



EASTERN SAN JOAQUIN GROUNDWATER
AUTHORITY

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**Eastern San Joaquin Groundwater Authority
Groundwater Sustainability Workgroup
April 10, 2019
4 – 5:30 p.m.
San Joaquin County Public Works Department
1810 E. Hazelton Ave., Stockton – Conference Room A**

Committee Members in Attendance

	Name	Organization
	Colin Bailey	The Environmental Justice Coalition for Water
	Barbara Barrigan-Parrilla	Restore the Delta
X	Gene E. Bigler	PUENTES
	Drew Cheney	Machado Family Farms
	Robert Dean	Calaveras County Resource Conservation District
X	Mary Elizabeth	Sierra Club
X	David Fries	San Joaquin Audubon
	Joey Giordano	The Wine Group
	Jack Hamm	Lima Ranch
	Mary Hildebrand	South Delta Water Agency
X	George V. Hartmann	The Hartmann Law Firm
	Michael Machado	Farmer
	Ara Marderosian	Sequoia ForestKeeper
	Ryan Mock	J.R. Simplot Company
	Yolanda Park	Coop
	Jonathan Pruitt	Catholic Charities of the Diocese of Stockton
X	Will Price	University of the Pacific & Vice Chair, SJ County Advisory Water Commission
X	Daryll Quaresma	2Q Farming, Inc.
	Jennifer Shipman	Manufacturers Council of the Central Valley
	Chris Shutes	California Sportfishing Protection Alliance
	Michael F. Stieler	CGCS, Spring Creek Golf & Country Club
	Linda Turkatte	San Joaquin County Environmental Health Department
	Ken Vogel	San Joaquin Farm Bureau Federation
X	Ted Wells	Trincherro Family Estates and Sutter Home Winery
	General Public	
X	Jane Wagner-Tyack	League of Women Voters of SJ County
X	Paul Wells	Department of Water Resources
	Andrew Watkins	Stockton East Water District
X	Bryan Pilkington	Private citizen

	Staff and Consultants	
X	Brandon Nakagawa	County ESJ GSP Project Representative
X	Michael Callahan	County ESJ
	Alicia Connelly	County ESJ
X	Alyson Watson	ESJ GSP Project Manager
X	Christy Kennedy	ESJ GSP Deputy Project Manager
	Lindsay Martien	ESJ GSP Deputy Project Manager
X	Cindy Thomas	Stakeholder Engagement & Public Outreach Consultant

Meeting Notes

I. Welcome

- a. Alyson Watson welcomed the group at 4:04.
- b. Alyson Watson reviewed the meeting agenda, emphasizing the focus would be on sustainability indicators and undesirable results for interconnected surface water.
- c. Alyson Watson provided an update on three of the undesirable results - seawater intrusion, storage and subsidence.

II. Meeting Objectives

- a. Alyson Watson discussed the meeting objectives:
 - i. Review and discuss the interconnected surface water sustainability indicator.
 - ii. Review approach for establishing sustainable management criteria.
 - iii. Understand proposed monitoring network.

III. Interconnected Surface Water

- a. Alyson Watson discussed the Depletion of Interconnected Surface Water and why it is a concern.
- b. Alyson Watson discussed the minimum threshold.
 - i. Major river systems in the Subbasin are highly managed.
 - ii. Instream flow requirements, water quality standards and water rights govern upstream releases.
- c. Alyson Watson shared DWR Guidance considerations and discussed some of the questions asked.
 - i. What are the historical rates of stream depletion for different water year types?
 - ii. What is the uncertainty in streamflow depletion estimates from analytical and numerical tools?
 - iii. What is the proximity of pumping to streams?
 - iv. Where are groundwater dependent ecosystems in the basin?
 - v. What are the agricultural and municipal surface water needs in the basin?
 - vi. What are the applicable State or federally mandated flow requirements?
- d. Alyson Watson led a discussion regarding potential current or historical undesirable results that have been observed in the basin for depletion of interconnected surface water.
- e. Will Price stated that surface water flowing into basins is not a right of those within the stream. He asked where one draws the line on rights of surface water.

- f. Alyson Watson asked the group where they think the line should be drawn between surface water and groundwater, and the difference between reasonable and unreasonable.
- g. Daryl Quaresma talked about a scenario of a free flow stream and pumping. Currently water districts can only pump flood flows to dry wells. The water now is being fought over by various agencies. He wants to know how people are going to recharge their basin now that streams that have never been monitored will now be monitored. He wants to understand how people will be able to recharge their basin and who determines flood flows, especially for unmonitored creeks and streams.
- h. Brandon Nakagawa said this issue is very complicated. If there is water in a stream that belongs to someone and someone diverts it via pumping, etc. the owner of the stream can sue you and win. The better question is what actions have caused depletion.
- i. Alyson Watson said an undesirable result is one that is significant and unreasonable. She clarified that we are discussing a riparian right and whether you can recharge for beneficial use.
- j. Brandon Nakagawa clarified that values are at minimum of what we want to hear.
- k. Mary Elizabeth said there are reports of salmon in the Calaveras River. Of the 30 projects proposed, there were multiple that were taking water from the Calaveras River. She noted that bypasses created could have positive benefits recharging parts of the cone of depression. She noted that taking the water and using it in lieu of groundwater is double dipping. She noted that there are other waterways in the county that are trash collectors because they are no longer used for water flow. She believes this is an interconnected problem. The other problem is diversions of the river. The decreased peak flows have resulted in sedimentation in the lower reach which have formed islands. People also live in the waterways there is a lot of trash that impacts the quality of life.
- l. David Fries said the connection in drought years must be catastrophic and doesn't know how to get around that. He asked about the impact to wildlife resulting from groundwater extractions.
- m. Alyson Watson noted that question is tricky because it is hard to determine what groundwater management plays on the impact to wildlife during dry years, no Delta flushing and invasive plant species.
- n. Daryl Quaresma said years like this year there are multiple wetlands. He asked if that comes into consideration for groundwater recharge? He believes it should since it is a natural flow. He also noted there needs to be common sense involved in this process. He stated the facts that some irrigation districts started up in the last three weeks because if they do not use it, they lose it.
- o. Brandon Nakagawa provided some clarification on flood releases. He noted that in a flood year, like this year, they have to release water. He indicated that the plan takes into consideration wet years and drought years. Everything is built into the baseline.
- p. Alyson Watson noted the shifting of cropping patterns changes groundwater.
- q. Bryan Pilkington asked among the current, historical and future undesirable results, what trends have we seen? When he moved to California in 1985, he irrigated his property by pumping water out of Bear Creek, which was on his property. He did not even know to use groundwater. He noted that when you project into the future, the inconsistency of the weather must be taken into consideration. He thinks public outreach is critical. Where is the water going to come from?

- r. Alyson Watson said that this basin is fortunate because there is a lot of surface water that is not being used. Some districts could sell more water. There is an imbalance in this basin but there is a lot of surface water that can be used in lieu of groundwater. We can lay the groundwork to work together for bigger impact solutions.
- s. Daryl Quaresma said South San Joaquin has extra water for sale. He asked how to get the water from where it is abundant to the cone of depression and noted that it is a long way for water to travel.
- t. Alyson Watson said there are agencies in the cone of depression that have surface water but they aren't using it because it is not cost efficient. There are a lot of options to use surface water before groundwater. Groundwater elevations in certain areas will be managed – it can't continue to perpetually decline.
- u. Brandon Nakagawa noted they will monitor where the issue is for minimum thresholds.
- v. Mary Elizabeth asked if the wells located near surface water that have been pumping will be decreased, using the surface water and not groundwater. There needs to be a count of wells that are nearby streams and their distance need to be noted. There is too much variation in well ordinances. We need to adjust the distance for each of the counties in the basin.
- w. Bryan Pilkington asked when recharge projects are arranged, does it have to have the best effects on the basin as a whole?

IV. Sustainability Indicators (Seawater Intrusion, Storage, Subsidence)

- a. Alyson Watson described the three indicators:
 - i. Seawater Intrusion
 - ii. Reduction in Groundwater Storage
 - iii. Land Subsidence
- b. Alyson Watson noted we will be fully addressing all six sustainability indicators based on guidance from the Advisory Committee. She noted that today the Workgroup will be discussing three.
- c. Alyson Watson discussed sustainable management criteria terminology and explained how minimum thresholds are determined. She noted we are regulated on the minimum threshold. The goal is to set those as numeric thresholds so we do not get to undesirable results.
- d. Alyson Watson explained the consequences of violating minimum thresholds and potential intervention by the State Water Resources Control Board.

V. Sustainability Indicator: Seawater Intrusion

- a. Alyson Watson discussed the salinity in the basin and the sources: San Joaquin Delta Sediments, Deep Deposits and Irrigation Return Water. The salinity we have in the basin is not caused by seawater intrusion.
- b. Alyson Watson discussed the proposed isocontour line that was presented to the Advisory Committee and the associated sustainable management criteria.
 - i. 2,000 mg/L chloride isocontour line.
 - ii. The proposed contour would be between the westernmost monitoring points and the next most-westerly points.
 - iii. Alternatively, it could be placed at I-5.
- c. The plan is due in 2020 and will be updated 5 years later.

- d. George V. Hartmann asked if the western wells are shut down because they were tied to seawater intrusion.
- e. Brandon Nakagawa explained the driver of closing the wells was not specifically due to seawater intrusion.
- f. George V. Hartmann asked what minimums they are using as a guide.
- g. Alyson Watson noted the minimum is calculated through the historical low with an added buffer. Domestic wells are the floor for elevation.
- h. Mary Elizabeth said with sea level rising the city of Stockton is protected.
- i. Daryl Quaresma asked for more information about the isocontour line.
- j. Alyson Watson noted that if there was seawater intrusion, there would be a migration. The isocontour line serves as sentinels.
- k. Ted Wells said the I-5 option is not good.
- l. Alyson said this will be proposed to the Board next month.

VI. Sustainability Indicator: Reduction of Groundwater Storage

- a. Alyson Watson discussed the historical model change in groundwater storage and the small variations.
 - i. There has been a cumulative change of -0.05 MAF per year (-0.09%)
- b. Alyson Watson discussed the process for using groundwater levels as a proxy. She discussed both approaches.
 - i. Approach 1: Using groundwater levels as a proxy, with justification that the groundwater level minimum thresholds will be protective.
 - ii. Approach 2: Set a threshold at a point at which undesirable results would occur based on volume at which groundwater is being accessed.
- c. Approach 2: There is a greater understanding of the top management area of the aquifer with regard to water quality and other parameters. Uncertainty increases with depth, and having storage drop below that point is considered undesirable.
 - i. Groundwater is currently pumped from Layers 1 and 2 of the model
 - ii. Total volume at which groundwater is pumped: **24.3 MAF**
 - iii. 53.0 MAF Total Storage – 24.3 MAF in the general zone of GW Management
 = **28.7 MAF as Proposed Threshold (Round to 30 MAF)**
- d. The Advisory Committee is recommending Approach 1 to the Board.
- e. George V. Hartmann said that groundwater levels are all that matter. People will not want to drill their wells deeper. He thinks it was a good recommendation. Why reinvent the wheel?
- f. Will Price said the volume is more important than the depth.
- g. Alyson Watson reminded the group that we can reevaluate again in 2025. She noted it will continue to come up in discussion.
- h. Will Price said he lived in Tucson and the city drew water from 600 feet deep and it did not bother them at all. They say the 600 foot water is always available and is not likely to go away even in drought periods. He asked why not think deep?
- i. George V. Hartmann said our water is constantly being recharged from the water running from the mountains.
- j. Mary Elizabeth asked if deeper wells have salinity issues.
- k. Alyson Watson noted that the deeper you go, there may be more issues.

VII. Sustainability Indicator: Land Subsidence

- a. Alyson Watson noted land subsidence has not been historically observed in the basin. We expect extremely low risk given basin conditions.
- b. Daryl Quaresma said the point is the river – the brown area has more chance of subsidence. PG&E was trying to reset some posts and it was full of water and has higher groundwater.
- c. Alyson Watson explained the recharge and what has been observed in that area. It is proposed to use groundwater levels as a proxy. She explained the two conditions of land subsidence.
 - i. Land subsidence requires dewatering of subsurface materials and that those materials be compressible.
 - ii. If the basin were to operate with the margin of operational flexibility proposed for groundwater levels, future dewatering would take place in similar geologic units to those currently dewatered.
 - iii. The dewatered materials are expected to behave the same way.
 - iv. Therefore, additional declines in groundwater levels are unlikely to cause subsidence.
- d. Christy Kennedy discussed the geological aspects of the cross section.
 - i. The Advisory Committee recommends using groundwater levels as a proxy for land subsidence.
- e. Alyson Watson hopes to have the recommended approach to the Board in May.

VIII. Monitoring Network

- a. Alyson Watson explained the monitoring network and how it is used to monitor for conditions that would cause undesirable results. Monitoring must address the six sustainability indicators.
- b. Mary Elizabeth was asked to point out the monitoring network wells in the cone of depression.
- c. Alyson Watson noted there is a data gap. We are establishing wells for monitoring and setting thresholds for the future. We know we need to have it – the wells are not suitable for monitoring.
- d. Bryan Pilkington asked about the monitoring wells in the Woodbridge area.
- e. Alyson Watson said we have to cover Woodbridge or the entire basin will be out of compliance.
- f. Alyson Watson explained the broad monitoring network and pointed out the new monitoring wells on the map. She explained the types of wells in the network.
- g. Ted Wells asked how quickly things change. How often should we monitor? The data rarely changes. Can we just use the data and make a frequency determination? It was suggested that monitoring be adjusted from quarterly to semiannually.
- h. Mike Callahan says it doesn't change often. We measure in spring when it is the highest point. We monitor again in the fall when it is at the bottom. There is so much interference in the data. The draw down is too variable from well to well. That is why we do it at the top and the bottom.
- i. Alyson Watson said we can automate it or just do a high and a low.
- j. Brandon Nakagawa discussed the cost of monitoring and the data quality and noted the need to increase costs.
- k. George V. Hartmann asked how you keep people from stealing monitoring equipment.

IX. Announcements

- a. The Administrative Information and HCM chapters will be posted to the website on May 1, in advance of the May Board meeting.
- b. Mary Elizabeth asked for information on the wells located in the disadvantaged community. How many wells are in DAC areas, what GSAs are they in and construction details for small water system production wells and domestic wells.
- c. The next meeting takes place on May 8.

X. Other Topics

Comments by Mary Elizabeth (March)

I am not sure about this statement, She noted that there is an approach for addressing enforcement or monitoring from the GWA. I think this is in reference to the JPA but not sure.

Here are some excerpts from the JPA:

To the extent the Members are not successful at jointly implementing the GSP within the Basin, or to the extent that any Member wishes to implement the GSP within its boundaries, the Authority intends to allow any individual Member to implement the GSP within its boundaries, and to work together with all Members to coordinate such implementation in accordance with the requirements of SGMA

2.6 The Members expressly intend that the Authority will not have the authority to limit or interfere with the respective Member's rights and authorities over their own internal matters, including, but not limited to, a Member's legal rights to surface water supplies and assets, groundwater supplies and assets, facilities, operations, water management and water supply matters. The Members make no commitments by entering into this Agreement to share or otherwise contribute their water supply assets as part of the development or implementation of a GSP.

6.2 Noncompliance. In the event any Member (1) fails to comply with the terms of this Agreement, or (2) undertakes actions that conflict with or undermine the functioning of the Authority or the preparation or implementation of the GSP, such Member shall be subject to the provisions for involuntary removal of a Member set forth in of Section 6.3 of this Agreement. Such actions of a Member shall be as determined by the Board of Directors and may include, for example, failure to pay its agreed upon contributions when due; refusal to participate in GSA activities or to provide required monitoring of sustainability indicators; refusal to enforce controls as required by the GSP; refusal to implement any necessary actions as outlined by the approved GSP minimum thresholds that are likely to lead to "undesirable results" under SGMA.

6.3 Involuntary Termination. The Members acknowledge that SGMA requires that multiple GSAs within Bulletin 118 groundwater basins designated as high- or medium-priority must coordinate, and are required to use the same data and consistent methodologies for certain required technical assumptions when developing a GSP, and that the entire Basin must be managed under one or more GSPs or an alternative in lieu of a GSP for the Basin to be deemed in compliance with SGMA. As a result, upon the determination by the Board of Directors that the actions of a Member (1) fail to comply with the terms of this Agreement, or (2) conflict with or undermine the functioning of the Authority or the preparation and implementation of the requirements of the GSP, the Board of Directors may terminate that Member's membership in this Authority, provided that prior to any vote to remove a Member involuntarily, all of the Members shall meet and confer regarding all

matters related to the proposed removal. The Board of Directors shall terminate the membership in the Authority of any Member that fails, on or before June 30, 2017, to (i) elect to become a GSA duly established in accordance with SGMA, or (ii) participate, through a joint exercise of powers agreement or other legal agreement, in a GSA duly established in accordance with SGMA.