FIRST AMENDMENT TO THE MADERA SUBBASIN COORDINATION AGREEMENT

This FIRST AMENDMENT (AMENDMENT) to the MADERA SUBBASIN COORDINATION AGREEMENT ("Agreement") is entered into the_____day of March 2023 (the "Effective Date"), by and between the Groundwater Sustainability Agencies of the COUNTY OF MADERA ("County"), the CITY OF MADERA ("City"), the MADERA IRRIGATION DISTRICT ("MID"), the ROOT CREEK WATER DISTRICT ("RCWD"), the MADERA WATER DISTRICT ("MWD"), the GRAVELLY FORD WATER DISTRICT ("GFWD"), and the NEW STONE WATER DISTRICT ("NSWD"), collectively hereinafter referred to as the "Parties," or individually as the "Party."

RECITALS

A. **WHEREAS**, groundwater and surface water resources within the Madera Subbasin of the San Joaquin Valley Groundwater Basin (DWR Bulletin 118 No. 5-22.06) (Subbasin) are vitally important resources, in that they provide the foundation to maintain and fulfill current and future environmental, agricultural, domestic, municipal, and industrial needs, and to maintain the economic viability, prosperity, and sustainable management of the Subbasin; and

B. **WHEREAS**, agriculture has been prominent in making Madera County one of the world's foremost agricultural areas and plays a major role in the economy of Madera County; and

C. **WHEREAS**, in 2014 the California Legislature passed a statewide framework for sustainable groundwater management, known as the Sustainable Groundwater Management Act, California Water Code § 10720-10737.8 (SGMA), pursuant to Senate Bill 1168, Senate Bill 1319, and Assembly Bill 1739, which was approved by the Governor on September 16, 2014. and went into effect on January 1, 2015; and

D. **WHEREAS**, the Subbasin has been designated by the California Department of Water Resources (DWR) as a high-priority subbasin in a condition of critical groundwater overdraft and is subject to the requirements of SGMA; and

E. **WHEREAS**, SGMA requires that all medium and high priority groundwater basins in California be managed by a Groundwater Sustainability Agency (GSA), or multiple GSAs, and that such management be implemented pursuant to an approved Groundwater Sustainability Plan (GSP), or multiple GSPs; and

F. **WHEREAS**, County, City, MID, and MWD have developed one GSP; RCWD has developed one GSP; GFWD has developed one GSP; and NSWD has developed one GSP, such that the Subbasin is governed by four separate GSPs unified through the Subbasin Coordination Agreement; and

G. **WHEREAS**, in January 2020, the Parties submitted four GSPs to DWR; and

H. **WHEREAS**, in January of 2020, the Parties entered into the Agreement.

I. **NOW, THEREFORE**, in consideration of the mutual promises, covenants and conditions contained herein and these Recitals, which are hereby incorporated herein by this reference, the Parties agree as required by DWR and limited to that set-forth herein, to amend the Agreement as follows:

AGREEMENT

1. **SUSTAINABILITY GOAL.** The Parties agree that the Sustainability Goal for the Subbasin shall be:

   "The sustainability goal for the Madera Subbasin is to implement a package of projects and management actions that will, by 2040, balance long-term groundwater system inflows and outflows based on a 50-year period representative of average historical hydrologic conditions."

2. **SUBBASIN SUSTAINABLE YIELD ESTIMATE.** The Parties agree that the Sustainable Yield Estimates from the Historical Water Budget and Projected with Projects Water Budget as initially developed during initial GSP development are as set-forth in Exhibit A.

3. **CURRENT AND PROJECTED WATER BALANCES.** The Parties agree that the current and projected water budgets for the Parties as initially developed during initial GSP development are as set-forth in Exhibit B. The Parties further recognize that additional discussion, consensus, and model refinement is necessary as part of the 2025 GSP update to ensure accurate portrayal of Holding Contract surface water supplies.

4. **NOTICES**. All notices required or permitted by the Amendment shall be made in writing, and may be delivered in person (by hand or by courier) or may be sent regular, certified, or registered mail or U.S. Postal Service Express Mail, with postage prepaid, or by facsimile transmission, or by electronic transmission (email) and shall be deemed sufficiently given if served in a manner specified in this Section 16. The addresses and addressees noted below are the Party's designated address and addressee for deliver or mailing notices.

To County:	County of Madera Stephanie Anagnoson 200 W 4th Street, 4th Floor Madera, CA 93637
To MID:	Madera Irrigation District Thomas Greci 12152 Road 28 1/4 Madera, CA 93637

To RCWD:	Root Creek Water District Julia Stornetta PO Box 27950 Fresno, CA 93729
To GFWD:	Gravelly Ford Water District Don Roberts 18811 Road 27 Madera, CA 93638
To City:	City of Madera Keith Helmuth 428 East Yosemite Avenue Madera, CA 93638
To NSWD:	New Stone Water District Roger Skinner 9500 South DeWolf Avenue Selma, CA 93662
To MWD:	Madera Water District Melanie J. Aldridge 1663 N. Schnoor Street, Suite 105 Madera, CA 93638

Any Party may, by written notice to each of the other Parties, specify a different address for notice. Any notice sent by registered or certified mail, return receipt requested, shall be deemed given on the date of delivery shown on the receipt card, or if no delivery date is shown, three days after the postmark date. If sent by regular mail, the notice shall be deemed given 48 hours after it is addressed as required in this section and mailed with postage prepaid. Notices delivered by United States Express Mail or overnight courier that guarantee next day delivery shall be deemed given 24 hours after delivery to the Postal Service or overnight courier. Notices transmitted by facsimile transmission or similar means (including email) shall be deemed delivered upon telephone or similar confirmation of delivery (conformation report from fax machine is sufficient), provided a copy is also delivered via personal delivery or mail. If notice is received after 4:00 p.m. or on a Saturday, Sunday or legal holiday, it shall be deemed received on the next business day.

IN WITNESS WHEREOF, the Parties have caused this AMENDMENT to be executed, each signatory hereto represents that he/she has been appropriately authorized to enter into this AMENDMENT on behalf of the Party whom he/she signs.

County of Madera

Date

Madera Irrigation District

Thomas Greci

Date

Root Creek Water District

Julia Stornetta

Date

Gravelly Ford Water District

Don Roberts

Date

City of Madera

Date

New Stone Water District

Roger Skinner

Date

Madera Water District

Phil Janzen

Date

EXHIBIT A

Subbasin Sustainable Yield Estimate

Summary of Sustainable Yield Estimate from Historical Water Budget

Table 2-34. Summary of Sustainable Yield Estimates from Historical Water Budget (23 CCR § 354.18(b)(7)).

Quantification Method	Average Volume, 1989-2014 (AF)	Estimated Confidence Interval (percent)	Confidence Interval Source	Average minus CI (AF)	Average plus CI (AF)
Groundwater Extraction and GWS Change in Storage	437,300	25%	Calculation.	328,000	564,600
Total Inflows to GWS	437,300	19%	Calculation.	354,200	520,400
"Simulation" of Reduced Demand	423,300	25%	Professional Judgment.	317,500	529,100

Summary of Sustainable Yield Estimate from Projected With Projects Water Budget

Table 2-35. Summary of Sustainable Yield Estimates from Projected With Projects Water Budget (23 CCR § 354.18(b)(7)).

Quantification Method	Average Volume, 2040-2090 (AF)	Estimated Confidence Interval[1] (percent)	Average minus CI (AF)	Average plus CI (AF)
Groundwater Extraction and GWS Change in Storage	439,300	25%	329,500	549,100

[1] Confidence interval source: Professional judgment based on historical calculations.

Sustainable yield was calculated for the 2040-2090 projected period (Table 2-35) with a single value of a sustainable yield for the Subbasin as a whole (DWR, 2017). The sustainable yield is estimated as the average annual groundwater extraction during the projected 2040-2090 period. This projected groundwater extraction equals the sum of the average annual recharge without projects and the average annual net project infiltration during the projected period. Since average groundwater inflows approximately equal outflows during the 2040-2090 period, the average annual change in the groundwater storage would be close to zero over this 50-year period. **By this method, sustainable yield is estimated to be 439,300 AFY.**

Current and Projected Water Budgets[1,2,3,4]

CURRENT

Note that the "Current" water budget is reflective of the "Current" water budget initially developed during initial GSP development and not indicative of the 2023 water budget.

GSA	Current Water Budget Average Net Recharge from SWS (AF)
CM	-3,300
MID	-23,600
GFWD	-1,700
MC	-110,700
MWD	-5,200
NSWD	-4,100
RCWD	-14,200
Total	-162,800

[1] The Parties recognize there are certain non-significant variances in the calculations of the impact of various sources of recharge and intend to develop further data or information through the DMS to further narrow such variances. Such additional data will help to refine, prove or disprove models and/or presumptions included in the respective GSPs.

[2] Current water budget values for each GSA have been calculated using 2015 land use and the 1989-2014 hydrology.

[3] The Parties recognize that additional discussion, consensus, and model refinement is necessary as part of the 2025 GSP update to ensure accurate portrayal of Holding Contract surface water supplies.

[4] For the MID GSA specifically, the current water budget approach resulted in a conservative estimate of net recharge from SWS (defined as groundwater recharge minus groundwater extraction). MID's operations for the 1989-2014 time period would have differed due to increased demands as assumed by the 2015 land use. Thus, while MID GSA is planning for the conservative number (higher deficit), it is acknowledged that MID GSA's actual deficit, if any, is less and that MID GSA has been, and is, operating close to sustainability.

PROJECTED

MCSim Projected with Projects Water Budget by GSA
Madera Subbasin

	Average Annual Water Budget (AF/m)							
	City of Madera		Madera County		Gravelly Ford Water District		Madera Irrigation District	
	Implementation Period, 2020-2039	Sustainability Period, 2040-2090	Implementation Period, 2020-2039	Sustainability Period, 2040-2090	Implementation Period, 2020-2039	Sustainability Period, 2040-2090	Implementation Period, 2020-2039	Sustainability Period, 2040-2090
Total Stream Seepage	729	1,456	52,942	75,636	12,517	15,694	96,752	120,771
In-Channel Seepage	*729*	*1,456*	*39,394*	*38,862*	*125*	*155*	*17,209*	*15,781*
Conveyance Losses	*0*	*0*	*13,548*	*36,775*	*12,391*	*15,539*	*79,543*	*104,989*
Deep Percolation	9,401	13,896	78,701	82,195	7,231	7,719	88,002	97,426
General Head Boundary Conditions	0	0	0	0	0	0	0	0
Small Watershed Baseflow	0	0	313	148	0	0	0	0
Small Watershed Percolation	0	0	0	0	0	0	0	0
Groundwater Pumping	-8,956	-12,703	-219,207	-175,069	-16,128	-15,146	-220,066	-221,149
Total Subsurface Inflow	-2,072	-2,082	71,234	23,487	-4,280	-8,395	23,054	6,169
Average Annual Change in Storage	-898	568	-16,018	6,397	-660	-128	-12,259	3,217
Total Cumulative Change in Storage	-17,969	28,946	-320,352	326,255	-13,204	-6,519	-245,173	164,069

	Average Annual Water Budget (AF/m)					
	Madera Water District		New Stone Water District		Root Creek Water District	
	Implementation Period, 2020-2039	Sustainability Period, 2040-2090	Implementation Period, 2020-2039	Sustainability Period, 2040-2090	Implementation Period, 2020-2039	Sustainability Period, 2040-2090
Total Stream Seepage	286	462	2,012	3,032	546	-54
In-Channel Seepage	*286*	*462*	*572*	*-622*	*-309*	*-913*
Conveyance Losses	*0*	*0*	*1,441*	*3,654*	*855*	*859*
Deep Percolation	3,241	3,647	3,831	5,469	8,222	8,738
General Head Boundary Conditions	0	0	0	0	0	0
Small Watershed Baseflow	0	0	0	0	0	0
Small Watershed Percolation	0	0	0	0	0	0
Groundwater Pumping	-5,660	-4,283	-7,665	-7,623	-14,084	-11,389
Total Subsurface Inflow	1,685	318	808	-676	4,929	2,554
Average Annual Change in Storage	-448	144	-1,014	202	-386	-151
Total Cumulative Change in Storage	-8,953	7,324	-20,270	10,305	-7,728	-7,683

	City of Madera	Madera County	Gravelly Ford Water District	Madera Irrigation District	Madera Water District	New Stone Water District	Root Creek Water District	Total (AF)
	Sustainability Period, 2040-2090	Sustainability Period, 2040-2090	Sustainability Period, 2040-2090	Sustainability Period, 2040-2090	Sustainability Period, 2040-2090	Sustainability Period, 2040-2090	Sustainability Period, 2040-2090	
Groundwater Pumping (AF)	-12,703	-175,069	-15,146	-221,149	-4,283	-7,623	-11,389	-447,362
Average Annual Change in Storage (AF)	568	6,397	-128	3,217	144	202	-151	10,249
Difference (AF)								-437,113