

Delta-Sierra Group Mother Lode Chapter P.O. Box 9258 Stockton CA 95208

Eastern San Joaquin Groundwater Authority P. O. Box 1810, Stockton CA 95205

25 August 2019

Via email: <u>info@esjgroundwater.org</u> and ESJgroundwater@sjgov.org

Re: Eastern Joaquin Groundwater Sustainability Plan – Public Draft July 2019

The Sierra Club has adopted a water policy to promote proper management for a healthful and aesthetically pleasing natural environment. The policy calls for thorough water inventories including historic water yields and uses, with priority where substantial demands are anticipated. The Eastern San Joaquin (ESJ) Subbasin is a high priority basin which is critically overdrafted requiring that managers of the resource comprised of 15 Groundwater Sustainability Agencies (GSAs) develop a groundwater sustainability plan (GSP) by January 2020.

The Draft GSP was released in July 2019 and the Delta-Sierra Group has prepared generalized comments regarding the following topics:

- 1. Initial Notification of GSP Preparation
- 2. GSP Funding
- 3. Beneficial Users Outreach
- 4. Wells
- 5. Recharge Areas
- 6. Interconnected surface waters

- 7. Groundwater dependent Ecosystems
- 8. Water Quality
- 9. Data Management System
- 10. Monitoring
- 11. Modeling
- 12. Notice of Intent to Adopt GSP

Initial Notification of GSP Preparation

The 15 GSAs along with 2 now former Eastern San Joaquin GSAs agreed to develop one GSP for the Eastern San Joaquin Groundwater Subbasin. The basis for this cooperation is outlined in the Joint Powers Agreement¹ which established the Eastern San Joaquin Groundwater Authority (GWA) to oversee the GSP development. According to the Notice of GSP Plan Development submitted to DWR: "The agreement specifies that the 17 GSAs will coordinate via the GWA to develop and implement a single GSP."

The GSP must contain four main components:

- 1. A description of the plan area and groundwater basin setting (including an assessment of current and future groundwater conditions) and a water budget.
- 2. Sustainability goals which must avoid all six undesirable results
- 3. Projects and management actions that will achieve the community's sustainability goal, and
- 4. A monitoring plan that will measure progress over time.

The Eastern San Joaquin groundwater basin is characterized as an alluvial basin because most all the underlying sediments were deposited by flowing water and that have been allowed to accumulate over a million years or more³. The area overlying the basin is located in three counties: San Joaquin, Calaveras, and Stanislaus. Most of the basin lies within San Joaquin County.

¹ https://www.sierraclub.org/sites/www.sierraclub.org/files/sce-authors/u14441/Fully%20Executed%20Eastern%20San%20Joaquin%20Groundwater%20Authority%20JPA_02082017.pd f. Fully authorized by signatories October 2017.

² https://sgma.water.ca.gov/portal/gsp/init/preview/82 Accessed 8.24.19.

³ PAGE R.W., Geology of the Fresh Ground-Water Basin of the Central Valley, California, with Texture Maps and Sections REGIONAL AQUIFER-SYSTEM ANALYSIS; U.S. GEOLOGICAL SURVEY PROFESSIONAL PAPER 1401-C; 1986.

GSP Funding

To develop the GSP a contract was signed with Woodard & Curran for \$2,176,420 that is in effect through the submittal of final GSP to DWR in January 2020. To fund the contractual obligation there was a uniform distribution of the local share costs between the then 17 GSAs. The Disadvantaged Community Grant, supported by Sierra Club, reduced the local cost share associated with the \$1,500,000 Proposition 1 grant that was awarded to the GWA. Additionally, San Joaquin County Zone 2 Groundwater Investigation Assessment funds were distributed to 16 of the GSAs to further lower local cost shares to approximately \$28,000/GSA within San Joaquin County. There was a much more robust discussion about funding the development of the GSP than for implementing the GSP. Table 1 below provides a summary of the GSA's areas and composition, both factors with groundwater extraction volumes should be considered when determining GSP implementation contributions.

Table 1. GSA's Area and Primary Land Use

Groundwater Sustainability Agency	Area (Acres)	Primary Land Use	
Central Delta Water Agency GSA	52,000	Agricultural	
Central San Joaquin Water Conservation District GSA	73,000	Agricultural	
City of Lodi GSA	8,7104	Urban 4,565 population density/mile ⁴	
City of Manteca GSA	13,000	Urban 3,784 population density/mile ⁴	
City of Stockton	39,000	Urban 4,730 population density/mile ⁴	
Eastside San Joaquin GSA	126,000	Agricultural: Calaveras County Water District, Stanislaus County, and Rock Creek Water District (1,800 acres).	
Linden County Water District	3,000	Urban 1,800 residents	
Lockeford Community Services District	800	Urban 3,200 residents	
North San Joaquin Water Conservation District GSA	149,000	Agricultural: Approximately 50% is irrigated land	
Oakdale Irrigation District	31,000	Agricultural – supplier of surface water to Urban and Agricultural	
County of San Joaquin GSA - Eastern San Joaquin 1	51,000	Agricultural with unincorporated community service districts	
County of San Joaquin GSA - Eastern San Joaquin 2- Calwater	7,000	Urban – 42,000 connections – County MOA ⁵ with California Water Service, an investor owned utility	
South Delta Water Agency GSA	18,000	Agricultural surface water users, groundwater unusable due to high salinity	
South San Joaquin GSA	64,000	Agricultural and Urban: South San Joaquin Irrigation District distributes water for agricultural and urban users; City of Ripon 14,700 residents, and City of Escalon 7,400 residents.	
Stockton East Water District GSA	101,000	Agricultural	

In June 2019, an Ad Hoc Committee was established by the GWA to evaluate the role of the GWA going forward because many members believed that the JPA was only a coordinating agreement so that a

⁴ https://www.census.gov/quickfacts/fact/table/mantecacitycalifomia,stocktoncitycalifomia,lodicitycalifomia/LND110210 data not included in the draft GSP.

⁵ https://www.sierraclub.org/sites/www.sierraclub.org/files/sce-authors/u14441/Cal%20Water%20MOA_A-17-146 06052017 0.pdf.

single plan could be prepared covering the entire Eastern San Joaquin Groundwater Subbasin rather individual GSAs preparing their own plans.

The uncertainty related to ongoing governance exists in part because the Ad Hoc Committee was created especially so that Brown Act notifications to the public were not required. Whether or not coordination between the 15 GSAs continues during implementation will be in large part determined by what this Ad Hoc Committee reports to the GWA for their consideration. It is expected that this report will be made available either in September 2019 GWA agenda materials or at the September 2019 GWA meeting. In either case long after comments on the draft GSP are due in August 2019. The postponing of these important governance and funding discussions creates a situation of urgency which will likely preclude widespread public outreach and consideration of beneficial users' comments. The deficiencies related to individual GSA water budgets casts serious doubts about how funding allocations will be made so that basin-wide monitoring and implementation activities are accomplished. A frequent comment has been, why should we fund someone else's misuse and lack of planning when we have been funding efficiency improvements all along.

Beneficial Users Outreach

To satisfy the requirement to consider all beneficial users when developing the GSP, the Stakeholder Workgroup was formed in June 2018 to convey to the Groundwater Authority the perspectives of beneficial users in the basin. The approach to create a stakeholder committee for outreach to all beneficial user types was presented at the March 2018 GWA meeting. The presentation included the role of the Stakeholder Committee and the flow of information: staff Advisory Committee to Groundwater Authority Board then to Stakeholder Committee, and after the Groundwater Authority Board is "comfortable with everything, the topics will be ready for public presentations".

The goals of the Stakeholder Workgroup are outlined in the June 2018 *Draft Eastern San Joaquin Groundwater Authority Groundwater Sustainability Plan and Sustainable Groundwater Management Program Stakeholder Engagement and Public Outreach Plan.* The Workgroup may provide to the consulting team developing the GSP, input regarding the following groundwater-related issues:

- Annual work plans and reports (including mandatory 5-year milestone reports)
- Community outreach
- Development, adoption or amendment of the Groundwater Sustainability Plan
- Fee proposals
- General advisory
- Inter-basin coordination activities
- Local regulations to implement Sustainable Groundwater Management Act ("SGMA")
- Modeling scenarios
- Monitoring programs
- Projects and management actions to achieve sustainability
- Sustainability goals and objectives
- Confirmation of community values

Early on Stakeholder Workgroup members expressed frustration that specific technical information was not available for review in advance of meetings; that during meetings new information was made available on PowerPoint slides only; that meetings were rushed because there was an emphasis on presenting information rather than engaging in meaningful dialogue that could be communicated to the GWA. These issues and others are included in the results of the DWR Facilitation Grant situational assessment completed in December 2018. *The Eastern San Joaquin Groundwater Sustainability Work*

Group Stakeholder Assessment Highlights Report and Highlights presentation⁶ were available in December 2018 and satisfied the requirements of the Department of Water Resources (DWR) Public Outreach Facilitation Agreement signed in September 2017. Since the GWA did not meet in December 2018 or January 2019 a video⁷ was prepared for GWA review.

Frequently, information was requested by Workgroup Members so that meaningful comments could be prepared. These requests were:

- For more complete descriptions of management projects before final selection included in the GSP.
- For how responsibilities for funding the implementation of the GSP were to be allocated between the GSAs.

While Stakeholder Workgroup members were apprised of these two major aspects of the GSP, the members had too little detailed information to develop comments to convey their ideas to the GWA. Because information flow was limited, it is questionable about how robust engagement was during the GSP development.

Members expressed frustration that there were no demand management options to curtail continued development of the groundwater resource in areas were overdraft have been identified. Wells of any size can be drilled in San Joaquin County and Calaveras County with no requirement for metering to verify that permit application estimates of groundwater demand are valid. Stanislaus County, on the other hand has taken a discretionary approach so that new wells installed do not further impact aquifer overdrafted conditions. This discretionary approach as well as the ministerial approach to groundwater well permitting are currently under consideration by the California State Supreme Court Case No. S251709.

Many of the problems related to outreach that were discussed in 2018 continued and are in part summarized in a July 2019 letter submitted by multiple organizations including the League of Women Voters – San Joaquin County, the Delta-Sierra Group of the Sierra Club, Restore the Delta, Environmental Justice Coalition for Water, and Puentes⁸.

On August 12, 2019 the members of the Stakeholder Workgroup were notified that scheduling for the final 1.5-hour meeting was underway and would be held in September 2019 to discuss responses to comments received on the Draft GSP, and "conclude with a small thank you ceremony." Likely, rather than a discussion, this meeting will include a presentation of a few comments or the GSP adoption process. This statement is based on the fact that the Stakeholder Workgroup was informed at the May 2019 that the June 2019 meeting was to include a discussion of Bundle 1 draft GSP comments and only a brief comment was made regarding one stakeholder group's comments – the Nature Conservancy regarding groundwater dependent ecosystem identification. Instead of a discussion of comments there was an overview presentation of draft GSP Bundles 2 and 3.

Wells, Recharge Areas, Interconnected Surface Waters, and Groundwater Dependent Ecosystems Wells

The GSP Wellhead protection areas and recharge areas Section 1.2.3.4, addresses wellhead protection programs in San Joaquin County, Calaveras County, and Stanislaus County. The discussion regarding wellhead protection areas seemed to be restricted to annular seals on wells which do prevent surficial contamination from entering the aquifer. No analysis was offered as to the variation of well construction

 $\underline{authors/u14441/Collective\%20Comments\%20on\%20GSA\%20outreach\%20activities\%20\%20071719\%20final.pdf}$

https://www.sierraclub.org/sites/www.sierraclub.org/files/sce-authors/u14441/Eastern%20San%20Joaquin%20%20Groundwater%20Sustainability%20Work%20Group%20Stakeholder%20Assessment%20Highlights%20Report.pdf and https://www.sierraclub.org/sites/www.sierraclub.org/files/sce-authors/u14441/ESJ-Assessment-DRAFT.pdf

⁷ https://www.youtube.com/watch?v=JKIHfbvTmPs&t=178s not distributed to GWA based on available public records.

⁸ https://www.sierraclub.org/sites/www.sierraclub.org/files/sce-

standards and location requirements that might relate to wellhead protection areas. A brief summary of well construction standards and location requirements for the three counties is included in Table 2. With the exception of Stanislaus County, there are no restrictions on pumping or new well installations, of any size and depth due to the ministerial approach adopted by San Joaquin and Calaveras Counties. Continued issuance of well permits of any size occurs including in areas where cones of depression have been identified due to historic groundwater extraction exceeding groundwater recharge.

Despite the fact that GSAs are able require water management devices on non-de minimis water wells no metering of wells of any size was proposed in the draft GSP. De minimis wells produce less than two acre-feet per year for domestic purposes. Reporting of extraction volumes and meters on all wells not de minimis is required should the State Water Resource Control Board have to regulate a basin. There are several thousand or more wells that are not de minimis that extract groundwater within the Eastern San Joaquin Groundwater Subbasin. The Delta-Sierra Group recommends that the largest non-de minimis extraction wells be metered with an annual reporting requirement. Requiring the metering of the largest extraction wells is a good step towards validating the results of modeling based on acreage and crop types.

Table 2. County Regulation for Well Installation

San Joaquin County ⁹	Stanislaus County ¹⁰	Calaveras County
San Joaquin County Environmental Health Department oversees a well permitting program	Stanislaus County Department of Environmental Resources oversees a well permitting program	Calaveras County Environmental Health Department oversees a well permitting program
Setbacks for Public Water System Wells (Lots recorded after 1972): Property Line 25 ft (10 ft) Septic Tank 100 ft (50 ft) disposal 100 ft (100 ft) Sewer Line 50 ft (50 ft) Stream, Creek, 50 ft (50 ft) River, Canal	In 2014, the DER adopted a Groundwater Ordinance to prohibit unsustainable extraction of groundwater in unincorporated areas of the County. The DER reviews each Well Permit Application and determines whether the well is subject to, or exempt from, the prohibitions in the Groundwater Ordinance. Permit Applications for wells intended to extract 2 AF/year of groundwater or less are exempt from the prohibitions in the Groundwater Ordinance	Setbacks ¹¹ Property line <5 acres 10ft Property line >5 acres 50 ft Septic Tank 100ft Disposal 100ft Sewer Line 50 ft Surface Water 25 ft
The minimum depth of the annular seal for wells in San Joaquin County: Public Water Supplies 100 ft Individual Domestic Well 100 ft Industrial Wells 100 ft Agricultural Wells 50 ft	All wells shall have an annual seal except for Agricultural wells located 300 feet or more from a domestic well ¹² : Minimum seals as set forth in Chapter II of the Department of Water Resources Bulletin No. 74, "Water Well Standards" (February 1968), or as subsequently revised or supplemented, which are incorporated in this chapter and made a part of this chapter. (Prior code §3-313) ¹³ Community water supply 50 ft Industrial 50 ft Individual domestic 20 ft Agricultural well 20 ft	The minimum dept of the annular seal for wells in Calaveras County 14: Public drinking water well 50 ft Commercial well 50 ft Industrial well 50 ft Individual domestic well 20 ft Agricultural well 20 ft Vertical geothermal exchange wells 20 ft Wells within twenty-five (25) feet of a water way 20 ft below the bed of the water way.

⁹ https://www.sigov.org/uploadedfiles/sjc/departments/ehd/forms/well%20standards.pdf

¹⁰ http://www.stancounty.com/er/pdf/application-packet.pdf

¹¹ http://ema.calaverasgov.us/Portals/EMA/Documents/EH/Wells/Minimum Well Setbacks.pdf

¹² https://gcode.us/codes/stanislauscounty/view.php?version=beta&view=mobile&topic=9-9 36-9 36 070

http://wdl.water.ca.gov/waterdatalibrary/docs/historic/Bulletins/Bulletin_74/Bulletin_74-90__1991.pdf

¹⁴ http://ema.calaverasgov.us/Portals/EMA/Documents/EH/Wells/Well Ordinance.pdf

Recharge Areas

Groundwater recharge areas were not specifically addressed in GSP Section 1.2.3.4 but instead were discussed in 2.1.4.5.3: Description of Potential Recharge Areas. Modified SAGBI data was used to categorize 310,098 acres out of 610,890 acres (51 percent) of agricultural and grazing land within the Subbasin as moderately good, good, or excellent for groundwater recharge. The Modified SAGBI data show higher potential for recharge than unmodified SAGBI data because the modified data assume that the soils have been or will be ripped to a depth of 6 feet, which can break up fine grained materials at the surface to improve percolation. A generalized map was provided of potential recharge areas as shown below, but a map identifying existing recharge areas that substantially contribute to the replenishment of the groundwater basin was not found in the draft GSP.

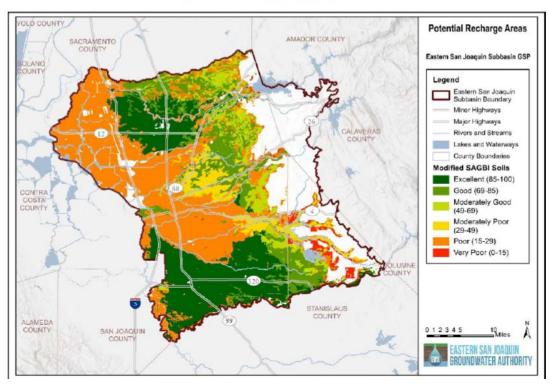


Figure 2-14 Potential Recharge Areas

SGMA requires that a map identifying existing and potential recharge, and specifically identifying the existing recharge areas that substantially contribute to the replenishment of the groundwater basin. This map shall be provided to the appropriate local planning agencies so that appropriate protection measures may be considered for adoption. In order to enhance recharge opportunities, land use planning that restrict paving and build over in an important mechanism. Good land use policies are necessary components to achieve the sustainability goals for the basin; so that existing recharge can continue and that development of additional regional recharge areas can become part of local water resource and community development plans.

Interconnected Surface Waters

Depletion of interconnected surface waters is an undesirable effect and the minimum threshold is the rate or volume of surface water depletions caused by groundwater use that has adverse impacts on beneficial uses of the surface water. Surface water supplies are available to many beneficial users including those with water rights granted by the State Water Resources Control Board directly or based on historical rights and environmental users including wildlife with and without narrow temperature ranges, and recreational users. When wells of any size are allowed to be drilled as near as 25 feet to 50 feet of a surface water source, it is likely that those wells are influenced to a large degree by surface water flows and contribute to surface water depletions in most circumstances.

The GSP noted in section 3.2.6 Depletion of Interconnected Surface Water that "quantification of depletions is relatively challenging and requires significant data on both groundwater levels near streams and stage information supported by groundwater modeling." Without restricting the installation of wells within areas of influence that intersect surface waterways, further depletion of interconnected surface waters will continue.

The draft GSP uses groundwater level minimum thresholds as a proxy for the depletion of interconnected surface water sustainability indicator. As such, the minimum thresholds for the interconnected surface water sustainability indicator are the same as the minimum thresholds for the chronic lowering of groundwater levels sustainability indicator. The use of the existing representative groundwater level monitoring wells is inadequate to assess whether or not surface waters are depleted by groundwater extraction wells near surface waterways. Figure 3-2 from the draft GSP shows the minimum threshold compliance well locations. Based on the scale of the legend the nearest well to a surface waterway is Bear Creek #3 which may be up to approximately 1 mile away from Bear Creek (0.5/2*3.75 miles) and operated by the Lockeford Community Services District which also operates wastewater infiltration ponds in the vicinity as shown in the snapshot from the 2007 Central Valley Regional Water Quality Control Board Waste Discharge Requirements¹⁵

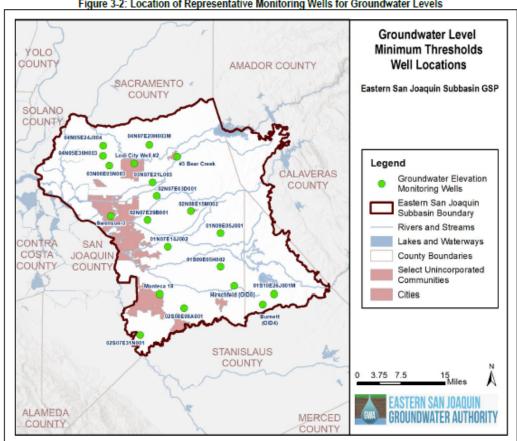
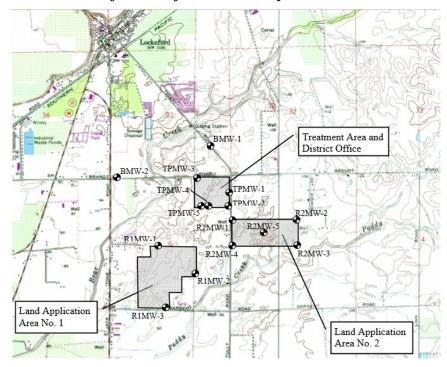


Figure 3-2: Location of Representative Monitoring Wells for Groundwater Levels

The CVRWQCB permitted the Lockeford Community Services District in 2007, a monthly average land application flow rate not to exceed 300,000 gallons per day, and upon approval of the Recycled Water Expansion Report by the Executive Officer, the monthly average flow rate may be increased to a maximum of 400,000 gallons per day. The location of Bear Creek #3 is not specified on the CVRWCB map shown below.

¹⁵ https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/san_joaquin/r5-2007-0179.pdf accessed 8.25.19

Snapshot from CVRWCD WDR for Lockeford Community Services District



The draft GSP included Bear Creek #3 well construction details (780 feet total depth with screened intervals from ground surface to depth or 96 feet to -684 feet mean sea level [msl]), The well could possibly be influenced by land application recharge as well as nearby Bear Creek. The current groundwater level for Bear Creek #3 is -49.3 ft msl with an objective of -50.3 ft msl or approximately 150 feet below ground surface. The minimum threshold for groundwater lowering which is being proposed as a basis for assessing depletion of groundwater is -72.3 ft msl. The minimum threshold is the quantitative threshold for each sustainability indicator used to define the point at which undesirable results may begin to occur. Reduction of groundwater levels approximately 20 feet while possibly causing some domestic or agricultural wells to go dry is not adequate to determine that surface water depletions are or are not occurring. The use of groundwater level reductions is inadequate to assess interconnected surface water impacts.

Groundwater Dependent Ecosystems

Groundwater-dependent ecosystems (GDEs) are defined in the GSP regulations as "ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface." SGMA requires the identification of GDEs but does not require that sustainable management criteria be established to manage these areas. GDEs exist where vegetation accesses shallow groundwater for survival; without the access to shallow groundwater, these plants would die. Thus, this Plan identifies GDEs within the Eastern San Joaquin Subbasin based on determining the areas where vegetation is dependent on groundwater as a reduced subset of potential GDEs identified in the Natural Communities Commonly Associated with Groundwater (NCCAG) database. The significant reduction of GDEs as compared to the NCCAG database was related to co-occurrence of surface water sources including irrigation canals. The Delta-Sierra Group objected in February 2019 to the disqualification of local ecosystems as GDEs if sources other than groundwater are available. Specifically, the criteria to not have other sources of water is defined as being at least 50 feet from irrigated land or 150 feet from either managed wetlands or from perennial surface water bodies. These water sources if not receiving water from groundwater will be discharging to groundwater. In either case freshwater species that are critical for ecosystem sustainability benefit: either the in-stream and riparian ecosystems or groundwater dependent ecosystems. The criteria used when removing GDE from the NCCAG database reduced the importance that these areas represent in the Subbasin. This reduction of designated GDE areas may

negatively affect future consideration and management actions and result in negative impacts to GDEs within the Eastern San Joaquin Subbasin. As no sustainable management criteria are required for GDEs, the Delta-Sierra Group recommends that a less restrictive method be used if reductions to the NCCAG are desired, and that the Nature Conservancy and California Department of Fish and Wildlife be consulted.

Water Quality, Data Management System, and Monitoring

Water Quality

The Eastern San Joaquin Subbasin groundwater quality is negatively impacted by contaminates not currently proposed for monitoring or inclusion in the Data Management System. Recent reports of a school using a contaminated well creates a reminder of the many contaminant plumes in the Subbasin including petroleum hydrocarbons, solvents, and emerging contaminants. Additionally, monitoring for nitrates in groundwater samples collected from monitoring wells and on-site domestic wells is now a requirement of the Irrigated Lands General Permit¹⁶ with results submitted in the State of California GeoTracker database. Nitrate contamination is a significant problem in agricultural areas related to the handling of wastes and applications of fertilizers.

Data Management System

An important part of the initial steps of implementation will be to have several workshops for beneficial users that are interested in accessing the database and creating reports or accessing pre-made report formats. Probably those staff that will be inputting data will also require training. Ideally, as work continues with the database, methods to incorporate contaminant data stored by the State of California in various databases can be explored. Another possibility is that GSAs exercise their powers and authorities to require that other groundwater management data be included in an expanded database. Fees could be charged of those with reportable results to submit to the database. The fees could offset time required by staff to input the data. Perhaps, San Joaquin Environmental Health could administer the database because they already have access to small water system monitoring data under permit. Those using groundwater and those making important planning decisions would benefit from a centralized location for groundwater quality.

Monitoring

Descriptions of monitoring frequencies need to be revised to consistently described the planned semi-annual monitoring. Staff involved with the California Statewide Groundwater Elevation Monitoring (CASGEM) well monitoring suggested that conditions could exist that more frequent monitoring may be necessary to capture valid seasonal fluctuations. Consideration should be given to the sampling of representative groundwater level compliance wells quarterly, a reduction of the DWR monthly monitoring suggestion. Semi-annual monitoring may miss transient changes in response to unseasonable conditions. Understanding these transient changes may help refine the conceptual model.

The monitoring protocols described in *The DWR Best Management Practices for the Sustainable Management of Groundwater Monitoring Protocols, Standards, and Sites* are used within the existing CASGEM program. The statement that "these protocols and existing resources will be used when possible in data monitoring and collection in support of this GSP" suggests that some wells being monitored by agencies not using these protocols may elect to continue to use their current protocol. A clear commitment that all representative groundwater wells will have well construction details and have data collected consistently using DWR's best management practices.

Modeling

The Delta-Sierra Group began asking for model specifics in 2017 and submitted correspondence in June 2018 summarizing those requests followed up with November 2018 and January 2019 correspondence.

¹⁶ https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/lirp_wdrs_res_final_web.pdf accessed 8.25.19

Public information requests with the DWR and San Joaquin County Counsel resulted in the report being made available in March 2019, six months after the report publication date and one year after it was due to DWR. Efforts are still underway to understand the complexities of the model and evaluate baseline conditions parameters used for model validation. The August 2018 Model Report included a reference to an April 25,2018 Eastern San Joaquin Water Resources Model IDC Workshop that was not noticed or advertised despite stakeholder collaboration being the first topic discussed. Going forward as the model is refined under contract, the Delta-Sierra Group suggests that model refinement include multiple opportunities for interested parties that are stakeholders to become more familiar with the model.

The sustainable conditions scenario for the water budget results in groundwater outflows almost equal to groundwater inflows with a basin sustainable yield estimated to be 715,000 AF/year \pm 10 percent. The water budget that was used to identify the 78,000 AF/year of offset needed to balance the groundwater budget over 50 years, is based on model results. This statement is confusing especially given the description of the model results under climate change, as it is unclear which number is being referred to:

This number is larger than the estimated annual overdraft of the projected conditions scenario due to the integrated nature of the groundwater subbasin.

Examples of offsets that could satisfy the groundwater deficit include direct or in lieu groundwater recharge and/or reduction in agricultural and urban groundwater pumping. Projects that reduce projected groundwater pumping and/or increase recharge will help the Subbasin reach sustainability.

Under the intermediate climate change scenario prescribed by DWR, the depletion in aquifer storage is expected to increase by about 68 percent to an average annual storage change of 57,000 AF/year, from 34,000 AF/year in the projected conditions scenario. If the 68 percent is applied to 78,000 AF/year, deficient an additional 53,000 AF/year will be needed and the planned projects projected to achieve sustainability included in the GSP will be insufficient.

Notice of Intent to Adopt GSP

Between 8.20.19 and 8.25.19, the esjgroundwater.org website was updated with the Notice of Intent to Adopted GSP. The website indicated that the Notice was posted on 8.16.19 and sent by mail and email. The Notice stated that no sooner than 90 days public hearings will be held to consider adoption of the GSP. The GSAs that were listed included Woodbridge Irrigation District which has withdrawn GSA standing with the Eastern San Joaquin Subbasin GWA and the Department of Water Resources. As of 8.25.19, the Notice of Intent to Adopt GSP was not forwarded to the ESJ interested parties list although interested parties were directed to the esjgroundwater.org website for meeting information and public hearing dates. The Notice of Intent to Adopt GSP did include email addresses of GSA representatives in addition to mailing addresses and FAX numbers.

Thank you for the 45 day comment period for the Eastern San Joaquin Groundwater Subbasin Draft Groundwater Sustainability Plan. If any questions arise regarding these comments, please contact me at mebeth@outlook.com.

Sincerely,

MELIL

Mary Elizabeth M.S., R.E.H.S.

Delta-Sierra Group Conservation Chair

Sierra Club