



Madera County GSAs' Advisory Committee September 3, 2020

Guidelines for Zoom Webinar Format

1. Mute your audio and remain on mute throughout the webinar.
2. Use the Q & A function for any clarifying questions.
3. Use chat for any technical issues (e.g., I can't hear!)
4. Be courteous, polite, and mindful of lag time.
5. Keep in mind we are all doing our best in constantly changing circumstances.

Panelists	Attendees (aka Participants)
Use video so we can see you as an Advisory Committee member	Use computer/video to see the presentation and Committee members. You are not on video.
Mute yourself	You will be muted (but mute yourself too)
Use the "raise your hand" tool to be called on.	Use the "raise your hand" tool to be called on.



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Agenda for September 3, 2020

1. CALL TO ORDER
2. PLEDGE OF ALLEGIANCE
3. ROLL CALL
4. PUBLIC COMMENT
5. AMBASSADOR REPORT
6. DIRECTOR'S REPORT
7. DOMESTIC WELLS
8. ALLOCATION DISCUSSION AND RECOMMENDATION
9. ADJOURNMENT

Next Meeting Dates at 2 p.m. on October 1, and December 3.



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Item 1: Call to Order



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Item 2: Pledge of Allegiance



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Item 3: Roll Call

Seat	Representative	Alternate
DAC	Victoria Ortiz	Self-Help
DAC	Teresa Padilla Mendoza	Leadership Council
Residential	H. Clay Daulton	Jay Quick
Residential	Jerrold Kazynski	Al Solis
Permanent Ag	Jim Maxwell	Karun Samran
Permanent Ag	Devin Aviles	James Unti
Non-Permanent Ag	Larkin Harman	Greg Hooker
Non-Permanent Ag	Bryant Elkins	Albert Guravage
Delta Mendota	Jared Samarin	Sam Lopes
Livestock	Darcy Vlot	Ben Pitman
At Large	Clay Haynes	Mike DeLaGuerra



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Item 4: Public Comment

The first 15 minutes of each regular session is set aside for members of the public to comment on any item within the jurisdiction of the Committee, but not appearing on the agenda. For items appearing on the agenda, the public is invited to comment at the time the item is called for consideration by the Committee. Any person addressing the Committee under public comment will be limited to a 3 minute presentation to ensure that all interested parties have an opportunity to speak.



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Item 5: Ambassador Reports (Committee Members)



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Committee Member Comments



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Public Comment



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Item 6: Director's Report (Stephanie Anagnoson)

- Rate Studies
- Data Management System
- Water Market Grant Update – December 1, 2020 at 3 p.m.
- Satellite Technology for Groundwater Monitoring
- Recharge Studies
- Prop 68 Domestic Well Inventory for the Chowchilla Subbasin
- Prop 68 Domestic Well Inventory for the Madera Subbasin



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Committee Member Comments



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Public Comment



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Item 7: Domestic Wells (SWRCB)

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Committee Member Comments



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Public Comment



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Item 8: Allocation Discussion and Recommendation (Mike Linden, Stephanie Anagnoson and Greg Young)



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Legal Framework

- Our approach is to protect overlying groundwater rights.
- A water right is legal permission to use a reasonable amount of water for a beneficial purpose.
 - The right is in the use of the water, not the water itself.
- Overlying groundwater rights arise solely from property ownership.
 - Not determined by the history or frequency of use.
 - If use is not active, right is considered to be dormant



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Legal Framework

Reasonable, beneficial use on the land.

Reasonable: Overdraft is per se unreasonable, so there is no right to pump more than the sustainable yield to the basin.

Beneficial: Types of beneficial uses are in Title 23 of the Water Code, and includes domestic, irrigation, municipal, industrial, and fish and wildlife protection.

On the Land: Overlying rights are appurtenant to the land, and thus the use must be on the land itself. The right is not transferrable.



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Legal Framework

- Overlying rights are correlative.
- Similarly situated property owners generally share an equal priority to use groundwater.
 - The use is for what a property owner needs for a beneficial purpose.
- Correlative rights change over time due to changing circumstances.
 - When basin is not overdrafted, no limit so long as the use is reasonable and beneficial.
 - When water is insufficient to meet the needs of all, the right is limited to a reasonable share of the water within the basin.
 - The exercise of the right should not deny other rights holders their reasonable share of the basin's safe yield.



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Legal Framework

- There is no overlying groundwater right other than reasonable, beneficial use on the land.
 - It does not include the right to sell the water you would otherwise use.
 - It does not include the right to obtain credit for use on other lands.



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Legal Framework

- An allocation is not the same as an overlying right.
 - SGMA allows GSAs to establish extraction allocations and to authorize transfers of allocations within a subbasin.
 - This is different than an overlying right, which is appurtenant to the land.
- SGMA allows a GSA to manage overdraft over a 20-year period.
 - To this end, a GSA may allocate more water than the owner has an overlying right to.
 - This is the “glide path” that has been referred to.



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Legal Framework

- A full allocation to all non-irrigated land is not necessary to protect the overlying right.
 - The right is in the use of water, and non-irrigated land has no current use.
 - However, the right can change based on changed circumstances.
- Our allocation proposal is not the subordination of a dormant right.
 - SGMA only allows for subordination in an adjudication proceeding.



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Legal Takeaways for Overlying Groundwater Rights

- The water right is the right to use the water (beneficially and reasonably) on the land
- An overlying water right is tied to the land
- An allocation is not a water right and vice versa



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What is an allocation?

In this case, an allocation is

- a water budget for agricultural water users
- allowed by SGMA (encouraged?)
- decreasing over time to reach sustainability
- tied to a rate structure, so there are fees for use



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What is a farm unit?

In this case, a farm unit is

- owned by the same family or managed by the same family or organization
- allowed to shared water within the farm unit, including sustainable yield and transitional water
- within a defined geographic/hydrogeologic boundary
- limited in size (max acres) unless special circumstances



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What types of water exist in the allocation?

Sustainable Yield (SY)

Water that can be opted-in for access

Ability to access a market (if developed)

Has fees associated with it

Transitional Water (TW) – Pool 1

Water that can be opted-in for access

Has fees associated with it (costs more than SY)

Transition Water (TW) – Pool 2

Water than can be opted-in for access

Has fees associated with it (costs more than TW Pool 1)



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What do we know about fees?

Raftelis, an experienced rate consultant, will develop fees.

To develop fees, you need to quantify costs and then discuss how to equitably distribute them.

Currently, on-going efforts are being made to quantify costs including:

- on-farm recharge efforts

- dedicated recharge basins, including water rights, conveyance, environmental work, O&M of conveyance and basins

- water purchases

- domestic well mitigation (costs should be shared with other GSAs)

- easements/land resting/land retirement



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County GSA Initial Allocation Participation Process

County offers access to Sustainable Yield (SY) – not necessarily annual

Opportunity to opt in or opt out every five years with ability to pay back fees



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County GSA Annual Process

Offers ability to pump SY in that particular year

Offers Transitional Water (TW) – Pool 1

Offers Transitional Water (TW) – Pool 2

May adjust

Evaluates grower use of allocation; sends bill to growers



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County GSA Grower Annual Process

Opts in for SY in that particular year

Opts in for Transitional Water (TW) – Pool 1

Opts in for Transitional Water (TW) – Pool 2

Tracks consumption against allocation on on-line portal

Pays bill and continues to farm



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Some Hypothetical Scenarios

Assumptions:

1. Sustainable Yield is determined to be 90,000 acre-feet per year
2. GSA has 185,000 total eligible acres:
 - a) 110,000 acres 'opt-in' for access to the SY allocation
 - b) 90,000 acres indicates intent to pump SY in each of the first 5 years
3. Transition Water is offered as:
 - a) Pool 1 = 70% of available TW for that year
 - b) Pool 2 = remaining TW not offered in Pool 1, plus any Pool 1 water not requested

SAMPLE

Transitional Water (acre-feet available per year) (Example only)										
Year	1	2	3	4	5	6	7	8	9	10
Total	140,000	136,500	133,000	129,500	126,000	117,600	109,200	100,800	92,400	84,000
Year	11	12	13	14	15	16	17	18	19	20
Total	75,600	67,200	58,800	50,400	42,000	33,600	25,200	16,800	8,400	-



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Some Hypothetical Scenarios

Additional assumptions are made:

1. Participants indicating intent to pump SY increases after Year 5 from 90,000 acres to 110,000 acres. This adjusts the SY allocation from 1.0 AF/AC to 0.82 AF/AC at Year 6.
2. Participants requesting access to TW water remain at 90,000 acres for the entire 10 years.
3. TW Pool 1 is only used by 80,000 of the 90,000 acres for the first 5 years
4. TW Pool 1 use increase to the full 90,000 acres after Year 5,
 - a) Thus, TW Pool 1 is divided by 90,000 acres instead of 80,000 acres starting in Year 6.



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Some Hypothetical Scenarios

The following farming units were created to represent “Year 1” cropping conditions:

- Farm Unit #1 – 1,120 acres of almonds and pistachios across 5 non-adjacent parcels
- Farm Unit #2 – 4,000 head dairy with 1,500 acres of adjacent field crops and orchards
- Farm Unit #3 – 800 acres of non-irrigated and 500 acres of pistachios
- Farm Unit #4 – 500 acres of low-water use permanent crop

SAMPLE

Conceptual Madera County Groundwater Allocations for Consumptive Use (af/ac/yr)										
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10
SY Allocation	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	0.82	0.82
TW: Pool 1	1.10	1.10	1.00	1.00	1.00	0.70	0.70	0.60	0.60	0.50
TW: Pool 2	0.87	0.88	0.96	0.90	0.92	1.39	0.73	0.67	0.62	0.56
Total	2.97	2.98	2.96	2.90	2.92	2.91	2.25	2.09	2.03	1.88
	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
SY Allocation	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
TW: Pool 1	0.70	0.60	0.50	0.50	0.40	0.30	0.20	0.20	0.10	0.00
TW: Pool 2	not available									
Total	1.52	1.42	1.32	1.32	1.22	1.12	1.02	1.02	0.92	0.82



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Farm Unit #1 Scenario

1,120 acres of almonds and pistachios across 5 non-adjacent parcels

Field Management

Unchanged Year 1 thru 3

Fallow 80 AC almond (17-year old) parcel after Year 3 harvest; replant in Year 5 to pistachios

Fallow 400-AC almond (19-year old) parcel as follows:

100 AC after Year 5 harvest

+50 AC after Year 6 harvest

+100 AC after Year 7 harvest

+50 AC after Year 8 harvest

Fully fallowed after Year 9 harvest

Use of Allocations

Fully use SY in all years

Fully use TW Pool 1 in all years

Significant use of TW Pool 2 in all years



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Farm Unit #1 DRAFT: Concepts for Discussion Only

GW Allocations for Consumptive use	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8	Y9	Y10	Y11	Y12	Y13	Y14	Y15	Y16	Y17	Y18	Y19	Y20
SY Allocation (af/ac/yr)	1.00	1.00	1.00	1.00	1.00	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
TW: Pool1 (af/ac/yr)	1.1	1.1	1	1	1	0.7	0.7	0.6	0.6	0.5	0.7	0.6	0.5	0.5	0.4	0.3	0.2	0.2	0.1	0
TW: Pool 2(af/ac/yr)	0.87	0.88	0.96	0.90	0.92	1.39	0.73	0.67	0.62	0.56	0									
Total Potential Allocation (af/ac)	2.97	2.98	2.96	2.90	2.92	2.91	2.25	2.09	2.03	1.88	1.52	1.42	1.32	1.32	1.22	1.12	1.02	1.02	0.92	0.82

Farm	Farming Unit (acres)		Year 1		Year 2		Year 3		Year 4		Year 5		Year 6		Year 7		Year 8		Year 9		Year 10		
			Crop	Age	Crop	Age	Crop	Age	Crop	Age	Crop	Age	Crop	Age	Crop	Age	Crop	Age	Crop	Age	Crop	Age	
1120	Field 1	160	Pistachio	10	Pistachio	11	Pistachio	12	Pistachio	13	Pistachio	14	Pistachio	15	Pistachio	16	Pistachio	17	Pistachio	18	Pistachio	19	
	Field 2	320	Pistachio	5	Pistachio	6	Pistachio	7	Pistachio	8	Pistachio	9	Pistachio	10	Pistachio	11	Pistachio	12	Pistachio	13	Pistachio	14	
	Field 3	160	Pistachio	20	Pistachio	21	Pistachio	22	Pistachio	23	Pistachio	24	Pistachio	25	Pistachio	26	Pistachio	27	Pistachio	28	Pistachio	29	
	Field 4	400	Almond	15	Almond	16	Almond	17	Almond	18	Almond	19	Almd/falw	20/1	Almd/falw	21/2	Almd/falw	22/3	Almd/falw	23/4	fallow	5	
	Field 5	80	Almond	15	Almond	16	Almond	17	fallow	1	fallow	2	Pistachio	1	Pistachio	2	Pistachio	3	Pistachio	4	Pistachio	5	
	Crop-type unit values (Inches/ac/yr)			Crop ET	Eff Precip	Crop ET	Eff Precip	Crop ET	Eff Precip	Crop ET	Eff Precip	Crop ET	Eff Precip	Crop ET	Eff Precip	Crop ET	Eff Precip	Crop ET	Eff Precip	Crop ET	Eff Precip	Crop ET	Eff Precip
		Field 1		34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7
		Field 2		34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7
		Field 3		34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7	34.7	2.7
		Field 4		39.3	3.0	39.3	3.0	39.3	3.0	39.3	3.0	39.3	3.0	39.3	3.0	39.3	3.0	39.3	3.0	39.3	3.0	0.0	0.0
	Field 5		39.3	3.0	39.3	3.0	39.3	3.0	0.0	0.0	0.0	0.0	10.4	0.8	17.3	1.4	26.0	2.0	31.2	2.4	34.7	2.7	
	Total ETAW (af/field)			ETAW (af/yr)		ETAW (af/yr)		ETAW (af/yr)		ETAW (af/yr)		ETAW (af/yr)		ETAW (af/yr)		ETAW (af/yr)		ETAW (af/yr)		ETAW (af/yr)		ETAW (af/yr)	
		Field 1		426		426		426		426		426		426		426		426		426		426	
		Field 2		852		852		852		852		852		852		852		852		852		852	
		Field 3		426		426		426		426		426		426		426		426		426		426	
		Field 4		1,210		1,210		1,210		1,210		1,210		908		756		454		303		0	
	Field 5		242		242		242		0		0		64		107		160		192		213		
	Farm Unit	Total Estimated ETAW (af)		3,157		3,157		3,157		2,915		2,915		2,676		2,567		2,318		2,199		1,918	
		SY Avail (af)		1,120		1,120		1,120		1,120		1,120		916		916		916		916		916	
		TW Pool 1 Avail (af)		1,232		1,232		1,120		1,120		1,120		784		784		672		672		560	
		Unused Pool 1		-805		-805		-917		-675		-675		-976		-867		-730		-610		-441	
		TW: Pool 2 Avail (af)		971		988		1,079		1,008		1,030		1,558		815		753		690		627	
		Unused Pool 2		166		183		163		333		356		582		-52		23		79		186	
	Actions taken on fields									[fallow 100% - F5]					[Fallow 100 ac - F4]	[Fallow 150 ac - F4]	[Fallow 250 ac - F4]	[Fallow 300 ac - F4]					[Fallow all F4]
														[Replant 100% - F5]									



Farm Unit #2 Scenario

4,000 head dairy with 1,500 acres of adjacent field crops and orchards

Field Management

Unchanged through Year 10

Likely will need change or alternative source of water after Year 10

Use of Allocations

Fully use SY in all years

Use about 75% of TW Pool 1 through Year 5

Fully use TW Pool 1 Year 6 through 10

No use of TW Pool 2 through Year 5

Slight to full use of TW Pool 2 for Year 6 through 10

Will be short after Year 10



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Farm Unit #3 Scenario

800 acres of non-irrigated and 500 acres of pistachios

Field Management

Unchanged through Year 5

Year 6 planted 250 acres of non-irrigated to low-water use permanent crop

Use of Allocations

Fully use SY in all years

Very minor use of TW Pool 1 through Year 5

About 50% use of offered TW Pool 1 starting in Year 6

No use of TW Pool 2



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Farm Unit #4 Scenario

500 acres of low-water use permanent crop

Field Management

Unchanged through Year 10 (including increased consumption from new field planted in Year 1)

Use of Allocations

Does not fully use SY

May have SY available to transfer (if a market is established)

Never uses TW



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Committee Member Comments



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Public Comment



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Item 9: Adjournment



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