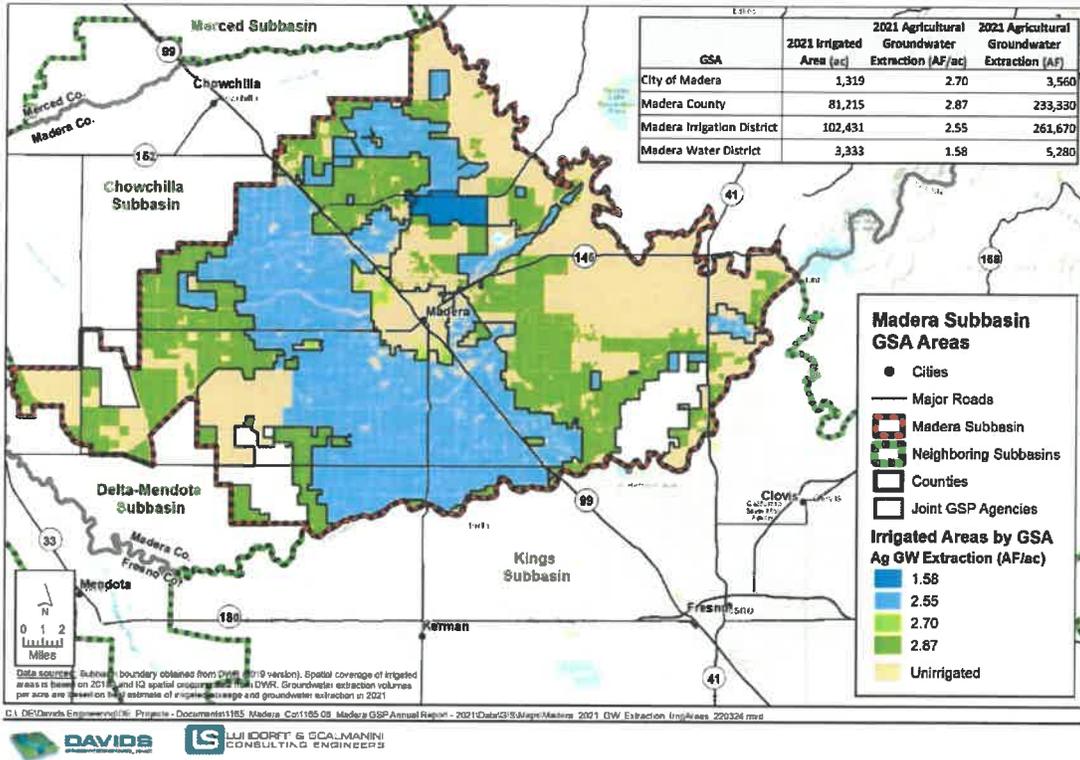


Figure 3-1. Agricultural Groundwater Extraction Volumes and Depths over Irrigated Areas*, by GSA.

**Irrigated areas shown are based on the 2018 Land IQ spatial cropping data available from DWR. Irrigated areas listed in the inset table and considered in the calculation of agricultural groundwater extraction are based on 2021 crop data from District records or determined through land use analyses. The groundwater extraction volumes per acre are based on measured or estimated groundwater extraction in 2021, quantified using the IDC root zone water budget methodology used in the Joint GSP. In subsequent Annual Reports, results from the IrriWatch demand measurement project may be used to quantify groundwater extraction in MC GSA.*



Table 6-1. Calculated Change in Groundwater Storage in the Combined Upper Aquifer and Undifferentiated Unconfined Zone.

Analysis Time Period	Specific Yield	Average Groundwater Elevation Change (ft)	Average Groundwater Storage Change Per Acre (AF/acre)	Area Applied for Estimating Groundwater Storage Change (acres)	Total Groundwater Storage Change in Joint GSP Area (AF) ¹	Notes on Specific Yield Basis
Spring 2020-2021	0.04	-9.35	-0.33	325,834	-107,145	Representative value from MCSim model

Table 6-2. Calculated Change in Groundwater Storage in the Lower Aquifer Zone.

Analysis Time Period	Lower Aquifer Zone	Storage Coefficient ¹	Specific Yield ²	Average Change in Groundwater Elevation Surface (ft)	Average Groundwater Storage Change Per Acre (AF/acre)	Area Used for Estimating Groundwater Storage Change (acres)	Total Groundwater Storage Change in Joint GSP Area (AF) ³ (AF)	Notes on Storage Coefficient Basis
Spring 2020-2021	Confined	1.24E-03		-25.99	-0.03	56,545	-1,816	Representative value from MCSim model
	Unconfined		0.049	-5.40	-0.26	12,474	-3,303	
	TOTAL				-0.07	69,019	-5,120	

¹ Storage Coefficient value applies to those areas under the Corcoran Clay considered to be confined (56,545 acres).

² Specific Yield value applies to those areas under the Corcoran Clay considered to be unconfined (12,474 acres).

³ Total Lower Aquifer within Joint GSP area is 69,019 acres and includes only those areas of the Madera Subbasin outside of RCWD GSA, GFWD GSA, and NSWD GSA.

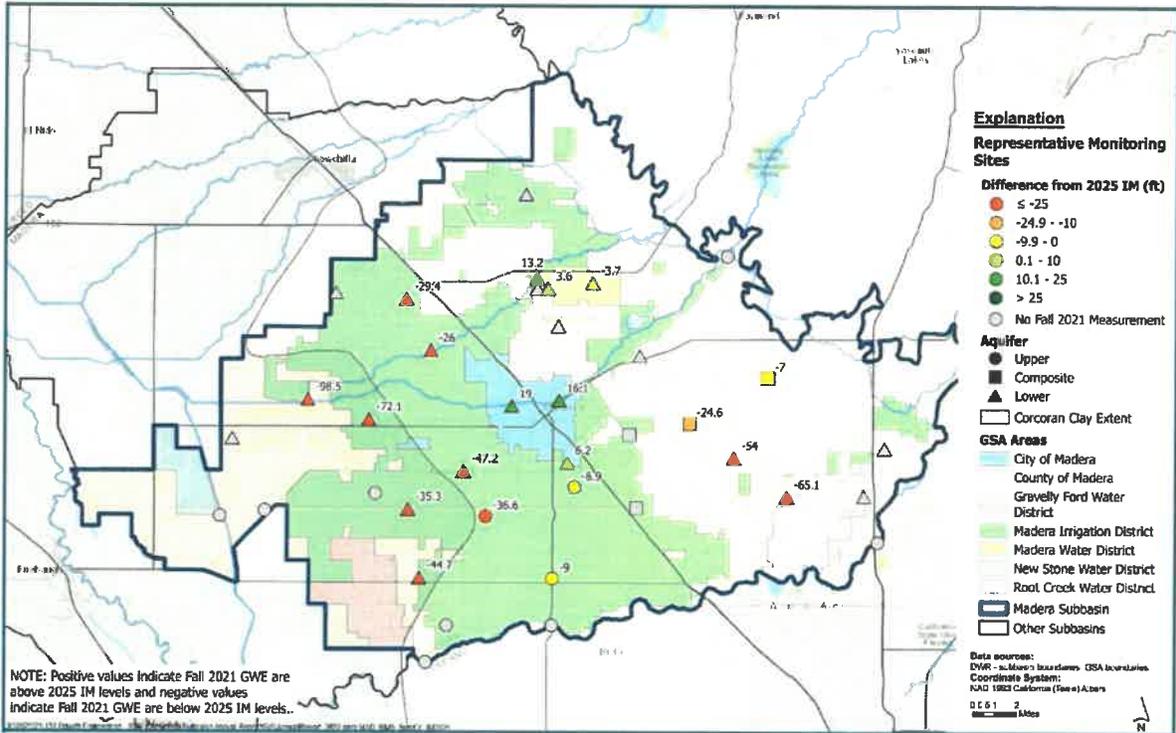


Figure 7-1. Fall 2021 Groundwater Level Measurements at RMS Wells Compared to 2025 Interim Milestone.