

Appendix 1-G

Public Comment Log

Comment No.	Commenting Organization	Comment By	Date of Comment	Section/ Appendix #	PDF Page Number	PDF Line Number or Figure Number	Comment	Response to Comment
1	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	General			<p>The Department is writing to support ecosystem preservation in compliance with SGMA and its implementing regulations based on Department expertise and best available information and science.</p> <p>The Department recognizes and appreciates the effort of the GSAs to thoroughly and quantitatively consider all beneficial users of groundwater in the subbasin, and the draft GSP includes thoughtful analysis of modeled scenarios to evaluate the identified management criteria for undesirable results. However, the Department disagrees with the GSP's assessment of what impacts constitute an unreasonable impact for environmental users and believes the GSP could improve its methods for identifying environmental users of groundwater and establish more protective management criteria. Accordingly, the Department recommends that South American Subbasin GSAs address the following comments before submitting the GSP to the Department of Water Resources (DWR).</p>	Comment noted.
2	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	General			<p>In conclusion, the draft GSP thoughtfully discusses all beneficial uses and users of groundwater, provides detailed characterization of groundwater conditions in the basin, and incorporates robust modeling of future scenarios; however, the GSP can further refine its management criteria to better avoid potential impacts to GDEs and ISW, and provide additional detail for planned projects and management actions. The Department recommends that the South American Subbasin GSAs address the above comments before GSP submission to DWR to best prepare for the following regulatory criteria for plan evaluation:</p> <ol style="list-style-type: none"> 1. The assumptions, criteria, findings, and objectives, including the sustainability goal, undesirable results, minimum thresholds, measurable objectives, and interim milestones are not reasonable and/or not supported by the best available information and best available science. [23 CCR § 355.4(b)(1)] (See Comments #1, 2, 3, 4, 5) 2. The GSP does not identify reasonable measures and schedules to eliminate data gaps. [23 CCR § 355.4(b)(2)] (See Comment #6) 3. The interests of the beneficial uses and users of groundwater in the basin, and the land uses and property interests potentially affected by the use of groundwater in the basin, have not been considered. [23 CCR § 355.4(b)(4)] (See Comments #1, 3, 4, 5) 4. The projects and management actions are not feasible and/or not likely to prevent undesirable results and ensure that the basin is operated within its sustainable yield. [23 CCR § 355.4(b)(5)] (See Comment #7) 	Comment noted and addressed in other comment items.
3	Clean Water Action/Clean Water Fund Union of Concerned Scientists Audubon California Local Government Commission The Nature Conservancy	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan E.J. Remson & Melissa M. Rohde	8/10/2021	Overall		See attached letter for comments regarding specific attachments	<p>Based on our review, we have significant concerns regarding the treatment of key beneficial users in the Draft GSP and consider the GSP to be insufficient under SGMA. We highlight the following findings:</p> <ol style="list-style-type: none"> 1. Beneficial uses and users are not sufficiently considered in GSP development. <ol style="list-style-type: none"> a. Human Right to Water considerations are not sufficiently incorporated. b. Public trust resources are not sufficiently considered. c. Impacts of Minimum Thresholds, Measurable Objectives and Undesirable Results on beneficial uses and users are not sufficiently analyzed. 2. Climate change is not sufficiently considered. 3. Data gaps are not sufficiently identified and the GSP needs additional plans to eliminate them. 4. Projects and Management Actions do not sufficiently consider potential impacts or benefits to beneficial uses and users. <p>Our specific comments related to the deficiencies of the South American Subbasin Draft GSP along with recommendations on how to reconcile them, are provided in detail in Attachment A.</p> <p>Please refer to the enclosed list of attachments for additional technical recommendations: Attachment A GSP Specific Comments Attachment B SGMA Tools to address DAC, drinking water, and environmental beneficial uses and users</p>	Specific comments addressed in other sections.
4	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			<p>Conceptually, the GSPD includes two conservative assumptions that deserve clarification. First, regarding the projected impacts from pending climate change, the selection of the 'central tendency' climate forecast understates the impacts of climate change on future water supply and demand, which would have a negative impact on the SAS's sustainability. The GSPD should clearly describe the climate change study, its assumptions, and the arguments for and against using the central tendency forecast. Second, the GSPD does not include demand reduction as a Project and, therefore, does not reduce groundwater demand resulting from the associated water conservation and efficiency actions and programs that are expected to take place. These demand reducing programs should be described along with the logic for not including them in this GSP. The effect is to potentially overstate future groundwater pumping in the SAS. We urge that: 1) the GSPD include a more robust discussion of the climate change forecast, and 2) both climate assessment and demand reduction approaches be reassessed and included in a future GSP annual report to DWR or, at a minimum, in the 2025 GSP update.</p>	Comment noted. Implementation of the GSP includes consideration of updates to the CoSANA model in light of changing conditions or additional data.

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5	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			We are concerned about how GDEs are impacted by the Sustainable Management Criteria. We acknowledge that the GSPD presents a comprehensive assessment of both interconnected surface water (ISW) and Groundwater Dependent Ecosystems (GDE) based on current science. However, new information was presented recently (Lewis and Burgy 1964 study) to the GSP Working Group suggesting the root depth analysis used for GDEs should use a depth of 80 feet, not the 30 feet used in the GSPD. In addition, The Nature Conservancy (TNC) is about to publish a study indicating root depths for certain oak species are 25 meters. Also, a recent TNC study identifies the inability of oak woodlands to reproduce when ground water levels are too low. Therefore, a determination of appropriate root depths to maintain GDEs should be included as a priority Management Action in the final GSP.	This 80 ft metric concerns one paper from 1964 that studied injected isotope tracers (particles moving through the subsurface) in a fractured rock aquifer in hilly topography on (n = 15) trees. Results are specific to geology and do not hold for a relatively flat, alluvial, aquifer-aquitard system. Reproducible, recent results are needed for a system comparable to the SASb.
6	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			We are concerned about the measures being taken to protect GDEs. While we understand the rationale behind the three-year trigger for ISW, we believe another approach is necessary for the protection of GDEs. If groundwater levels fall below the root zone for three years before any action is taken, then the need for action has passed because the plants located in the area of concern will already be dead. We urge further work in this area and that the final document include more protective measures for GDEs; or if further study is needed, this be identified as a high priority Management Action.	The GSP identifies undesirable results for GDEs not when groundwater levels are below the root zone for 3 years, but rather, when the area of GDEs decreases below 44% (2012-2016 groundwater levels), or when the GDE "greenness" measured by satellites declines below historically observed values. In other words, GDEs won't shrink or dry out beyond what we've previously seen in the basin. Importantly, GDE area and greenness has improved since the past drought, indicating the ability to come back from those groundwater lows. Furthermore, projected management and climate change are expected to impact GDE area by -3 to +4 %, with a median impact slightly greater than 0, largely due to PMA near GDEs (Figure 3-6).
7	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			Finally, with respect to communicating, we recommend that that monitoring data be presented to the public in a form that allows local property owners to track information from sampling events that are of immediate interest to them. We suggest that the GSAs incorporate telemetry into the well monitoring program so that results can be recorded on a real-time basis. This will allow for more frequent sampling if the need arises.	Section 3.5.3 summarizes the protocols for data collection and monitoring. Section 3.5. assesses and provides recommendations for improving the monitoring network, including installation of telemetry and data loggers, as well as protocols for data management. As part of the implementation of the GSP, the monitoring network will also be reassessed regularly for adequacy in tracking Subbasin conditions.
8	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			The Group 2 project list should be expanded to include a priority list of water purveyor projects that best contribute to the sustainable management of the basin. Water purveyors have a significant list of system connectivity, conjunctive use, and recharge projects. We recognize that the GSAs have no direct authority over any of these projects, but it is important to send a signal to the water purveyors and the public at large regarding which projects fit best with the management of the SAS and what completion priority each project has with respect to attaining subbasin sustainability.	Additional projects and management actions may be developed, discussed, and considered for inclusion into the GSP update by the GSAs as part of the implementation phase of the GSP.
9	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			Finally, we note the important insights made possible by research and monitoring that guides Project development so that both recharge and ecological value are increased. An example is the investment made by OHWD and SAFCA to work with research teams to fully understand the site characteristics and to identify all the opportunities for both principal aquifer recharge and flood protection, and ecological uplift. This information will enhance funding opportunities and support effective and responsible groundwater banking. We encourage SAS GSAs efforts to support individual GSA projects like this, and suggest including a thorough description of the many benefits of the project in the DGSP.	Additional projects and management actions may be developed, discussed, and considered for inclusion into the GSP update by the GSAs as part of the implementation phase of the GSP.
10	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			This Section also contains Management Action. We endorse the concept of a Shallow/ Vulnerable Well Protection Program and the Well Permit Coordination actions. The GSPD should specify responsibilities and timeframes for these Actions' development, funding, and implementation. Additionally, we recognize that the Shallow/Vulnerable Well Protection Program is still in the formative stage and offer these suggestions: The Program should focus on shallow wells (domestic and agricultural) that become dry resulting from MT exceedance, and should not apply to localized dry well conditions. We support efforts to engage the local agricultural and residential landowners in the development of the program. We suggest that the GSPD's initial focus include voluntary, private well owner data gathering and coordination. We recommend that the GSPD include enough information about the effort to support any subsequent funding opportunities from outside sources. The tie between shallow wells and conjunctive use/recharge should also be assessed as part of program development and implementation. Additionally, with enhanced private well owner monitoring, these well owners will have information they can use to carry out their own water conservation efforts.	Management actions are not all equally developed. The information provided is what was available at the time of the development of the GSP.
11	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			The GSPD's Management Actions section should be expanded to include specific lists of work, studies, and monitoring system improvements, including the responsible GSA(s). The same level of detail should be included in Management Action write-ups for the additional monitoring system improvements (including those we have recommended) noted as needed to be performed within the GSPD. The GSAs may find it difficult to plan and budget for these Actions unless they are called out in the final GSP that is approved by the GSAs. We believe the GSPD's Management Actions section should be expanded to include the following additional Management Actions: (see the next 2 rows)	Management actions are not all equally developed. The information provided is what was available at the time of the development of the GSP.

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12	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			1) A Management Action should commission a climate impacts assessment that results in revised climate impact inputs for the five-year GSP update. This new climate impacts assessment should build upon the American River Basin Study used as the basis for the current GSPD analysis. The yet-to-be-published American River Basin Study is expected to include over 60 climate forecasts and the version that the GSPD uses is based on climate information and forecasts do not reflect the region's recent climate experience and the latest climate forecasts. Fortunately, the local agencies who helped fund the study have briefed the Water Forum and others on its findings and have indicated that the American River Basin Study does have climate data that is more reflective of current conditions and these newer forecasts. The study's project managers have advised that the study's forecasting models can be run with that information. Given the repeated references in the GSPD to the importance of the impacts of climate change on basin management, a new assessment should be conducted so that it is available in time for a future annual update to DWR or, by the latest, the next plan update in five years. To that end, the GSAs should reach out now to the other subbasin GSAs, RWA and the Water Forum to develop an agreement to perform that work so that it can be included in the region's three GSP updates. The same inputs should be used in the next round of UWMPs and by the RWA and Water Forum in their planning efforts. ECOS and RWA are members of the Water Forum and participate in the Water Forum 2 renegotiation process, which is committed to actions that lead to the Region's water supplies being able to best adapt to climate change. This includes how groundwater is a significant, sustainable resource for providing for our water needs - both for people and the environment. We believe that the Water Forum 2 process, and successor efforts, should help in the development of studies linking our water supply with future	Addition of these studies and analyses, including updates to the CoSANA model will be considered during the implementation phase of the GSP.
13	Environmental Council of Sacramento (ECOS)		6/18/2021	Overall			2) A Management Action should direct the GSAs to develop a policy and procedure for reviewing, formally commenting on, and approving (when appropriate) groundwater transfers, water banking activities including the accounting framework, and conjunctive use operations. The document should include GSA ongoing monitoring and management responsibilities in each area, and how costs for these activities are recovered. The policy and procedure should lay out how water banking and recharge programs will be implemented in the SAS including governance, water accounting, banking and recharge operations, and SAS banking premiums of water left in the SAS, over and above deposits, to adjust for natural storage loss, environmental premiums, and basin supply enhancement. Some Projects (Harvest Water Project and OHWD) are investments that enhance the subbasin's storage and provide multiple benefits for the subbasin. These efforts contribute to subbasin sustainability and the ability to utilize the subbasin for transfers, conjunctive use, and water banking. The policy and procedure should address how these types of Projects are able to participate in transfers, conjunctive use, and water banking operations, and/or other transactions that add value to their basin contributions.	Additional projects and management actions may be developed, discussed, and considered for inclusion into the GSP update by the GSAs as part of the implementation phase of the GSP.
14	Huhtamaki Foodservice, Inc.	Amy Steinfeld	8/17/2021	General			In 1963, Huhtamaki began production of groundwater from two water supply wells on the Property for overlying use in Huhtamaki's consumer products manufacturing operations. From 1990 until 2005, the volume of water pumped by Huhtamaki ranged from 200,000 to 3.5 million gallons per day (MGD) or 220 to 3,900 acre-feet per year (AFY). In 2001, groundwater pumping ranged between 300,000 and 1.5 MGD (335 to 1,680 AFY). In 2002, at a time when its production process was using approximately 600,000 to 750,000 gallons per day (approximately 672 to 840 AFY), Huhtamaki was forced to temporarily pause all groundwater production after third-party groundwater pollution from operations on a neighboring property caused elevated levels of the contaminant tetrachloroethylene (PCE) in groundwater beneath the Property. ² During this interim period, Huhtamaki was forced to connect to the local municipal water system (California-American Water's (Cal-Am) Parkway System) as an interim water supply to replace groundwater supplies. Clean-up efforts are ongoing, and Huhtamaki intends to resume groundwater production from the Subbasin once groundwater quality conditions improve.	Comment noted
15	Sacramento Regional County Sanitation District (Regional San)	Terrie Mitchell	8/18/2021	General			We appreciate the GSP incorporating Harvest Water as a project and management action that contributes to the sustainability of the basin. Regional San is developing Harvest Water to provide a safe and reliable supply of tertiary-treated recycled water for agricultural uses, reducing the need for groundwater pumping in the region, supporting habitat protection and enhancement efforts, and providing near-term benefits to the Sacramento-San Joaquin Delta.	Comment noted.
16	Sacramento Regional County Sanitation District (Regional San)	Terrie Mitchell	8/18/2021	General			We believe Harvest Water is an exceptional opportunity to proactively restore and manage groundwater, while improving stream flows in the lower Cosumnes River, enhancing riparian habitats and wetlands, sustaining prime agricultural lands, and improving regional water supply reliability through conjunctive use. By delivering recycled water in-lieu of groundwater pumping, Harvest Water will increase groundwater storage by approximately 245,000 acre-feet within 10 years. This in-lieu recharge is expected to raise groundwater levels up to 35 feet in the center of the Harvest Water Program area, and 15 to 25 feet in other parts of the groundwater basin in the vicinity of the Program.	Comment noted.
17	Sacramento Regional County Sanitation District (Regional San)	Terrie Mitchell	8/18/2021	General			The GSP's measurable objectives for groundwater levels incorporate the estimated increases in groundwater levels in the vicinity of the Harvest Water Program. We believe this is not only appropriate, but vital to ensuring that the on-going management of groundwater in the basin supports the success of the Harvest Water Program. Regional San plans to continue our involvement in GSP development and implementation to ensure that Harvest Water benefits are realized in the form of elevated groundwater levels, protection of groundwater dependent ecosystems, and the related ecological benefits. We are available to provide additional information on the Harvest Water Program as needed and look forward to continuing our involvement as the GSP is adopted and implemented.	Comment noted.

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18		Carl Werder	7/5/2021	Overall			General comment: Section 1 is currently 204 pages and more pages to be added. Other sections are less than 100 pages. Recommend dividing Section 1 into two parts or adding another section. Same for appendix 2-B, it is too big at 459 pages to be useful. May want to divide the basin into four or five areas of hydrographs.	Comment noted
19		Lynn Wheat Wheat91@yahoo.com	8/18/2021	General			<p>As a 34 year resident of Elk Grove and active participant in local government, it was only after another community member began sharing information with me on SCGA meetings and the GSP, did I begin attending meetings and reading documents--and it was only after taking these steps did I begin to understand the importance in developing and implementing a plan. Were it not for the community member reaching out to me and discussing the GSP and meetings of the various GSA's would I have had any idea of the future of water in our area. This document suggested there has been extensive outreach. I believe the final GSP document needs to further elaborate on "extensive". Many in my community have no idea what will be required of them in the future and the cost burden of implementing the various projects.</p> <p>How have the members of the SCGA board been communicating to the general public they represent? I had requested the City of Elk Grove communicate with the residents in a manner which would peak curiosity; what will be required of the residents? Will residents be required to reduce use and carry the financial obligations of program implementation imposed by increasing fees, taxes and water bills?</p> <p>As a resident of Elk Grove, I pay taxes and fees to the City of Elk Grove, Elk Grove Water District, and Sacramento County Sanitation District. All are members of SCGA who contribute monies to support the functions of SCGA. There will be costs to implementing the programs and the costs should be clearly estimated and defined within the GSP. Who will cover the costs? How will the cost burden be distributed? Will there be equity in sharing the burden of the costs? What about "Unknown" costs of programs and facilities. "Costs of facilities and activities uncertain and will be developed as</p>	Comment noted. See Section 1 and Appendix 1-E for summaries of public outreach and noticing. See Section 5 for discussion on implementation funding.
20		Lynn Wheat Wheat91@yahoo.com	8/18/2021	General			<p>What will the quality of local groundwater be when GSP projects are implemented? Will there be significant changes to the quality of the water and treatment process? Will our groundwater become contaminated? What will be the estimated costs of treating the water to make it drinkable and meeting minimal State/EPA standards? The GSP needs to evaluate this and include it in the document. It is of no value to have water available that is more contaminated and harmful to the health and environment of the region and therefore unusable.</p>	Comment noted. See Section 4. PMAs are in various levels of development, and details are provided as available. All projects will be required to obtain applicable state and federal environmental clearances as well as other permits as required.
21		Suman Singha, PhD	8/16/2021	General			It is heartening to learn that there is no significant aquifer drawdown in the SASb and future management should ensure long term sustainability.	Comment noted
22		Suman Singha, PhD	8/16/2021	General			It is equally heartening to learn that the contaminant plumes at Mather AFB, Aerojet and Kiefer Landfill are being closely monitored and that the remediation plans are working.	Comment noted
23		Suman Singha, PhD	8/16/2021	General			However, I do have a major concern that the CoSANA projections are based on past and current parameters. Given that climate change is a reality, I believe the model should also include a protracted/severe drought scenario that has the potential of occurring; especially when we consider the 20- and 50-year timelines for the plan.	Comment noted. Implementation of the GSP includes consideration of updates to the CoSANA model in light of changing conditions or additional data.
24		Suman Singha, PhD	8/16/2021	General			Although outside the scope of this report, I believe we need to start considering water as a finite and precious resource. Change in consumer behavior regarding water conservation and usage is going to be an important component of this. Part of this should include tiered pricing for water. Action on this is needed at all levels, else the scenario playing out in Mendocino will no longer be the exception but the rule.	Comment noted

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1	Environmental Council of Sacramento (ECOS)		6/18/2021	Executive Summary			The Executive Summary (ES) does not adequately include the impacts and importance of climate change on SAS sustainability even though this information is found in the body of the GSPD. The ES focuses on the need for a plan to address human water needs, but the SGMA makes it clear that environmental groundwater needs must also be addressed. The ES also focuses on past plans and actions, and while these contribute to why we are engaged in a GSPD, the ES should focus on the future. Terms and concepts should be better defined, along with their relevance to groundwater assessments and planning. For example, "groundwater conditions", "conceptual model", and "water budget" need definitions/relevance narratives for the lay reader. Many readers may only read the ES, so it is important that the ES communicate effectively. Our specific comments on the GSPD's technical work, conclusions, and findings are discussed in the following section reviews.	Executive Summary has been modified, in part, to address comment. The detail requested is provided in later sections of the GSP (Sections 2,3,4 and 5).
2	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	Executive Summary	IX	129	Please revise the first sentence of the Kiefer Landfill Description, contained within Table ES-2, as follows: "The Kiefer Landfill is a 1,084-acre site with an active class III 300 335-acre solid waste disposal site that is owned and operated by Sacramento County." Source info for revision: Page 2 of https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2016-0013.pdf The number was adjusted upward by 30 acres to account for recently opened landfill Module M4.	Edit accepted
3	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	Executive Summary	IX	129	We would prefer that the last sentence of the Kiefer Landfill Description (within Table ES-2), which lists the number of monitoring wells, be removed, as these details are more properly provided in Section 2. If this sentence must be retained within the Executive Summary, then it should be revised as follows: "Currently, the monitoring network at Kiefer consists of 23 65 monitoring wells." If the sentence is retained, the numbers of monitoring wells for the Mather and Aerojet sites (570 and 2000, respectively) should also be listed within this table. Source info for revision to number of wells: Page 10 of https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2016-0013.pdf	Edit accepted

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1	Huhtamaki Foodservice, Inc.	Amy Steinfeld	8/17/2021	Section 1.5.3.1			The Draft Plan list of SASb Beneficial Uses and Users (Section 1.5.3.1) does not include “commercial” or “industrial” uses of groundwater as beneficial uses within the Subbasin. Although the Draft Plan mentions these types of uses elsewhere and in the Sustainability Goal (see, e.g., Plan, § 3.1, App. 1-D), “commercial” and/or “industrial” uses should be added to this list. (See Wat. Code, §§ 10723.2, 10727.2(b)(2); Cal. Code Regs., tit 23, § 354.10(a).)	Water uses listed in 1-D have been added to 1.5.3.1
2	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/10/2021	Appendix 1D	69-71		Provide a map of tribal lands in the subbasin. The GSP states (p. 2-10): “The only tribal land that falls within the SASb is located south of Elk Grove near the intersection of Kammerer Road and Hwy 99.” However no map, acreage, or population is provided.	Although we do not provide maps, acreage, or population counts, tribal governments and entities were contacted during engagement and outreach (detailed in Appendix 1D) and are involved in ongoing communication and outreach. Tribal groups involved in ongoing C&E include: Wilton Rancheria, Buena Vista Rancheria Mewuk Indians, Lone Band of Miwok Indians, Nashville Enterprise Miwok-Maidu-Nishinam Tribes, Shingle Springs Band of Miwok Indians, Tsi Akim Maidu, United Auburn Indian Community of the Auburn Rancheria, Colfax-Todds Valley Consolidated Tribe, Yocha Dehe Wintun Nation.
3	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/12/2021				Provide the population of each identified DAC and include details on the population dependent on groundwater for their domestic water use.	Although we do not provide population counts of DACs, DAC groups were contacted during engagement and outreach (detailed in Appendix 1D) and are involved in ongoing communication and outreach. DAC-representative groups involved in ongoing C&E include: Environmental Justice Coalition for Water, Florin Census-Designated Place (CDP) DAC, Lemon Hill CDP DAC, Parkway CDP DAC, Fruitridge Pocket CDP DAC, Freeport CDP DAC. The GSP comprehensively evaluates impacts to domestic wells - which may be used by DACs - and finds them to be minimal (Appendix 3A).
4	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/16/2021	Appendix 1D			Describe efforts to engage with stakeholders during the GSP <i>implementation</i> phase in the Stakeholder Communication and Engagement Plan. Refer to Attachment B for specific recommendations on how to actively engage stakeholders during all phases of the GSP process.	The GSAs are in the process of developing an implementation MOU that includes public engagement provisions. The GSAs will follow DWR guidance in stakeholder engagement during implementation (i.e., public notices and meetings before amending a GSP or prior to imposing or increasing a fee, and ongoing efforts to encourage active involvement).
5	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/17/2021	Appendix 1D			Describe efforts to consult and engage with tribes within the subbasin. Refer to the DWR guidance entitled Engagement with Tribal Governments for specifics on how to consult with tribes.	We received a list of potentially interested tribes after making a direct request to the Native American Heritage Commission. Contact was made with all of the listed tribes and those that indicated interest were added to the subbasin outreach lists. However, we will maintain ongoing communication with tribes following DWR guidance in stakeholder engagement during implementation.
6		Carl Werder	7/5/2021	Section 1			Section 1, -- This section offers nothing but a rehash of existing documentation concerning the GSP process, therefore no comment	Noted. No changes made.

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1	Ag/Res resident	Amelia Vankeuren	8/17/2021	2	102	1577	Section 2.2.7 Natural Water Quality Characterization only summarizes older groundwater quality data (pre-2016) in public supply wells, which tend to be deeper than shallow domestic wells. The summary in this section should also incorporate the more recent data downloaded from the GAMA Groundwater Information System Data Download in 2020 (as mentioned on page 2-142) as that would include shallow well information from the 2017 GAMA Sacramento-Metro Study Unit - Shallow Assessment.	The document was developed using the data that was available at the time it was written. More recent data can be reported in Annual Reports to be submitted after the GSP is completed.
2	Ag/Res resident	Amelia Vankeuren	8/17/2021	2	125	1938	The declining trend in groundwater levels in the eastern portion of the subbasin is highly concerning. "Not well understood" declines of 40 ft over 50 years are unacceptable, particularly as well 244 is relatively close to an area with a high concentrations of shallow domestic wells.	Comment noted. The text has been edited to clarify the discussion of groundwater elevations in this section.
3	Ag/Res resident	Amelia Vankeuren	8/17/2021	2	132	2019	The hydrographs for the 4 shallower wells show that the shallow aquifer groundwater elevation is generally 30 ft higher than the deeper aquifer wells, so there is a strong downward vertical gradient. The shift from an upward vertical gradient in other locations in the subbasin to the downward vertical gradient in Elk Grove suggests that the deeper aquifer is being heavily exploited in this location. Why is this downward gradient not mentioned in the summary of this section?	Comment noted. The text has been edited to clarify the discussion of groundwater elevations in this section.
4	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Plan Area and Basin Setting, 2.1.3 Description of Beneficial Uses and Users of Groundwater	page 2-19		1. Comment #1 Beneficial Uses and Users (Plan Area and Basin Setting, 2.1.3 Description of Beneficial Uses and Users of Groundwater, page 2-19): The GSP does not specifically identify environmental uses and users as beneficial users of groundwater in the subbasin. a. Issue: The GSP defines beneficial uses of groundwater in the subbasin as municipal and domestic water supply, agricultural supply, industrial service supply, and industrial process supply. GSAs are required to consider all beneficial uses of groundwater, including environmental uses [Water Code 10723.2(e)]. b. Recommendation: The Department recommends revising the Section 2.1.3 description of beneficial uses and users to more accurately describe all groundwater users in the subbasin, similar to the more inclusive description of environmental beneficial users included in Section 1.5.3.1 (page 1-14).	Environmental uses has been added as a beneficial use.
5	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Plan Area and Basin Setting, 2.2 Hydrogeologic Conceptual Model, 2.4 Water Budget			2. Comment #2 CoSANA Model (Plan Area and Basin Setting, 2.2 Hydrogeologic Conceptual Model, 2.4 Water Budget): The GSP does not include sufficient detail on CoSANA model development. a. Issue: The GSP states that "The CoSANA model and model layers are described in detail in the Model Development technical memorandum" (page 2-78) and that "Additional information on the data and assumptions used to develop the CoSANA model is included as an appendix to the GSP" (page 2-172). However, neither of these documents are included with the draft GSP. b. Recommendation: The Department recommends the technical information referenced regarding CoSANA model development be included to facilitate careful review of the GSP.	The CoSANA model appendix has now been provided for review
6	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Plan Area and Basin Setting, 2.3.6 Interconnected Surface Water Systems, starting page 2-159			3. Comment #3 Interconnected Surface Waters (Plan Area and Basin Setting, 2.3.6 Interconnected Surface Water Systems, starting page 2-159): GSP identification of interconnected surface waters (ISW), defined by 23 CCR § 351(o) as surface water hydraulically connected "at any point" to the underlying aquifer, is based on a methodology that relies on a narrower definition of ISW than the definition included in the regulations and that risks misidentifying surface waters as disconnected. a. Issues: i. ISW Identification: The methodology for identifying a surface water reach as interconnected requires a majority of CoSANA stream nodes to be connected for a season in order to be considered ISW (line 2358, Appendix 3-C). However, this methodology applies a narrower definition of interconnected surface waters than 23 CCR § 351(o), which defines surface water as ISW if the surface water is hydraulically connected to groundwater "at any point." Therefore, surface water reaches that have connected nodes, regardless of whether those nodes represent a majority for a given season, meet the definition of interconnected surface water and should be evaluated accordingly in the GSP. Additionally, the GSP applies this ISW identification methodology inconsistently by identifying the Cosumnes River approximately between Deer Creek and Twin Cities Road as a data gap due to "sub-seasonal connection" (line 2366). The GSP does not discuss whether other surface waters throughout the basin were evaluated for sub-seasonal connections. 23 CCR § 351(o) does not require connection to last for the duration of a season for a reach to be interconnected. ii. Streamflow Depletion: The GSP states that increased streamflow will increase the hydraulic gradient and therefore increase ISW depletion (page 3-11, line 397).	(i) We agree with the reviewer that correctly classifying ISW is very important. For this reason, we conservatively include entire reaches when a majority of nodes are interconnected for at least 1 of 22 seasons evaluated in the historical record from 2005-2018 (Appendix 3-C, Figure 24). Unlike the reviewer suggests, this classification system actually leads to more surface water being considered ISW (compare subplots A and B in Figure 24) than if we only classified ISW at the nodal level. This increases ISW protection under SGMA because it includes portions of surface water that may actually be disconnected. We believe it reasonable that "interconnection" is an average state during a season and disagree with the reviewer that the scant evidence of sub-seasonal connection along the Cosumnes River between Deer Creek and Twin Cities Road should be considered "interconnection". Out of an abundance of caution we classify this section a "Data Gap" and seek to study whether the scant evidence of sub-seasonal connection in a small number of wells may be the result of air entrapment, perched aquifer dynamics, or another essential function that supports ISW. Bear in mind: groundwater conditions in this reach show persistent disconnection from 2005-2018. The GSP's decision to call this a Data Gap and to coordinate with environmental groups and the neighboring Cosumnes basin on studying this reach is taken out of an abundance of caution. Furthermore, scant evidence from high frequency 15-minute data suggests that a few days in the past 10 years groundwater levels sharply increased above river stage in the Cosumnes Data Gap. Notably, these groundwater level increases occur in wells more than a mile from the river - it is highly unlikely this these pulse events propagate to the river, and they may well represent air entrapment following floodplain inundation, or perched aquifer heads. This data is simply not available across all surface water reaches in the basin, nor is it necessary in locations
7	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Plan Area and Basin Setting, 2.3.6 Interconnected Surface Water Systems, starting page 2-159			b. Recommendations: i. ISW Identification: The Department recommends revising the methodology for identifying ISW so that surface water reaches that are connected at any node, regardless of whether the nodes reach the majority threshold or are connected for a full seasonal duration, are considered ISW. The reach of the Cosumnes River between Deer Creek and Twin Cities Road should be classified as ISW, rather than as a data gap. Additionally, the GSP should provide additional clarification on the sub-seasonal interconnection analysis and whether other surface water reaches in the subbasin similarly demonstrated short term interconnectedness. ii. Streamflow Depletion: The Department recommends clarifying that increased streamflow may increase the rate of stream water seeping from ISW into the underlying aquifer; but increased streamflow will not necessarily cause greater depletion of surface waters.	(i) As previously stated, we maintain that the methodology for classifying ISW is conservative and includes many more persistently disconnected surface water nodes with no strong evidence of connection as ISW because they exist on reaches where a majority of nodes experience at least 1 season of interconnection of out the 22 evaluated (Appendix 3-C, Figure 24). The reach of the Cosumnes River between Deer Creek and Twin Cities Road is persistently disconnected for all 22 seasons evaluated from 2005-2018. We include it as a Data Gap out of an abundance of caution and due to scant evidence from high frequency 15-minute data that suggests a few days in the past 10 years when groundwater levels sharply increased. Notably, these groundwater level increases occur in wells more than a mile from the river - it is highly unlikely this these pulse events propagate to the river, and they may well represent air entrapment following floodplain inundation, or perched aquifer heads. We maintain that this area is best classified as a Data Gap, and have plans for additional monitoring, interbasin coordination, and outreach to conclusively determine the location, timing, and magnitude of ISW (should data show that it exists) in this region. (ii) This point is well taken and the section has been clarified.

Comment No.	Commenting Organization	Comment By	Date of Comment	Section/ Appendix #	PDF Page Number	PDF Line Number or Figure Number	Comment	Response to Comment
8	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Plan Area and Basin Setting, 2.3.7 Groundwater Dependent Ecosystems, starting page 2-164			<p>4. Comment #4 Groundwater Dependent Ecosystems (Plan Area and Basin Setting, 2.3.7 Groundwater Dependent Ecosystems, starting page 2-164): GDE identification, required by 23 CCR § 354.16(g), is based on methods that risk exclusion of ecosystems that may depend on groundwater.</p> <p>a. Issues:</p> <p>i. Depth to Groundwater: Methods applied to the Natural Communities Commonly Associated with Groundwater dataset to eliminate potential GDEs may exclude deep rooted vegetation. The GSP removes potential GDEs with a depth to groundwater greater than 30 feet; however, mature Valley Oak (<i>Quercus lobata</i>) can access groundwater up to 80 feet below the ground surface (Howard 1992, Lewis & Burgy, 1964). The use of a 30-foot threshold may incorrectly exclude Valley Oak communities within the subbasin from further consideration as a GDE.</p> <p>ii. Special Status Species: Though Appendix 3-B of the GSP references a compiled resource of GDE beneficial uses and users, the annotated list of species and their groundwater dependence (Appendix E to Appendix 3-B) has not been included for review with this draft GSP.</p>	(i) The consultant team has reviewed the study in question (Lewis and Burgy, 1964) and does not find merit in the results. The study concerns an isotope-tracer study in a fractured rock aquifer in hilly topography using a small sample (n = 15) of trees. These results are highly specific to geology (i.e., isotope transport in fractured rock and alluvium are not at all comparable), and hydraulics (i.e., topographic driven flow patterns in mountainous regions are much different than those in relatively flat valley floors). Moreover, other literature reviewed by TNC suggest rooting depths of around 30 feet. The scientific de-merits outlined above give cause to not consider an 80 foot rooting depth parameter, and hence, we maintain the GDE study carried out the Freshwater Trust for the SASb (see technical Memo 3B (groundwater dependent ecosystems)). (ii) This appendix is now included.
9	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Plan Area and Basin Setting, 2.3.7 Groundwater Dependent Ecosystems, starting page 2-164			<p>b. Recommendations:</p> <p>i. Depth to Groundwater: The Department recommends the GSP update the methodology for GDE identification to reflect accurate maximum rooting depth specifically for Valley Oak communities. The Department recommends use of the NCAAG, field verification, and/or other local data to identify the locations of Valley Oak within the subbasin. For those areas, the GDE analysis should apply a threshold of 80 feet below the ground surface as the maximum potential depth at which the potential GDE could access groundwater. The Department accepts the use of a 30-foot threshold as sufficiently conservative for other potential GDEs within the subbasin that likely do not contain Valley Oak.</p> <p>ii. Special Status Species: The Department recommends including the list of GDE environmental users of groundwater within an appendix to the GSP.</p>	(i-ii) addressed in the response to Comment No. 8.
10	Environmental Council of Sacramento (ECOS)	Ralph Propper & Robert Burness	6/18/2021	Section 2.5			<p>We find the introductory materials to be duplicative of the material presented in Section 1 of the Draft GSP and do not materially contribute to the technical presentation of the South American Subbasin's (SASb) Sustainable Yield under SGMA. If there is reference to the former level of 273,000 AFY within this section of the GSP analysis, then a full technical analysis of why the basin sustainable level has changed from 273,000 AFY as late as last year to the new sustainable average level of 235,000 AFY should be included. One can only conclude that moving from a 20-year-old single value to a range that has a substantially lower midpoint, is the result of improved data and analysis carried out as part of the GSP process. In addition, there is an omission in the several paragraphs that discuss the uncertainties associated with the analysis underpinning the Sustainable Yield Estimate. These paragraphs neglect to mention the uncertainty posed by climate change. In our earlier comments on the draft GSP, we pointed out the importance of thoroughly documenting the climate change analysis that underpins the GSP analysis including the basis for the Sustainable Yield estimates.</p>	The Background section was included because it provides context for how the GSP's sustainable yield estimate relates to previous Basin management. The remainder of the section provides a discussion of why the new value of 235,000 AFY is recommended.
11	Environmental Council of Sacramento (ECOS)	Ralph Propper & Robert Burness	6/18/2021	Section 2.5			<p>We find that the materials meant to describe how the Sustainable Yield estimates were determined and why 235,000 AFY is the average sustainable yield, are not sufficiently explanatory for the lay person. The presentation needs to explain how the range of pumping was developed and, using one or more of the charts, identify what the points on these charts mean, and why and how the X and Y axis are developed. Also, if 0 change in groundwater storage is the desired point (as presented in figures 2.5.2(a & b) why is there no X and Y axis lining up on figure c and what is the significance of the negative value under the corresponding point of 235,000 AFY?</p>	The section narrative has been revised to make more clear that the range of pumping shown by year type is meant to be descriptive of typical operational patterns and was not meant to be prescriptive.
12	Environmental Council of Sacramento (ECOS)	Ralph Propper & Robert Burness	6/18/2021	Section 2.5			<p>We do not find a compelling analysis that determines why a range of pumping between 210,000 AFY and 270,000 AFY is acceptable. Also, there is no description of what "various year types" are, who determines them, and how are they factored into basin management. If this analysis is dependent on past years weather and hydraulic conditions projected forward, then an additional caution is warranted given that more recent conditions are tending to diverge from the past. It is not apparent from the analysis presented whether the SASb could withstand successive years like the past two continuing for another one or two years while being operated on the premise that 270,000 AFY can be withdrawn from the basin without Sustainable Yield consequences. More information is needed to put context around the "year types" and the GSAs' management responsibilities vis a vis the SASb's Sustainable Yield.</p>	The section narrative has been revised to explain what is meant by year types (i.e. Sacramento River Index) and to make more clear that the range of pumping shown by year type is meant to be descriptive of typical operational patterns and was not meant to be prescriptive.
13	Environmental Council of Sacramento (ECOS)	Ralph Propper & Robert Burness	6/18/2021	Section 2.5			<p>The document presents a table of annual pumping levels which it asserts, if adhered to, would ensure the SASb is managed so that its Sustainable Yield is maintained. However, there is no description of monitoring or management actions the GSAs will engage in to ensure that the SASb is not drawn down in such a fashion that its Sustainable Yield is negatively impacted. The GSP should include Management Actions to ensure that SASb pumping is managed not to exceed these pumping levels. In addition, there is no base line calculation for the storage level in 2015. It seems obvious that this value is needed so that the Sustainable Yield can be monitored and managed. There is five years of known data that can be used to develop and track the SASb's Sustainable Yield.</p>	The pumping levels by water year are reflective of an average of 235,000 AFY, and are meant to provide guidelines for operational flexibility to implement water supply projects and to manage year-to-year weather variability. Under projected conditions with the PMAs, there is not a projection of overdraft in the SASb. However, additional adaptive management strategies can be used to maintain long-term sustainability of the basin. These do not necessarily need to be explicitly included in the GSP.
14	Environmental Council of Sacramento (ECOS)	Ralph Propper & Robert Burness	6/18/2021	Section 2.5			<p>We believe that Management Actions are needed in at least two areas. First, there is a need to manage data and annually report the amount of annual pumping and how that volume relates to the SASb's sustainability including the Sustainable Yield. This work also needs to include coordination with the Water Forum, The Regional Water Authority, and the Bureau of Reclamation regarding forecasts of current and future "water years". This coordination will allow the GSAs to better understand if any management actions (e. g. possible pumping restrictions or demand management actions) are needed to maintain basin sustainability.</p>	The pumping levels by water year are reflective of an average of 235,000 AFY, and are meant to provide guidelines for operational flexibility to implement water supply projects and to manage year-to-year weather variability. Under projected conditions with the PMAs, there is not a projection of overdraft in the SASb. However, additional adaptive management strategies can be used to maintain long-term sustainability of the basin. These do not necessarily need to be explicitly included in the GSP.

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15	Environmental Council of Sacramento (ECOS)	Ralph Propper & Robert Burness	6/18/2021	Section 2.5			A second Management Action includes the establishment of agreements with the water purveyors who plan to utilize the basin's groundwater for conjunctive use so that their pumping levels are consistent with figure 2.5-3. Agreements that match pumping levels with "water years" will assist the GSAs in exercising their responsibilities under SGMA. Similar agreements will be needed with those purveyors and others who carry out water banking operations.	The pumping levels by water year are reflective of an average of 235,000 AFY, and are meant to provide guidelines for operational flexibility to implement water supply projects and to manage year-to-year weather variability. Under projected conditions with the PMAs, there is not a projection of overdraft in the SASb. However, additional adaptive management strategies can be used to maintain long-term sustainability of the basin. These do not necessarily need to be explicitly included in the GSP.
16	Environmental Council of Sacramento (ECOS)		6/18/2021	Section 2			Section 2 also discusses water purveyor supply and demand numbers. The GSPD provides information from published 2015 Urban Water Management Plans (UWMP). The water purveyors subsequently published their 2020 UWMPs. These plans include updated information including actual supply and demand numbers for 2020, as well as forecasts for future water demand based on current local land use plans. The base numbers for 2020 are actual water supply and demand for that year and will not change so these 2020 UWMP numbers should be included in the final GSP. Understanding future groundwater demand is a critical component in the subbasin's water budget and in assuring management actions will have the desired effects in achieving SAS sustainability. Additionally, including 2020 supply and demand numbers as benchmarks improves the accuracy of assessments conducted to determine the effectiveness of purveyor demand reduction programs. Also, the next five-year GSP update should be based on 2025 UWMP demand numbers and programs. Therefore, the GSAs should engage in GSP planning and coordination for the next five-year update to ensure the latest water purveyor numbers are provided in advance of the draft and included in the final 2025 GSP update.	Table 2.1-23 has been updated to included data from the 2020 UWMPs
17	Environmental Council of Sacramento (ECOS)		6/18/2021	Section 2			Section 2 encompasses a compendium of information about the SAS. While we understand that the existing monitoring well system depends on existing wells and monitoring programs of the GSAs and other organizations, we urge those deficiencies noted in the system be corrected and that plans be developed, and resources set aside to further the coverage of both the shallow and deep portions of the primary aquifer. In addition, time and experience may necessitate additional monitoring associated with ISW and GDE protection. Finally, the existing monitoring system needs to be assessed to determine if it is sufficient to monitor future groundwater banking operations. If additional wells and monitoring are needed, their installation, operation and maintenance costs should be incorporated within the water banking program and borne by its participants.	Section 3.5.3 summarizes the protocols for data collection and monitoring. Section 3.5. assesses and provides recommendations for improving the monitoring network, including installation of telemetry and data loggers, as well as protocols for data management. As part of the implementation of the GSP, the monitoring network will also be reassessed regularly for adequacy in tracking Subbasin conditions.
18	Huhtamaki Foodservice, Inc.	Amy Steinfeld	8/17/2021	Section 2.4			The Water Budget (Section 2.4) should account for Huhtamaki's historical and projected groundwater use within the Subbasin. This section does not present granular detail about groundwater use by commercial and industrial users, but rather estimates urban water demand based on 2015 Urban Water Management Plans (UWMPs) and agricultural demand through land use mapping. (See Plan, §§ 2.4.1.3.1, 2.4.1.3.2, 2.4.1.3.3.) Accordingly, the Water Budget may not capture large-scale commercial and industrial users, such as Huhtamaki, unless those users are accounted for within the UWMPs.3 As described above, Huhtamaki holds an overlying right to the Subbasin, has previously pumped groundwater from the Subbasin, and plans to resume groundwater pumping when the quality of its water is satisfactory. We thus recommend that the Final Plan assess the groundwater production of commercial and industrial users that may not be included in the UWMPs and incorporate this production into the Water Budget and other sections of the Plan.	The water budgets included in CoSANA reflect the data that was available at the time the model was developed. Updates can be considered for the 2025 GSP Update.
19	Huhtamaki Foodservice, Inc.	Amy Steinfeld	8/17/2021	Section 2.4.3 Section 5.4 Section 2.1.6			The Draft Plan indicates that three sections are missing: (1) Sustainability Yield Estimate (Section 2.4.3); (2) Funding Sources and Mechanism (Section 5.4); and (3) Interconnected Surface Water Monitoring (Section 2.1.6). The public and stakeholders must have the opportunity to review and comment on these sections prior to approval of the Final Plan by the groundwater sustainability agencies. (Cal. Code Regs., tit 23, § 355.4(b)(10); Plan, App. 1-D, p. 16.) Because these are fundamental sections of the Plan, we request that these sections be posted for review and comment as soon as possible.	These sections have now been provided for review
20	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3.1	2-51	628	Please revise as follows: "Currently, the monitoring network at Kiefer consists of 23 65 monitoring wells." Source info for revision: Page 10 of https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2016-0013.pdf	Change has been made
21	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3.1	2-51	630	Please revise as follows: "The infiltration basin pilot study was successfully, and the County is currently awaiting has received approval for permanent use" Source info for revision: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2015-0012_noas/r5-2015-0012-062.pdf	Change has been made
22	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3.2	2-51	638	Please revise quantities (AFY) in Table 2.1-16, Kiefer Groundwater Pumping, as follows: 2010 1,099; 2011 1,142; 2012 391; 2013 518; 2014 507; 2015 460; 2016 380; 2017 475; 2018 599; 2019 650; Average 622. Source info for revision: Spreadsheet data previously supplied to Woodard & Curran for CoSANA model on 6/11/2020	Change has been made
23	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.5	2-53	678	Please revise quantity (AFY) in Table 2.1-17 for Kiefer to 622 AFY. Source info for revision: See Line No. 638 comment above.	Change has been made
24	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18	2-36	346	Please revise the estimated Remediation Water Use for Kiefer Landfill to 612 AF/year for the 2018 Water Year. Source info for revision: Spreadsheet data previously supplied to Woodard & Curran for CoSANA model on 6/11/2020	Change has been made

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25	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3	2-49	590-592	Please revise these lines to reflect the most recent regulatory orders, as follows: "The CVRWQCB carries out Kiefer Landfill remediation under WDR Order R5-2007 R5-2016-0013 . Additional information can be found here: https://www.waterboards.ca.gov/centralvalley/board_decisions/tentative_orders/0708/kiiefer/kiiefer-wdr-adopted_orders/sacramento/r5-2016-0013.pdf "	Change has been made
26	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3	2-49	593	Please revise this line as follows: "The Kiefer Landfill is a 1,084-acre site with an active class III 300 335 -acre solid waste disposal site..." Source info for revision: See Page 2, Finding No. 6 of https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2016-0013.pdf The number was adjusted upward by 30 acres to account for recently opened landfill Module M4.	Change has been made
27	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3	2-49	603	Please revise this sentence as follows: "Sacramento County was issued a tentative order Order No. 89-207 to install a network of monitoring wells." Source info for revision: CVRWQCB Order No. 89-207, copy available upon request. Please also note that Tentative Orders are not issued and not enforceable.	Change has been made
28	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3.1	2-51	618	Please revise the sentence that is fully contained on this line as follows: "Approximately 375,000 650,000 gallons of water are treated each day." Source info for revision: last sentence of 3rd paragraph of Page 2 of: https://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2015-0012_noas/r5-2015-0012-062.pdf ("The Discharger proposes an average and maximum discharge to the infiltration basin at approximately 450 and 900 gpm, respectively, which are flows expected from the groundwater extraction and treatment system.")	Change has been made
29	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3.1	2-51	619	Please revise "rate of 1,000 gallons per minute" to "rate of up to 1,000 gallons per minute" Reason: Please see revisions to historical pumping rates which follow below (Line 638 comments), which show that the 1000 gpm level is rarely attained.	Change has been made
30	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.3.3	2-52	642-648	These figures appear to have been extracted from a 2009 report. In 2015 (the last time that these figures were estimated), the numbers for VOCs remaining in Zone A were 90 pounds and for Zone B were 13 pounds. The 2015 annual report is available on Geotracker (see Section 10.7 for total VOC mass estimates). Also, in line 648, "2000" should be replaced with "1995", as 1995 is the reference year for the groundwater cleanup that is used in all reports and orders.	Change has been made
31	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	2.18.4	2-52	665-667	There are about ten other landfills listed on Geotracker (https://geotracker.waterboards.ca.gov) that overlay the SASb. Two of these (28th Street and L & D Landfills) are in corrective action.	The list has been updated
32	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/13/2021	Figure 2.3-46 and throughout Section 3			While the GSP clearly identifies data gaps and their locations, we recommend that the GSP considers any segments with data gaps as <i>potential</i> ISWs and clearly marks them as such on maps provided in the GSP.	No action is taken.
33	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/25/2021	Section 2			Provide more information regarding the selection of the American River Basin Study and the methods through which climate change is incorporated, since this is a different method than the use of climate change factors suggested by DWR.	This rationale has been clarified and improved in the text.
34	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/26/2021	Section 2			Integrate climate change, including extremely wet and dry scenarios, into all elements of the projected water budget to form the basis for development of sustainable management criteria and projects and management actions.	This change is not taken, but the rationale for selecting the central tendency has been made more clear.

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35	The Nature Conservancy	Ngodoo Atume	8/27/2021	Section 2			Calculate sustainable yield based on the projected water budget with climate change incorporated.	The sustainable yield estimate utilizes the climate change scenarios that were analyzed for the GSP, along with the other modeling scenarios. The data does not indicate that climate change will significantly change the basin sustainable yield.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
36	The Nature Conservancy	Ngodoo Atume	8/28/2021	Section 2			Incorporate climate change scenarios into projects and management actions.	We agree this is important, and evaluate a scenario that includes both climate change and PMAs.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
37		Carl Werder	7/5/2021	Section 2	Page 135	Figure 2.3-18	Page 135 of 204, Figure 2.3-18., This hydrograph of wells 262 and 263 shows a steady decline in the groundwater table as a result of over pumping for remediation efforts and over reliance of groundwater in the Vineyard area. This decline must be clearly addressed as the current drop in the water table is not sustainable. Action needs to be clearly stated in this document as to how this decline will be stopped prior to any reporting to DWR. And how soon projects will be up and running to rectify this ongoing problem.	The proposed projects and timing of implementation are described in Section 4
38		Carl Werder	7/5/2021	Section 2	Page 33	line 212	Page 33 of 204, line 212., Recommend adding internet location for DWR so that the reader of this document can obtain additional information concerning their individual wells.	This has been added
39		Carl Werder	7/5/2021	Section 2	Page 60	line 678, Table 2.1-17	Page 60 of 204, line 678, Table 2.1-17., This table uses an average but fails to show how many years to determine this average? Also, since this document shows numbers in Table 2.1-13 for 2018 why add additional numbers. It would be best to stay with either a year or a specified average throughout this GSP.	The table is a roll-up of the previous 3 tables that show the average from 2010-2019.
40		Carl Werder	7/5/2021	Section 2	Page 36	line 242, Table 2.1-10	Page 36 of 204, line 242, Table 2.1-10., Each of these SCGA well locations are shown in hydrograph format so as to show how some areas have declining water tables and others that have improved water tables. The problems with this draft document is that on pages 35 and 36 there is no reference to Appendix 2-B Hydrographs and the hydrographs in Appendix 2-B do not show either the Local Designation or State Well Number. In fact there are 459 hydrographs in appendix 2-B numbered in order. This appendix needs to be divided up into groups so as to allow the reader of this document to find a specific well. This seems to me to be a case of putting out so much information (459 hydrographs) and poor referencing of hydrographs so that the declining well locations are buried.	The well locations for the hydrographs in Appendix 2-B are shown on Figure 2.3-6. It will also be available in an easy-to access format in the Subbasin Data Management System.
41		Carl Werder	7/5/2021	Section 2	Page 203	Line 2936	Page 203 of 204, Line 2936., Very disappointed that this section has yet to be completed. This is the real meat of this section one. Everything else in this section one is just a repeat of existing documents providing nothing new to the reader. Please forward this section to me via email as soon as it becomes available.	Section has now been made available for review
42		Carl Werder	7/5/2021	Section 2	Page 43	line 346, Table 2.1-13	Page 43 of 204, line 346, Table 2.1-13., This table for 2018 shows a total remediation groundwater extraction of 34,322 AF/yr and Aerojet alone extracting 26,075 AF/yr. However, on page 189 of 204, Table 2.4-7, remediation amount is only 21,000 AF/yr over a period of nine years and yet it goes up over a period from 1970. This makes no sense and appears to be deflecting the fact that remediation efforts contribute to reducing recharging of the groundwater in the Vineyard area.	The numbers have been checked and updated
43		Carl Werder	7/5/2021	Section 2	Page 59	line 607	Page 59 of 204, line 607., The words "small decline" are subjective and the word 'small' should be deleted as this is an opinion with no bases in fact.	This sentence has been removed
44		Carl Werder	7/5/2021	Section 2	Page 60	line 705 and 706	Page 60 of 204, line 705 and 706., The yield number of 273,000 AF/yr is a negotiated settlement amount that has no bases in fact. This was pointed out by DWR in their rejection of the SCGA Alternative. Therefore, I recommend that any reference to this number be deleted from this GSP.	The yield amount from the Water Forum Agreement is provided for historical context
45		Carl Werder	7/5/2021	Section 2	Page 14	line 78, Table 2.1-2	Section 2. – Page 14 of 204, line 78, Table 2.1-2., Why is this document using 2018 Water Year and not 2019 or a better picture of distributed water would be a three year average.	2018 was the last year where all data was available at the time the document was developed
46		Suman Singha, PhD	8/16/2021	Section 2	2-194	2908	I believe the word should be "with" not "without"	Change has been made
47		Suman Singha, PhD	8/16/2021	Section 2		Table 2.1-7 and Figure 2.1-12	Table 2.1-7 CDEC Flow Stations in SASb lists 4 active and 1 inactive sensor. The corresponding Figure 2.1-12 lists 5 active and 3 inactive sensors; with one active sensor being outside the SASb.	Thin shown the Section 3.2

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1	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	20	566	Allowing the minimum threshold at some representative monitoring points to be set lower than the 2015 low is unacceptable. Model simulations of projected conditions with climate change and PMA should not be allowed to serve as the minimum threshold. The purpose of SGMA is to ensure sustainability of the subbasin. If projected conditions with climate change and PMA result in groundwater levels lower than the 2015 low, then additional management actions must be taken in order to raise groundwater levels to at least the level of the 2015 low. It is unacceptable and disingenuous just lower the minimum threshold so that existing PMA are sufficient to not exceed the minimum threshold.	The reviewer's opinion is that SMC should not be set lower than the 2015 groundwater level. SGMA requires GSAs to evaluate the impact of SMC on beneficial users of groundwater. There is no one "historical" water year that guarantees the avoidance of impacts to beneficial users, and it is incorrect that significant and undesirable results are avoided if groundwater levels fall below those recorded in an arbitrary year. SGMA requires quantitative assessments of the impacts to beneficial users observed at MTs (evidenced by comment letters to Paso Robles and Cayuma GSAs). Thus, this plan acknowledges that the environment, domestic users, agricultural users, industrial users, and municipal users all require groundwater. Then, it sets MTs at levels that avoid significant and unreasonable impacts to these users of groundwater. The plan forecasts the avoidance of impacts to beneficial users (summarized in Section 3.3.1.2, and in technical Appendices 3A, 3B, and 3C).
2	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	7	109	Localized undesirable results such as this would likely not exceed the sustainable management criterion of 25% of representative monitoring wells being below the minimum threshold for three consecutive years. How will beneficial users be protected from localized undesirable results?	Our analyses suggest that even if 100% of wells reach MTs, significant and unreasonable impacts to wells are avoided. However, in an abundance of caution, the GSP advances a well protection program in Section 4.7.1 and a budget item in Section 5 to provide coordination, monitoring, outreach, a well census, and rehabilitation funds. Annual reporting and ongoing monitoring efforts, coupled with the well protection program will protect well users from localized undesirable results.
3	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	8	151	Wells that are currently functioning and become impacted due to lowering of groundwater levels must be included in this count even if the wells are not listed in the DWR Well Completion Report database (as is the case for many older domestic wells). That is, even if a well is not listed on the DWR Well Completion Report database, if it is impacted it will be considered as contributing to the undesirable result threshold.	The GSP will always use the "best available information", which at this time is the DWR WCR database. As the well census yields more accurate well location information, these data will be used.
4	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	27	661	Both the 31 or 40 year retirement age for wells is inappropriate. My own domestic well is 47 years old and still functions quite well. Most of the other homes in my Ag/Res area were also built in the 1970s and still have original functioning wells. By assuming that older wells are not active, functional wells are being inappropriately removed from the domestic well count.	We thank the reviewer for this comment. Well impact analyses were re-run using a 50 year retirement age and found an additional 6 wells were impacted, and the count of active wells increased to about 1300 (compared to around 400-800). Thus, forecasted well impact appear insensitive to well retirement age. Importantly, these results do not change the definition of significant and unreasonable impacts to wells occurring at 5% of impacted wells. We keep the text as-is because using lower well retirement age results in a more conservative count of wells required to reach 5%. If a larger retirement age is used for GSP planning purposes - as the reviewer suggests - then the number of wells required to trigger a significant and unreasonable impact is also increased (5% of 1300 wells is 65 wells, but 5% of 400 wells is only 20 wells). Thus, using a larger retirement age in the GSP planning process may make it difficult to more rapidly respond to a well impact situation should it occur. Moreover, we point out that the reviewer's well is one sample. Retirement ages of 31 and 40 years are suggested by peer-reviewed literature that use thousands of samples (Gailey et al., 2019; Pauloo et al., 2020), and which are more appropriate until better data is uncovered in the well census.
5	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	27	654	The DWR Well Completion Report database that provides the basis for the number of active domestic wells is woefully incomplete, particularly for older wells (prior to 1990). My 1974 fully functioning domestic well is not included in the database, nor are many of my neighbors' wells. I live in a section of Elk Grove that is specifically zoned for Ag/Res small parcels and each residence has its own well, but many of these wells are not shown on the database. I've heard that Sacramento County well records prior to 1990 are a mess and not digitized, so weren't included in the database. In order to get a better count of active domestic wells and a more representative depth estimate of those wells, a well census should be conducted.	We fully agree with the reviewer and a well census is already proposed as part of the well protection program (Section 4.7.1). This effort will begin during the first year of SGMA implementation.
6	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	27	general	If 2-3% of domestic wells are impacted, the number of domestic wells impacted will be much higher than the 7 estimated by the climate change + PMA simulation. This is due to the incomplete nature of the DWR Well Completion Report database. The database is missing many older wells (pre-1990) that are still functioning, so the number of active domestic wells is undercounted. Also, newer wells tend to be drilled deeper than the older wells were, so the depth of domestic wells appear deeper and thus less vulnerable than they actually are.	This is not necessarily true. If older wells are indeed missing from the DWR WCR database, these wells are more likely to be shallower due to their age, and thus inactive anyway. As presented in working group meeting 10 (December 11, 2020), average domestic well depth in the SASB increased by a factor of 3 between 1940 and 2020. Nonetheless, the WCR represents our best available information on well construction and we must use it. In an abundance of caution, and acknowledging potential limitations in the data, a well census is planned, alongside a well protection program that involves monitoring, coordination, and rehabilitation funds.
7	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	27	675	Well rehabilitation costs is estimated based on the number of wells that will need to be deepened due to the water level declining to below 30 feet above the bottom of the well. However, there may be many more wells that are impacted due to the water level falling below the minimum level above the pump. These wells will need to have their pump lowered in order to maintain productivity. Lowering the pump is substantially cheaper than deepening a well, but may be much more common and thus contribute substantially to the cost of the program. It must be made clear that lowering of pumps in impacted wells is also covered in the Shallow/Vulnerable Well Protection Program	"Pump lowering" is now mentioned in the identified line. The authors wish to make it known that "well rehabilitation" and "well impacts" are used throughout the plan instead of "well replacement" and "well failure" to account for exactly the kind of lower-cost rehabilitation to impacted wells that the reviewer points out.
8	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	27	677	This cost is likely a gross underestimate because 1) it ignores the cost of lowering pumps which may be much more commonly needed than deepening wells, and 2) the number of wells that may be impacted is underestimated due to the fact that the DWR Well Completion Report database only includes a fraction of active wells and is skewed younger and deeper than the actual active well population.	(1) The model referenced by Pauloo et al (2021), EKI (2020) and Gailey (2019) actually does internalize the cost of pump lowering and well deepening. (2) Impacted well counts increase by about 6 when using a 50 year retirement ages, and thus costs are not substantially different than those reported in the GSP. Importantly, uncertainty and potential missing data that inform these models should be recognized. The GSP acknowledges this in the form of a well protection program with coordination, monitoring, a well census, and a well rehabilitation fund to mitigate impacts caused by unsustainable groundwater use.

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9	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	27	681	Estimated well impacts and associated rehabilitation costs were shared during public meetings, but the public response and feedback has not been properly addressed. During public meetings, Ag/Res residents brought up the incomplete nature of the DWR Well Completion Report database and the inappropriate 31-40 year old retirement age for domestic wells, but neither of those issues were addressed.	Concerns about the retirement age parameter have been addressed in additional analysis that suggests only minimal additions to impacted well count that are still on the order of 1% of wells impacted. We elect to keep well retirement ages as-is so that the count of wells impacted to trigger undesirable results stays low (5% of 1300 wells is 65 wells, but 5% of 400 wells is only 20 wells). Section 4.7.1 details a well protection plan which includes a management action of improving well data in the region. This will drive more accurate well impact models. At the same time, a well rehabilitation fund will be built up to protect well users from unintended impacts.
10	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	31	745	Again, allowing the minimum threshold to be set lower than the 2015 low is unacceptable. Model simulations of projected conditions with climate change and PMA should not be allowed to serve as the minimum threshold. The purpose of SGMA is to ensure sustainability of the subbasin. If projected conditions with climate change and PMA result in conditions worse than the 2015 low, then additional management actions must be taken. It is unacceptable and disingenuous just lower the minimum threshold so that existing PMA are sufficient to not exceed the minimum threshold.	The reviewer's opinion is that SMC should not be set lower than the 2015 groundwater level. SGMA requires GSAs to evaluate the impact of SMC on beneficial users of groundwater. There is no one "historical" water year that guarantees the avoidance of impacts to beneficial users, and it is incorrect that significant and undesirable results are avoided if groundwater levels fall below those recorded in an arbitrary year. SGMA requires quantitative assessments of the impacts to beneficial users observed at MTs (evidenced by comment letters to Paso Robles and Cayuma GSPs). Thus, this plan acknowledges that the environment, domestic users, agricultural users, industrial users, and municipal users all require groundwater. Then, it sets MTs at levels that avoid significant and unreasonable impacts to these users of groundwater. The plan forecasts the avoidance of impacts to beneficial users (summarized in Section 3.3.1.2, and in technical Appendices 3A, 3B, and 3C).
11	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	81	1610	Rather than using "best professional judgement" to ensure that groundwater samples are representative of ambient groundwater, sampler collectors should use standard protocol from USGS National Field Manual for the Collection of Water-Quality Data, which specifies allowable fluctuation in pH, temperature, electrical conductivity, turbidity, etc.	Thank you for the recommendation, the recommended change has been incorporated.
12	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	65	1362	Public supply wells tend to be deeper than domestic wells. Will groundwater quality measurements from these wells actually be representative of groundwater quality in domestic wells? Most domestic well users do not monitor groundwater quality on a regular basis, but could be the first affected by water quality changes. Some domestic well owners (like myself) might be willing to allow regular sampling from our wells in order to get better spatial and depth coverage for monitoring efforts.	Two water quality monitoring networks are proposed for the basin: an upper aquifer network, and a lower aquifer network. A combination of municipal and monitoring wells of various depths will be utilized for these networks. In short, the deeper public supply wells will be used to characterize the lower zone, and the shallower monitoring and domestic wells will monitor the upper zone. As shown in Table 3-7, 11 wells have been selected to monitor the upper aquifer zone, and 10 wells have been selected to monitor the lower aquifer zone. This equates to roughly 36% of the upper aquifer layer being monitored (Figure 3-25), and roughly 47% of the lower aquifer layer being monitored (Figure 3-26). It is noted that these coverages are only estimates, as there is no official guidance on the required number of wells to monitor a basin of this size and pumping rate. Additionally, the monitored coverage will be increased in the future with wells incorporated to fill spatial data gaps, as well as existing wells within Regional San's Harvest Water Project. So, although deeper public supply wells may not necessarily be representative of shallower domestic wells, the proposed monitoring network contains an adequate assortment of well depths, sufficiently characterizes basin conditions, and is capable of being upgraded if spatial gaps are determined. Thank you for the interest in volunteering your well. Private wells were considered, but the team is hesitant to include these wells in the network as the data will be part of public, long-term record, and the goal is for these locations to be monitored 40+ years.
13	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	60	1306	The monitoring network only achieves 92% spatial coverage when combining data from both aquifers. The upper aquifer only has 70% spatial coverage and the lower aquifer only 50% coverage. There is a large spatial gap, particularly in the upper aquifer, near the center of the subbasin to the north and south of Elk Grove. Additional wells should be added to the monitoring network in those locations to fill the spatial data gap. These locations are particularly important to monitor due to the high density of domestic wells in the rural estates of Elk Grove.	The RMP network for groundwater level includes 45 wells which is nearly triple the amount required by DWR for a basin of the acreage and pumping capacity of the SASb (n = 16). The SASb has one principal aquifer (Section 2) with shallow and deep zones. Monitoring networks are designed to follow the zones of production from this principal aquifer. We maintain that together, the monitoring network is sufficient and representative.
14	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	66	1388	The water quality monitoring network should also include wells with a history of arsenic measurement. Figure 2.3-36 showed many shallow wells with arsenic exceeding the EPA MCL. Changes in groundwater levels and flow directions due to groundwater management could mobilize arsenic into other shallow wells such as those used for domestic purposes. Even if arsenic is naturally occurring and being mobilized from sediments, changes in groundwater flow and chemistry (i.e., changes in oxidation-reduction potential) could mobilize arsenic into the water.	While we agree that water quality monitoring should be conducted for arsenic, the historical assortment of constituents monitored at wells within the basin makes inclusion of wells monitored for arsenic, as well as TDS and N, hard to include in the network. Therefore, efforts will be made to ensure wells have historical record of arsenic measurements, but this cannot be guaranteed.
15	Ag/Res resident	Amelia Vankeuren	8/17/2021	3	68	Figure 3-24	There are huge spatial gaps in the groundwater quality monitoring network. This is highly concerning given the concentration of domestic wells in the upper aquifer. Most domestic well users do not measure groundwater quality except when buying or selling a house, so changes in water quality in this aquifer (e.g., increases in nitrate or arsenic) could go undetected for years and cause significant health impacts.	Monitoring coverage of the shallow aquifer is planned to be expanded in the near future. Wells from Aerojet's network in the northern portion of the Subbasin, and wells located within Regional San's Harvest Water Project area in the southern portion of the Subbasin, will be added to expand coverage. The northwestern portion of the Subbasin covers urban areas with no known issues related to nitrate or TDS, and therefore no expansion is planned for that region at this time. As shown in Table 3-7, 11 wells have been selected to monitor the upper aquifer zone, and 10 wells have been selected to monitor the lower aquifer zone. This equates to roughly 36% of the upper aquifer layer being monitored (Figure 3-25), and roughly 47% of the lower aquifer layer being monitored (Figure 3-26). It is noted that these coverages are only estimates, as there is no official guidance on the required number of wells to monitor a basin of this size and pumping rate.
16	Ag/Res resident	Amelia Vankeuren	8/17/2021	Appendix 3-A	18	Figure 7	The projected conditions with PMA and climate change result in a decline of groundwater levels to 15 ft below the Fall 2015 low along a north-south oriented line at the center of the subbasin. This amount of decline is unacceptable, particularly given the high concentration of domestic wells that fall in that zone of groundwater level depletion near Elk Grove. While it appears that most domestic wells were still functioning during the 2012-2016 drought, an additional decline of 15 ft may impact many domestic wells in that area and require well rehabilitation in the form of pump lowering or well deepening. Additional PMA should be planned in order to prevent the projected groundwater level declines in the center of the subbasin.	Our modeling suggests that even in this situation, an additional 15 feet of decline in this area is unlikely to impact wells to a significant and unreasonable degree (see Figure 15 in this appendix). PMA are developed around a well protection program to fund rehabilitation, to run a volunteer monitoring program, to coordinate with local community members, and to fill data gaps to better model well impacts.

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17	Ag/Res resident	Amelia Vankeuren	8/17/2021	Appendix 3-A	25	Figure 13	The range of domestic well total completed depths determined from the DWR Well Completion Report database is likely deeper the actual range of depths in active domestic wells. The database is incomplete, particularly for wells installed prior to 1990, many of which are still in use in rural communities that were built in the 1970s and 1980s like those near Elk Grove. The older wells that are not listed on the database tend to be shallower than the newer wells that are listed. The Greater Sheldon Rural Estates Homeowners Association has been collecting well information from its members and has found that there may be significantly more wells in the more vulnerable 150-200 ft depth range than Figure 13 suggests.	As part of the well protection program and ongoing annual reporting and monitoring, the GSP will incorporate the best available information into the SGMA planning process, which can include the well information collected by GSREHA. Until then, this plan uses the best available information.
18	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Sustainable Management Criteria; 3.3.1, 3.4.1 Groundwater Levels and 3.3.4, 3.4.4 Depletions of Interconnected Surface Water			5. Comment #5 Sustainable Management Criteria (Sustainable Management Criteria; 3.3.1, 3.4.1 Groundwater Levels and 3.3.4, 3.4.4 Depletions of Interconnected Surface Water): Groundwater level and interconnected surface water sustainable management criteria (SMC) may not protect against undesirable results for fish and wildlife beneficial uses and users of groundwater and interconnected surface waters. a. Issues: i. Minimum Thresholds: Minimum thresholds (MTs) for groundwater levels, and by proxy, for depletions of interconnected surface water, are not likely to prevent undesirable results for environmental beneficial uses and users of groundwater and interconnected surface water. The GSP assumes that conditions that have previously occurred in the basin did not lead to significant and unreasonable impacts to beneficial users of groundwater, relying on a circa 2015 baseline. At this baseline, which occurred towards the end of an extended period of dry from 2012 to 2016 (including two back-to-back Sacramento Valley critically dry water years in 2014 and 2015), wherein groundwater extraction increased to replace more than 70% of lost agricultural water supplies (Lund 2018), it is probable that vegetated and aquatic GDEs were experiencing adverse impacts due to combined groundwater depletion and reduced surface water availability. These adverse impacts included stressed or dying riparian vegetation, poor instream habitat availability, and increased water temperatures (DFW 2019). The GSP contends that only groundwater conditions that worsen beyond historic lows would constitute an undesirable result. However, GSPs must first evaluate potential adverse impacts to beneficial uses and users and determine at what groundwater levels those impacts would occur, and then set minimum thresholds accordingly. Defaulting to the post-2015 low groundwater level as minimum thresholds because similar	The comment contends that ISW and GDEs may have experienced significant and unreasonable impacts during the period circa 2015, but does not state or quantify what those impacts were. Without this information, it is difficult to assess the validity of this claim. Moreover, in contrast to what the reviewer states, MTs in this plan do not default to post-2015 lows, but rather are based on projected groundwater level change due to water use, projects and management actions, and climate change. Next, impacts to beneficial users are at these projected groundwater levels were assessed and found to be below ranges defined as significant and unreasonable by the GSAs. Avoiding impacts to beneficial users is at the core of this GSP, and we refer the reviewer to technical appendices 3A-3C, which detail the methods and results for impacts to wells, ISW, and GDEs. To summarize results here: quantified impacts to beneficial users were less than limits that the working group defined as significant and unreasonable. For instance, in the worst case scenario evaluated ("climate change with no PMA") domestic wells impacted by 1-2%. MTs are in fact set higher than these levels (i.e., at the scenario "climate change with PMA"), leading to even less well impact. Furthermore, at projected MTs, ISW reach length is may decline by 2.6% relative to 2015 conditions, and late fall baseflow to streams - important for spawning migration and habitat - will stay roughly the same, and may increase depending on the severity of climate change in the basin. Finally, GDE area is estimated to change by -3% to + 4% depending on the impacts of climate change, meaning that a low severity scenario actually leads to an increase in GDE area over the SGMA management horizon. Therefore, we maintain that the SMC set herein protect beneficial users of groundwater to quantifiable degrees and do not classify as "significant and unreasonable".
19	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Sustainable Management Criteria; 3.3.1, 3.4.1 Groundwater Levels and 3.3.4, 3.4.4 Depletions of Interconnected Surface Water			ii. Undesirable Results: The GSP metrics for declaring an undesirable result for the chronic lowering of groundwater, and by proxy, the depletion of interconnected surface water, may not sufficiently protect environmental beneficial users of groundwater. The GSP requires 25% of representative monitoring wells in the subbasin to fall below their MTs for three consecutive years before identifying an undesirable result to GDEs or ISW. While environmental users are adapted to sustain short-term lowering of groundwater levels during dry periods, environmental users may not be able to sustain extended periods of reduced groundwater access that would result from allowing groundwater levels to fall to historic lows for three consecutive years. The scenarios analyzed in the GSP showed that climate change impacts are likely to be most acutely felt by interconnected surface waters and GDEs that rely on shallower groundwater (line 559). By the time an undesirable result is declared, and management actions are triggered in response to the undesirable result, environmental users will have already experienced significant stress and potentially irreversible mortality.	As described in comment 18, in a theoretical and unlikely worst-case scenario in which all MTs are simultaneously reached across the entire basin was used to estimate impacts to ISW, GDE, and wells. Results suggest that these impacts are minimal and below thresholds determined by the GSAs as significant and unreasonable. Moreover, actual impacts would be even less if 25% of RMPs reach their MTs (versus the 100% of RMPs that we stress-tested our SMC against). To be clear, MTs have been carefully set and iteratively defined with respect to analyses of impacts to beneficial users such that they avoid "significant and unreasonable impacts", not "all impacts whatsoever".
20	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Sustainable Management Criteria; 3.3.1, 3.4.1 Groundwater Levels and 3.3.4, 3.4.4 Depletions of Interconnected Surface Water			b. Recommendations: i. Minimum Thresholds: The Department recommends the GSP reselect minimum thresholds that would better protect environmental uses and users of groundwater, rather than defaulting to the historical low groundwater levels for the subbasin. ii. Undesirable Results: The Department recommends the GSP reconsider the 3-year duration of groundwater levels below MTs required to constitute an undesirable result, recognizing that extended durations of groundwater inaccessibility for environmental users will likely lead to adverse impacts that cannot be easily reversed when groundwater levels recover. At a minimum, the Department recommends identifying physical triggers (e.g., declining Normalized Difference Vegetation Index (NDVI) signals) and associated management actions (e.g., demand reduction) to mitigate localized patterns of lowering groundwater or depleted ISW that can be implemented before the third consecutive year of MT exceedances. These interim action triggers will help preempt irreversible losses and undesirable results, instead of waiting for three years before deciding a trend is unacceptable. Protective MT criteria and/or interim action triggers are particularly important if anticipated supply augmentation PMAs are not implemented in a timely or predictable manner (see Comment #6).	These comments are well taken. (i) MTs are not, as the reviewer states, set to historic lows, but rather based on a simulation of our best-available information of forecasted groundwater pumping, PMAs, and climate change. In some locations, MTs are lower than historic lows, and in other locations, MTs are higher than historic lows. Importantly, across all scenarios tested, significant and undesirable results are avoided if 100% of RMPs reach their MTs, thus 25% of RMPs reaching MTs is conservative. (ii) In the abundance of caution, we have already implemented what the reviewer recommends in this second bullet point. We direct the reviewer to table 3-2, which lists criteria for GDE area and GDE NDVI set at historical minima, that when reached trigger the identification of significant and undesirable results for GDEs. These findings are elaborated upon in Technical Appendix 3B (Freshwater Trust, 2020), and importantly allow the identification of unprecedented impacts to GDEs even if RMPs do not register the identification of undesirable results.

Comment No.	Commenting Organization	Comment By	Date of Comment	Section/ Appendix #	PDF Page Number	PDF Line Number or Figure Number	Comment	Response to Comment
21	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Sustainable Management Criteria, 3.3 Minimum Thresholds, 3.4 Measurable Objectives and Interim Milestones, 3.5 Assessment and Improvement of the Monitoring Network			<p>Comment #6 Monitoring Networks (Sustainable Management Criteria, 3.3 Minimum Thresholds, 3.4 Measurable Objectives and Interim Milestones, 3.5 Assessment and Improvement of the Monitoring Network): The GSP is inconsistent in identifying data gaps and plans for improvement of the monitoring network.</p> <p>a. Issue:</p> <p>i. Shallow Groundwater Monitoring: Existing shallow groundwater monitoring wells may not be sufficient to characterize groundwater level trends as they relate to potential GDEs within the subbasin. The GSP identified the need for additional shallow groundwater data near both surface waters and natural communities commonly associated with groundwater (2.2.9, line 1738); while the GSP later discusses plans to install paired monitoring wells and stream gauges (3.5.5, line 1735), there is no further discussion of the plan to collect additional shallow groundwater data near GDEs.</p> <p>ii. Representative Monitoring Points: While Table 3-4 (page 3-36) includes the geographic coordinates of the representative monitoring points (RMP), the points are not explicitly identified on any of the maps that display the RMP thresholds.</p> <p>iii. Groundwater Elevation Mapping: The maps in Section 3 that display groundwater levels of minimum thresholds (Figures 3-13 and 3-17; beginning on page 3-37) and measurable objectives (Figures 3-15 and 3-18) utilize elevations above mean sea level. Without a reference to the ground surface elevation, it is difficult to determine the depth of groundwater levels below ground surface and evaluate potential impacts to groundwater dependent ecosystems and interconnected surface water.</p>	<p>We are confused by the reviewer's comment, because all of the items that are reportedly missing are in fact present in the public draft of the GSP. First, we maintain that the RMP network is sufficient, that data gaps are consistently identified, and that plans for improvement of the groundwater level network are clearly outlined (Section 3.3.1.3, Figure 3-28), described in Section 4 (PMAs), and budgeted for in Section 5. (i) Shallow monitoring wells adequately cover GDE areas in the basin (compare Figures 3-23, 3-24 with Figure 3-7). There are no plans to collect additional shallow groundwater measurements near GDEs because enough are present. In fact, the 45 RMPs is nearly triple DWR recommendations for a basin of this size and pumping (n = 16). Finally, the additional monitoring alluded to in the comment for ISW is a separate issue: to better understand surface and groundwater interactions near ISW data gaps. Given the co-location of ISW and GDEs, these monitoring networks will also aid in GDE monitoring. (ii) The point is well taken, and Figure 3-14 now shows RMP ids and locations. (iii) The point is well taken and RMP MOs and MTs are now shown with as elevation and depth to groundwater in Figures 3-15, 3-17, 3-19, and 3-20. Moreover, Figure 3-5 now shows all hydrographs as depth to groundwater.</p>
22	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Sustainable Management Criteria, 3.3 Minimum Thresholds, 3.4 Measurable Objectives and Interim Milestones, 3.5 Assessment and Improvement of the Monitoring Network			<p>iv. ISW Data Gaps: The GSP states "reaches of the Cosumnes River approximately between Deer Creek and Twin Cities Rd. ... are considered a data gap for planning purposes, and more research and inter-basin coordination is needed to determine the nature of surface groundwater interactions in this region. It is expected that by the next plan update (2027), a revised determination of ISW in this area will be developed" (page 3-29). The GSP describes how other data gaps, such as the lack of well perforation data, "will be addressed in future fieldwork during the GSP implementation period" (page 3-55). The GSP proposes that "additional stream gage and continuous monitoring will be installed in the area" to address the data gaps (page 3-79); however, the proposed monitoring network (displayed in Figure 3-21 on page 3-58) does not include any indicators for interconnected surface water near the stretch of the Cosumnes River that has been identified as a data gap. In particular, the two representative monitoring points closest to this area are proposed to only monitor groundwater level and groundwater storage, but not ISW.</p> <p>v. ISW Monitoring: Figure 3-21 (page 3-58) identifies interconnected surface waters in the far northeast portion of the subbasin. However, the representative monitoring points closest to these interconnected surface waters are proposed only to monitor groundwater level and groundwater storage, but not ISW.</p>	<p>(iv) As detailed in the ISW technical memo (Appendix 3C), and as emphasized in "Addressing Regional Surface Water Depletions in California: A PROPOSED APPROACH FOR COMPLIANCE WITH THE SUSTAINABLE GROUNDWATER MANAGEMENT ACT" (EDF, 2018) groundwater monitoring locations should be sufficiently spaced away from ISW to avoid near-stream hydraulic influences in the groundwater level signal. To serve as an adequate monitoring point for ISW depletion, a monitoring well should represent changes in the expanding cone of depression that will eventually surpass the well's location and propagate to the stream, thereby capturing a portion of its streamflow. Thus, we disagree with the reviewer that points proximal to streams should be included based on their proximity alone, and refer them to Figure 34 of Technical Appendix 3C and EDF (2018). Our analysis suggests selecting monitoring wells between 3000 and 9000 feet from streams, consistent with EDF (2018) recommendations to position wells beyond 2000 feet from streams: "To indicate incipient streamflow depletion, therefore, water-level measurements in this zone, which for purposes here is estimated to be between 0 and 2000 feet for most Central Valley conditions, are not useful. (p. 8)". The two wells the reviewer suggests should monitor for ISW are in fact too close to the stream to be useful, but the one that we select is sufficiently spaced, and hence, used as an ISW RMP. Furthermore, we maintain that existing and planned monitoring in the Cosumnes River ISW data gap is sufficient. Paired, continuous, 15 minute groundwater level and streamflow data are collected at the upper and lower end of the Cosumnes River data gap, with plans to install an additional stream gage (Figure 3-29). (v) Please refer to the response above in (iv).</p>
23	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Sustainable Management Criteria, 3.3 Minimum Thresholds, 3.4 Measurable Objectives and Interim Milestones, 3.5 Assessment and Improvement of the Monitoring Network			<p>b. Recommendation:</p> <p>i. Shallow Groundwater Monitoring: Consistent with the GSP's acknowledgement of the need for additional shallow groundwater monitoring, the Department recommends the GSAs propose a specific plan for installing a discrete number of additional shallow groundwater monitoring wells near GDEs. The Department recommends using the list of GDE-associated beneficial users (not available for review, see Comment #3(ii)) to identify locations of GDE communities within the subbasin that are most likely to support special status species. GDEs that support special status species, or that are most vulnerable to reduced access to lowered groundwater levels (e.g., have limited surface water supply), should be prioritized for siting additional shallow groundwater monitoring wells.</p> <p>ii. Representative Monitoring Points: The Department recommends providing an identification number to each RMP listed in Table 3-4 and including a map identifying the location of each of the RMPs.</p> <p>iii. Groundwater Elevation Mapping: The Department recommends including ground surface elevation and groundwater depth below ground surface for the included maps.</p> <p>iv. ISW Data Gaps: The Department recommends that the GSP include specific gage and monitoring well plans and locations to address the data gap on the Cosumnes River.</p> <p>v. ISW Monitoring: The Department recommends that all interconnected surface waters are adequately monitored.</p>	<p>(i) RMPs that monitor shallow groundwater conditions (Figure 3-23 and 3-24) overlap with GDEs (3-6). Moreover, a robust plan to monitor changes in GDE area and NDVI are in place and we are confident in the GSP's ability to protect these beneficial users of groundwater. (ii) This comment has been addressed with a revised Table 3-4 and Figure 3-13. (iii) This has been addressed in Figures 3-15, 3-17, 3-19, and 3-20. (iv) This is already addressed in Section 3.5 (Figure 3-29) with commensurate PMAs in Section 4 and budget in Section 5. (v) In addition to groundwater level monitoring at carefully selected shallow aquifer monitoring wells, in an abundance of caution, the GSP also monitors for changes in the late fall spawning migration exceedance flow, and the ISW reach length. The Department's concerns are heard, and all efforts are being made to protect ISW.</p>
69	Environmental Council of Sacramento (ECOS)		6/18/2021	Section 3			<p>Section 3 effectively communicates the analysis done to comply with the requirements of SGMA and we concur with the proposed Sustainability Goal. However, we are concerned about the use of 2015 storage and water levels as the triggers in the Sustainable Management Criteria. The document implies that we can drop below 2015 levels for three consecutive years before any action is taken. However, under this approach, the GSPD does not comply with the SGMA provisions that direct conditions not to worsen below the 2015 base year. A more prudent approach would be to set the trigger levels higher so that action can be taken when water and storage levels initially reach the 2015 mark. The result of analysis presented in the GSPD makes it possible to adjust the Minimum Thresholds to levels that would require action when the actual 2015 values are reached.</p>	<p>In contrast to what the reviewer states, MTs are not all below 2015 levels. In fact, some are above 2015 levels, some are near 2015 levels, and some are below (Figure 3-4 and 3-5 in Section 3, and Figure 21 in the ISW technical Appendix). MTs are allowed to decline below 2015 levels, provided the avoidance of significant and unreasonable impacts to beneficial users of groundwater, which we demonstrate in three technical appendices to Section 3 and summarize in the Section 3 (see Section 3.3.1.2). Finally, we do not set trigger thresholds as the reviewer states at 2015 storage and levels. In fact, we do not set triggers at all. Rather, we use the identification of undesirable results as triggers for action and rely on PMAs to address them. Furthermore, the monitoring network and SMC tracking ensures continuous awareness of groundwater conditions in the basin, and GSAs will coordinate actions to address negative trends in the basin if and when they emerge as identified by the monitoring network, the SMC, and the onus of responsibility to continually evaluate groundwater conditions for annual reports and plan updates.</p>

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24	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	3.4.3	3-51	1119	Regarding Table 3-6, L10008601447-MW-13 is a background well for Elk Grove Landfill and currently exceeds the Measurable Objective for Specific Conductivity. As this well is offsite and upgradient of the landfill and does not exceed any Water Quality Protection Standards for the landfill as specified by the CVRWQCB, achievement of the MOs would require action on the part of private landowners (Hilltop Cemetery) and public districts (Cosumnes CSD) and these other parties may wish to dispute or comment on the MOs, which are well below maximum thresholds. Without such input, the MO for Specific Conductivity should be increased to at least 580 umhos/cm, the current level of the Water Quality Protection Standard, and above the current Specific Conductivity of 538 umhos/cm. See Geotracker for further info.	This comment is well received and highlights the fact that MOs for specific wells must be reviewed at this time.
25	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	3.4.3	3-51	1119	Regarding Table 3-6, L10007396297-MW-40B is a downgradient well for Kiefer Landfill and this well currently exceeds the Measurable Objective for Specific Conductivity. However, this well does not exceed any Water Quality Protection Standards for the landfill, the Specific Conductivity is well below maximum thresholds, and no corrective action has been indicated for this location by the CVRWQCB, other than VOC treatment by air stripping (which does not reduce Specific Conductivity). Therefore, the Measurable Objective for Specific Conductivity for this well should be increased to at least the level of the Water Quality Protection Standard, which is set by statistical analysis of background wells and has varied between 480 and 512 umhos/cm in recent years. See latest monitoring reports on Geotracker for further info.	This comment is well received and highlights the fact that MOs for specific wells must be reviewed at this time.
26	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	3.5.2	3-71	Table 3-8	Please change GSA for Well ID L10007396297-MW-40B from OHWD to SCGA. Reference: SCGA MOU dated 5/13/2020 removing Kiefer Landfill from OHWD GSA.	Change incorporated.
27	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	Appendix 3-D	NA	Table A-1	Please change GSA for all Kiefer Landfill wells from OHWD to SCGA. Reference: SCGA MOU dated 5/13/2020 removing Kiefer Landfill from OHWD GSA.	Change incorporated.
28	Sacramento County Department of Waste Management & Recycling	Mike Koza	8/17/2021	Appendix 3-D	NA	Table A-1	Well depth to upper limit of screened interval for Kiefer Landfill well L10007396297-MW-38B is incorrect. Please use well depth to screen of 170 feet, as reported in Appendix B of 2020 annual monitoring report on Geotracker.	Change incorporated.
29	Sheldon Community Association Greater Sheldon Road Estates Homeowners Association	William Myers Shirley Peters	7/21/2021	Appendix 3-A			Issue 1: The number of functioning domestic wells The 5400 acres within the city of Elk Grove zoned Agricultural Residential, a fifth of its land area, at present contain over 1,200 occupied residences, all of them dependent for water on roughly the same number of domestic wells. This may be the principal dense concentration of domestic wells in the SCGA area, and perhaps one of the largest in the South American subbasin. Virtually all these wells are fully functioning and currently supply their associated residences with adequate water. The dramatic growth of this area, including in planned developments, dates back to at least the 1970s and 80s. Hundreds of wells over 30 or 40 years old, with some over 50, are maintained by their owners and are without visible deterioration.	The number of assumed active wells in our modeling efforts is controlled by an assumed "retirement age" parameter, which we have evaluated at 50 years in response to these comments. This raises the number of assumed active wells to around 1300, in line with the reviewer's suggestion. However, the true retirement age is likely to be lower than 50 years, consistent with the reviewer's claim that the DWR WCR database undercounts wells (thus a larger retirement age is required in order to increase the active well count to 1300). Well impact analyses re-run using a 50 year retirement age found an additional 6 wells were impacted, and the count of active wells increased to about 1300 (compared to around 400-800). Thus, forecasted well impact appear insensitive to well retirement age. Importantly, these results to not change the definition of significant and unreasonable impacts to wells occurring at 5% of impacted wells. We keep the text as-is because using lower well retirement age results in a more conservative count of wells required to reach 5%. If a larger retirement age is used for GSP planning purposes - as the reviewer seems to imply - then the number of wells required to trigger a significant and unreasonable impact is also increased (5% of 1300 wells is 65 wells, but 5% of 400 wells is only 20 wells). Thus, using a larger retirement age in the GSP planning process may make it difficult to more rapidly respond to a well impact situation should it occur. Moreover, we point out that retirement ages of 31 and 40 years are suggested by peer-reviewed literature that use thousands of samples (Gailey et al., 2019; Pauloo et al., 2020), and which are more appropriate until better data is uncovered in the planned well census (Sections 4.7.1 and 5).
30	Sheldon Community Association Greater Sheldon Road Estates Homeowners Association	William Myers Shirley Peters	7/21/2021	Appendix 3-A			(Issue 1 continued) The area water table and geological formations have been so stable that competently constructed wells have faced few threats. Well and pump purveyors serving our area say that residential well failures are rare. The Ag-Res area is subject to both City of Elk Grove and Sacramento County governance, plus community vigilance from CC&Rs and our two long active neighborhood associations established to monitor and defend the quality of rural life. This is not an environment in which a rash of well failures would go unnoticed. All observable evidence suggests that our domestic wells of all ages are generally performing adequately; we see no evidence to the contrary.	Our modeling is consistent with what the reviewer notes. Wells have no record of being impacted during recent historical lows (i.e., 2012-2016, DWR, MyDryWaterSupply), and our analysis of well impacts using peer-reviewed methods (Gailey et al., 2019; Paulo et al., 2020) suggests the avoidance of significant and unreasonable impacts. It is the intent of the well protection program in the GSP (Section 4.7.1) to not let well impacts go unnoticed. This is achieved by a volunteer monitoring program, coordination with a well advisory group, a well census, and a rehabilitation fund.
31	Sheldon Community Association Greater Sheldon Road Estates Homeowners Association	William Myers Shirley Peters	7/21/2021	Appendix 3-A			(Issue 1 continued) It is therefore with some surprise and puzzlement that we find in the recently released SASb draft Groundwater Sustainability Plan, particularly in Appendix 3-A, the suggestion that residential wells should be attributed an expected functional lifetime of something around 30 or 40 years, with the implication being that older wells should not be counted as viable or provided protection. If applied to Elk Grove, that policy could exclude hundreds of obviously functioning wells unproblematically providing water to their residences. Obviously, nobody knows the actual life span of our Elk Grove rural area domestic wells, since virtually all, including some several decades old, are still functioning and have not yet begun to peter out. There is no evidence on which to base a life expectancy estimate until we begin to see a failure pattern that has yet to appear. The only logical policy at this time is to accept the valid presence of all domestic wells in the Elk Grove rural residential area for both identification and protection. This will considerably raise what we understand to be the current SASb estimate of only around 700 eligible wells in the entire subbasin---only two thirds the number we observe just within the city limits of Elk Grove alone.	The reviewer is mistaken that the 30-40 year old retirement age parameter discredits older wells from being protected. The GSP at this time makes no distinction as to what wells are protected, but rather, creates a broad well protection program (Section 4.7.1) that includes among other provisions, a well rehabilitation fund. As the reviewer notes, no one knows the actual life span of a domestic well in the Elk Grove rural area. Retirement ages of 31 and 40 are used to address uncertainty in this parameter while still using the best available information (Pauloo et al., 2020; Gailey et al., 2019). A well census is designed as part of the well protection program to improve understanding of wells. Moreover, a well impact model was re-run with a retirement age parameter of 50 years, which brings the active well count closer to 1400, and increases well impacts by only 6 wells. As stated before, the 1% impact ratio is constant, but we elect to maintain retirement ages as-is in Section 3 and Appendix 3-A because a lower active well count results in a lower trigger threshold in terms of the count of impacted wells required to identify an undesirable result (5% of 1400 wells is 65 wells, but 5% of 400 wells is 20 wells). We hope that this conservative management threshold, coupled with the well protection program, gives the review confidence in the GSP.

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32	Sheldon Community Association Greater Sheldon Road Estates Homeowners Association	William Myers Shirley Peters	7/21/2021	Appendix 3-A			(Issue 1 continued) Curious about how the Subbasin working group could have come up with an estimate so obviously at odds with observable fact in our Elk Grove rural area, we consulted one of the main databases they cite---a website of well completion reports maintained by DWR. An initial look at the site suggests to us that the data it contains are so incomplete and so biased toward new wells that these data probably are worse than useless. Given the lack of credible evidence supporting any imputed average well life span in our Elk Grove rural area, plus strong prima facie evidence that virtually all wells of all ages, over 1,100 in number, are still working acceptably, we request that every well serving an occupied residence be counted as functional. There simply is no empirical justification for doing otherwise. The burden of proof is clearly on those who would impose a well lifespan criterion.	We have investigated the DWR WCR database and actually find the opposite. Please review slide 11 in Working Group presentation # 10 (December 11, 2020). The distribution of well completion dates shows no systematic bias towards well completion date. In fact, more older wells are represented compared to new wells. This makes sense because WCRs need to be tabulated and entered into the database, so we expect some lag time for new wells to enter the system. We disagree with the reviewer's comment that these data are "worse than useless" and instead offer that although limited, they are the "best available information" at the time of GSP writing. It is infeasible for the GSP to collect information on all domestic wells at the present moment, but the GSP takes management actions (Section 4.7.1) to improve well completion data through a well census during the first year of plan implementation. In an abundance of caution, the GSP also provides monitoring, coordination, and a rehabilitation fund.
33	Sheldon Community Association Greater Sheldon Road Estates Homeowners Association	William Myers Shirley Peters	7/21/2021	Appendix 3-A			Issue 2: Minimum Threshold The draft GSP proposes setting a subbasin-wide minimum threshold groundwater level equivalent to the groundwater level in the fall of 2015, a year of severe drought. That level is not the same everywhere relative to current groundwater levels, this year also being a severe drought year. We have not found a recorded 2015 groundwater level for the Elk Grove rural residential area, but anecdotal evidence from well and pump purveyors and other observers suggests that the groundwater level in 2015 was so close to the current ground level in 2021 that the difference is negligible. In the absence of solid evidence of a substantial difference, we propose that the groundwater level as measured in fall of 2021--under effects from the current drought---be adopted as the official recognized minimum threshold pertaining to the Elk Grove rural residential area. It is important to have a solid beginning point measurement, for the Elk Grove rural residential area is projected (Appendix 3-A, p. 17) to suffer some of the subbasin's most pronounced groundwater level decline (15 feet) even after accounting for project and management actions to retain water.	Groundwater level trends may be highly localized and influenced by a variety of hydrogeologic factors, however, the reviewer's claim that 2015 levels are close to 2021 levels at the scale of Elk Grove, or at a regional scale are inaccurate. Groundwater level data from the DWR, SCGA, OHWD, and UCD strongly suggest that, on average, levels were around 12 feet lower comparing 2019 and 2021 (slides 33-34, Working Group presentation #10, December 11, 2020). Moreover, setting MTs at present day levels, which may avoid significant and unreasonable impacts to domestic well users, would certainly cause significant and unreasonable impacts to municipal users of water - the GSP must avoid impacts to all beneficial users of groundwater as per the stated Sustainability Goal (Section 3.1). Thus, this GSP models impacts to domestic wells assuming all MTs are reached and finds a low impact proportion of around 1-2%, irrespective of well retirement age. Nonetheless, in the abundance of caution, please refer to the well protection program (Section 4.7.1).
34	Sheldon Community Association Greater Sheldon Road Estates Homeowners Association	William Myers Shirley Peters	7/21/2021	Appendix 3-A			One of the reasons for this especially severe decline is that the Elk Grove rural residential area does not substantially benefit from any such project or management action now planned. Nor are there any announced intentions to reinforce the especially impacted aquifers in this area. Hence, some of SCGA's, and the subbasin's, greatest groundwater table decline is projected to occur precisely at the location of its largest and most dense collection of shallow domestic wells, with no remedial action at the spot even considered. This is a recipe for looming disaster, and one practical means to help prevent it is to designate a minimum threshold for this area no deeper than the current water table at the time the GSP is proposed.	The reviewer's claim that Elk Grove does not benefit from planned PMAs is inaccurate. The Harvest Water and regional conjunctive use programs collectively are modeled to increase the groundwater level by around 6-12 feet in the Elk Grove area (technical Appendix 3A, Figure 8) compared to projected groundwater conditions without PMAs.
35	Sheldon Community Association Greater Sheldon Road Estates Homeowners Association	William Myers Shirley Peters	7/21/2021	Appendix 3-A			Issue 3: Well monitoring The large cluster of domestic wells and variety of conditions in the Elk Grove rural residential area suggest a need for denser well monitoring than is currently being considered for the subbasin as a whole. It is generally agreed between our associations and the technical working group advising the draft GSP that such enhanced monitoring will be useful, and that it must be conducted through organized community effort in communication with SCGA and perhaps whatever team is working across the subbasin. Because of the specificity of our area of interest---the designated rural residential area established within the city limits of Elk Grove---we have decided to organize under our auspices an independent community well monitoring project within and limited to the Elk Grove rural residential area, of course maintaining communication and cooperation with SCGA and related technical staff as appropriate.	We cannot agree more with the reviewer that local-scale well monitoring is needed, and in fact the GSP supports an even more dense monitoring effort through a volunteer monitoring network (compared to the RMP network) and coordination with a well advisory committee that can relate this information to the GSAs (Section 4.7.1).
36	Sheldon Community Association Greater Sheldon Road Estates Homeowners Association	William Myers Shirley Peters	7/21/2021	Appendix 3-A			Issue 4: Well protection program We request that any GSP adopted by SCGA and submitted for approval to DWR include the guarantee of a well protection program that deepens or replaces free of cost to owners all domestic wells within the Elk Grove rural residential area in which groundwater levels are judged in danger of sinking to levels less than 30 feet above the bottom of the existing well. Since at the time of this writing all known domestic wells in this area are functioning adequately with proper groundwater access, and since it is unlikely that the net water use of domestic well owners as a group surpasses the total rainfall they typically receive on their Ag Res acreage in a season, and since future conditions of groundwater availability and quality are likely to reflect management policies, practices and decisions taken by SCGA, that agency should from the date its GSP enters into force be responsible for maintaining full access of each and every Elk Grove rural residential area well to a sufficient groundwater supply. Well owners are responsible for maintaining well structure and equipment in good repair.	Precipitation as a benchmark for de minimis extraction is ill advised: groundwater inputs are not - as the reviewer suggests - controlled directly by precipitation, but rather, net deep percolation from imported and diverted surface water and runoff, and subsurface interflow. The metric that this GSP adopts quantifies the proportion of wells impacted (5%) after which significant and unreasonable impacts are identified, with no restriction on using the well rehabilitation fund (Section 4.7.1) prior to the identification of such results.
37	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/10/2021	Appendix 1D	69-71		Provide a map of tribal lands in the subbasin. The GSP states (p. 2-10): "The only tribal land that falls within the SASb is located south of Elk Grove near the intersection of Kammerer Road and Hwy 99." However no map, acreage, or population is provided.	Although we do not provide maps, acreage, or population counts, tribal governments and entities were contacted during engagement and outreach (detailed in Appendix 1D) and are involved in ongoing communication and outreach. Tribal groups involved in ongoing C&E include: Wilton Rancheria, Buena Vista Rancheria Mewuk Indians, Lone Band of Miwok Indians, Nashville Enterprise Miwok-Maidu-Nishinam Tribes, Shingle Springs Band of Miwok Indians, Tsi Akim Maidu, United Auburn Indian Community of the Auburn Rancheria, Colfax-Todds Valley Consolidated Tribe, Yocha Dehe Wintun Nation.

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38	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/11/2021				Include a map showing domestic well locations and average well depth across the subbasin.	These are present in Technical Appendix 3C (Figures 10, 13, 14).
39	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/12/2021				Provide the population of each identified DAC and include details on the population dependent on groundwater for their domestic water use.	Although we do not provide population counts of DACs, DAC groups were contacted during engagement and outreach (detailed in Appendix 1D) and are involved in ongoing communication and outreach. DAC-representative groups involved in ongoing C&E include: Environmental Justice Coalition for Water, Florin Census-Designated Place (CDP) DAC, Lemon Hill CDP DAC, Parkway CDP DAC, Fruitridge Pocket CDP DAC, Freeport CDP DAC. The GSP comprehensively evaluates impacts to domestic wells - which may be used by DACs - and finds them to be minimal (Appendix 3A).
40	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/13/2021	Figure 2.3-46 and throughout Section 3			While the GSP clearly identifies data gaps and their locations, we recommend that the GSP considers any segments with data gaps as <i>potential</i> ISWs and clearly marks them as such on maps provided in the GSP.	No action is taken.
41	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/14/2021				The GSP states that a complete list of special status species is presented in Appendix E of the GSP, but this was not included in the public review draft. We recommend that the GSP includes a clear description of the fauna (e.g., birds, fish, amphibians) and flora (e.g., plants) that are dependent on GDEs within the GDE section of the GSP (see Attachment C of this letter for a list of freshwater species located in the South American subbasin). Also note any threatened or endangered species.	This will be included on the website ASAP and we will coordinate with the Freshwater Trust to see to this.
42	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/15/2021				Refer to Attachment B for more information on TNC's plant rooting depth database. Deeper thresholds are necessary for plants that have reported maximum root depths that exceed the averaged 30 feet threshold, such as valley oak (<i>Quercus lobata</i>). We recommend that the reported max rooting depth for these deeper-rooted plants be used. For example, a depth-to-groundwater threshold of 80 feet should be used instead of the 30 feet threshold, when verifying whether valley oak polygons from the NC Dataset are connected to groundwater.	The consultant team has reviewed the study in question (Lewis and Burgy, 1964) and does not find merit in the results. The study concerns an isotope-tracer study in a fractured rock aquifer in hilly topography using a small sample (n = 15) of trees. These results are highly specific to geology (i.e., isotope transport in fractured rock and alluvium are not at all comparable), and hydraulics (i.e., topographic driven flow patterns in mountainous regions are much different than those in relatively flat valley floors). Moreover, other literature reviewed by TNC suggest rooting depths of around 30 feet. The scientific de-merits outlined above give cause to not consider an 80 foot rooting depth parameter, and hence, we maintain the GDE study carried out the Freshwater Trust for the SASb (see technical Memo 3B (groundwater dependent ecosystems)).
43	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/16/2021	Appendix 1D			Describe efforts to engage with stakeholders during the GSP <i>implementation</i> phase in the Stakeholder Communication and Engagement Plan. Refer to Attachment B for specific recommendations on how to actively engage stakeholders during all phases of the GSP process.	The GSAs are in the process of developing an implementation MOU that includes public engagement provisions. The GSAs will follow DWR guidance in stakeholder engagement during implementation (i.e., public notices and meetings before amending a GSP or prior to imposing or increasing a fee, and ongoing efforts to encourage active involvement).

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44	The Nature Conservancy	Ngodoo Atume	8/17/2021	Appendix 1D			Describe efforts to consult and engage with tribes within the subbasin. Refer to the DWR guidance entitled Engagement with Tribal Governments for specifics on how to consult with tribes.	We received a list of potentially interested tribes after making a direct request to the Native American Heritage Commission. Contact was made with all of the listed tribes and those that indicated interest were added to the subbasin outreach lists. However, we will maintain ongoing communication with tribes following DWR guidance in stakeholder engagement during implementation.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
45	The Nature Conservancy	Ngodoo Atume	8/18/2021	Section 3			Describe direct and indirect impacts on DACs and tribes when defining undesirable results for chronic lowering of groundwater levels.	Undesirable results are defined with respect to domestic, industrial, agricultural, municipal, and environmental users. DACs are already considered by inclusion in these user groups (particularly domestic users).
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
46	The Nature Conservancy	Ngodoo Atume	8/19/2021	Section 3			Evaluate the cumulative or indirect impacts of proposed minimum thresholds on DACs and tribes.	Analysis of reaching 100% of MTs at all RMPs suggest the avoidance of significant and undesirable results to domestic wells. Thus impacts to all user groups - which include DACs - are already considered.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
47	The Nature Conservancy	Ngodoo Atume	8/20/2021	Section 3			Describe direct and indirect impacts on DACs and tribes when defining undesirable results for degraded water quality. For specific guidance on how to consider domestic water users, refer to "Guide to Protecting Water Quality Under the Sustainable Groundwater Management Act."	Undesirable results are defined with respect to domestic, industrial, agricultural, municipal, and environmental users. DACs are already considered by inclusion in these user groups (particularly domestic users).
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
48	The Nature Conservancy	Ngodoo Atume	8/21/2021	Section 3			Evaluate the cumulative or indirect impacts of proposed minimum thresholds on DACs and tribes.	Groundwater quality MTs suggest the avoidance of significant and undesirable results for all users. Thus impacts to all user groups - which include DACs - are already considered.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
49	The Nature Conservancy	Ngodoo Atume	8/22/2021	Sections 2 and 3			Section 2.3.4 (Groundwater quality) discusses TDS, however Section 3.3.3 (Maximum threshold for degraded groundwater quality) discusses specific conductivity. Choose one measurement to describe salinity and use it consistently throughout the GSP.	The groundwater quality section (Section 2.3.4) uses analysis of Total Dissolved Solids (TDS), as opposed to specific conductivity, to evaluate salinity levels in the Subbasin as this data is historically abundant for the subbasin. Section 3.3.3 (Maximum threshold for degraded groundwater quality) discusses specific conductivity, as opposed to TDS, for the reason that specific conductivity can be measured with an in-situ probe, while TDS requires laboratory results. This ease of measurement will enable easier collection of salinity data for the subbasin moving forward. We understand that disconnect arises with use of the different methods, but feel that the historic analysis available through TDS data, and the future ease of measurements available through probe measurements of specific conductivity, outweigh any potential disconnect.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						

Comment No.	Commenting Organization	Comment By	Date of Comment	Section/ Appendix #	PDF Page Number	PDF Line Number or Figure Number	Comment	Response to Comment
50	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/23/2021	Section 3			The plan only sets minimum thresholds and measurable objectives for nitrates and specific conductivity. The GSP should set SMC for the additional COCs in the subbasin (arsenic, iron, and manganese) and ensure they align with drinking water standards.	Analysis of the available data for arsenic, iron, and manganese does show that exceedances of these constituents occur throughout the Subbasin. Arsenic is different from iron and manganese for the reason that there are public health risks associated with elevated arsenic concentrations, as opposed to the aesthetic considerations that arise due to elevated concentrations of iron and manganese. Further analysis of elevated concentrations of these constituents reveals that exceedances of the Maximum Contaminant Level (MCL), and Secondary Maximum Contaminant Levels (SMCLs) occur within regions that are served water by Municipal Community Water Systems (this analysis will be presented in an upcoming draft). The monitoring and treatment of these constituents should be sufficient to protect the beneficial users of groundwater. As part of the updated GSP Draft, it is not proposed that SMC be set for these constituents, but instead proposed that the three constituents be included in the two monitoring networks proposed by the GSP (the GSP Water Quality Monitoring Network, and the Community Monitoring Effort). This monitoring data will then be evaluated, and if deemed necessary, SMC will be set in the next GSP update in 2027.
51	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/24/2021	Section 3			When defining undesirable results for chronic lowering of groundwater levels and depletions of interconnected surface waters, provide specifics on what biological responses (e.g., extent of habitat, growth, recruitment rates) would best characterize a significant and unreasonable impact to GDEs. Undesirable results to environmental users occur when 'significant and unreasonable' effects on beneficial users are caused by groundwater conditions in the subbasin. Thus, potential impacts on environmental beneficial uses and users need to be considered when defining undesirable results9 in the subbasin. Defining undesirable results is the crucial first step before the minimum thresholds can be determined.	See Technical Appendix 3B and Section 3's Table 3-2 (The Freshwater Trust, 2020). GDE area and NDVI declining below historical observed levels are used as quantitative metrics to define when significant and unreasonable impacts occur.
52	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/25/2021	Section 2			Provide more information regarding the selection of the American River Basin Study and the methods through which climate change is incorporated, since this is a different method than the use of climate change factors suggested by DWR.	This rationale has been clarified and improved in the text.
53	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/26/2021	Section 2			Integrate climate change, including extremely wet and dry scenarios, into all elements of the projected water budget to form the basis for development of sustainable management criteria and projects and management actions.	This change is not taken, but the rationale for selecting the central tendency has been made more clear.
54	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/27/2021	Section 2			Calculate sustainable yield based on the projected water budget with climate change incorporated.	The sustainable yield estimate utilizes the climate change scenarios that were analyzed for the GSP, along with the other modeling scenarios. The data does not indicate that climate change will significantly change the basin sustainable yield.
55	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/28/2021	Section 2			Incorporate climate change scenarios into projects and management actions.	We agree this is important, and evaluate a scenario that includes both climate change and PMAs.

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56	The Nature Conservancy	Ngodoo Atume	8/29/2021	Section 3			Provide maps that overlay monitoring well locations with the locations of DACs, domestic wells, and tribal areas to clearly identify potentially impacted areas. Ensure that existing and proposed representative monitoring sites adequately cover DAC, domestic well, and tribal portions of the subbasin.	We provide both maps of monitoring well locations (Section 3.3.1.3) and DACs (Appendix 1D, page 69). Analysis of reaching 100% of MTs at all RMPs suggest the avoidance of significant and undesirable results to domestic wells. Thus impacts to all user groups - which include DACs - are already considered.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
57	The Nature Conservancy	Ngodoo Atume	8/30/2021	Section 3			Provide specific steps to fill data gaps relating to representative monitoring sites that lack historical data or well screen information for wells on private lands.	A management action to fill the described data gaps has been provided in Section 4 and a budgetary item has been provided in Section 5.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
58	The Nature Conservancy	Ngodoo Atume	8/31/2021	Section 3			Determine what ecological monitoring can be used to assess the potential for significant and unreasonable impacts to GDEs or ISWs due to groundwater conditions in the subbasin. The GSP (Appendix 3-B) describes GDE analyses using NDVI. Describe more fully if NDVI will be used to assess impacts to GDEs during the GSP implementation phase.	Groundwater level monitoring and NDVI monitoring will occur throughout the implementation period.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
59	The Nature Conservancy	Ngodoo Atume	9/1/2021	Section 4			For DACs, include a discussion of whether potential impacts to water quality from projects and management actions could occur. For example, groundwater recharge projects can have potential negative impacts to water quality which could cause undesirable results to drinking water beneficial users. Ensure that appropriate monitoring and mitigation aspects are included in the project development plans for recharge projects. Refer to Appendix B for drinking water well impact mitigation guidance.	The project proponents for each project included in the GSP will be responsible for monitoring water quality effects of their projects and for mitigating any potential impacts. These aspects will be addressed as the projects are implemented.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
60	The Nature Conservancy	Ngodoo Atume	9/2/2021	Section 4			Develop management actions that incorporate climate and water delivery uncertainties to address future water demand and prevent future undesirable results.	Currently planned PMA substantially improve groundwater elevations (Appendix 3A, Figure 8) and avoid undesirable results. PMA also include regional conjunctive use, which incorporate climate and water delivery uncertainties.
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						
61	The Nature Conservancy	Ngodoo Atume	8/11/2021				Include a map showing domestic well locations and average well depth across the subbasin.	These are present in Technical Appendix 3C (Figures 10, 13, 14).
	Audubon California	J. Pablo Ortiz-Partida, Ph.D.						
	Local Government Commission	Samantha Arthur						
	Union of Concerned Scientists	Danielle V. Dolan						
	Clean Water Action	EJ Remson Melissa M. Rohde						

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62	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/14/2021				The GSP states that a complete list of special status species is presented in Appendix E of the GSP, but this was not included in the public review draft. We recommend that the GSP includes a clear description of the fauna (e.g., birds, fish, amphibians) and flora (e.g., plants) that are dependent on GDEs within the GDE section of the GSP (see Attachment C of this letter for a list of freshwater species located in the South American subbasin). Also note any threatened or endangered species.	This will be included on the website ASAP and we will coordinate with the Freshwater Trust to see to this.
63	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/15/2021				Refer to Attachment B for more information on TNC's plant rooting depth database. Deeper thresholds are necessary for plants that have reported maximum root depths that exceed the averaged 30 feet threshold, such as valley oak (<i>Quercus lobata</i>). We recommend that the reported max rooting depth for these deeper-rooted plants be used. For example, a depth-to-groundwater threshold of 80 feet should be used instead of the 30 feet threshold, when verifying whether valley oak polygons from the NC Dataset are connected to groundwater.	The consultant team has reviewed the study in question (Lewis and Burgy, 1964) and does not find merit in the results. The study concerns an isotope-tracer study in a fractured rock aquifer in hilly topography using a small sample (n = 15) of trees. These results are highly specific to geology (i.e., isotope transport in fractured rock and alluvium are not at all comparable), and hydraulics (i.e., topographic driven flow patterns in mountainous regions are much different than those in relatively flat valley floors). Moreover, other literature reviewed by TNC suggest rooting depths of around 30 feet. The scientific de-merits outlined above give cause to not consider an 80 foot rooting depth parameter, and hence, we maintain the GDE study carried out the Freshwater Trust for the SASb (see technical Memo 3B (groundwater dependent ecosystems)).
64	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/18/2021	Section 3			Describe direct and indirect impacts on DACs and tribes when defining undesirable results for chronic lowering of groundwater levels.	Undesirable results are defined with respect to domestic, industrial, agricultural, municipal, and environmental users. DACs are already considered by inclusion in these user groups (particularly domestic users).
65	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/19/2021	Section 3			Evaluate the cumulative or indirect impacts of proposed minimum thresholds on DACs and tribes.	Analysis of reaching 100% of MTs at all RMPs suggest the avoidance of significant and undesirable results to domestic wells. Thus impacts to all user groups - which include DACs - are already considered.
66	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/20/2021	Section 3			Describe direct and indirect impacts on DACs and tribes when defining undesirable results for degraded water quality. For specific guidance on how to consider domestic water users, refer to "Guide to Protecting Water Quality Under the Sustainable Groundwater Management Act."	Undesirable results are defined with respect to domestic, industrial, agricultural, municipal, and environmental users. DACs are already considered by inclusion in these user groups (particularly domestic users).
67	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/21/2021	Section 3			Evaluate the cumulative or indirect impacts of proposed minimum thresholds on DACs and tribes.	Groundwater quality MTs suggest the avoidance of significant and undesirable results for all users. Thus impacts to all user groups - which include DACs - are already considered.

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68	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/22/2021	Sections 2 and 3			Section 2.3.4 (Groundwater quality) discusses TDS, however Section 3.3.3 (Maximum threshold for degraded groundwater quality) discusses specific conductivity. Choose one measurement to describe salinity and use it consistently throughout the GSP.	The groundwater quality section (Section 2.3.4) uses analysis of Total Dissolved Solids (TDS), as opposed to specific conductivity, to evaluate salinity levels in the Subbasin as this data is historically abundant for the subbasin. Section 3.3.3 (Maximum threshold for degraded groundwater quality) discusses specific conductivity, as opposed to TDS, for the reason that specific conductivity can be measured with an in-situ probe, while TDS requires laboratory results. This ease of measurement will enable easier collection of salinity data for the subbasin moving forward. We understand that disconnect arises with use of the different methods, but feel that the historic analysis available through TDS data, and the future ease of measurements available through probe measurements of specific conductivity, outweigh any potential disconnect.
69	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/23/2021	Section 3			The plan only sets minimum thresholds and measurable objectives for nitrates and specific conductivity. The GSP should set SMC for the additional COCs in the subbasin (arsenic, iron, and manganese) and ensure they align with drinking water standards.	Analysis of the available data for arsenic, iron, and manganese does show that exceedances of these constituents occur throughout the Subbasin. Arsenic is different from iron and manganese for the reason that there are public health risks associated with elevated arsenic concentrations, as opposed to the aesthetic considerations that arise due to elevated concentrations of iron and manganese. Further analysis of elevated concentrations of these constituents reveals that exceedances of the Maximum Contaminant Level (MCL), and Secondary Maximum Contaminant Levels (SMCLs) occur within regions that are served water by Municipal Community Water Systems (this analysis will be presented in an upcoming draft). The monitoring and treatment of these constituents should be sufficient to protect the beneficial users of groundwater. As part of the updated GSP Draft, it is not proposed that SMC be set for these constituents, but instead proposed that the three constituents be included in the two monitoring networks proposed by the GSP (the GSP Water Quality Monitoring Network, and the Community Monitoring Effort). This monitoring data will then be evaluated, and if deemed necessary, SMC will be set in the next GSP update in 2027.
70	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/24/2021	Section 3			When defining undesirable results for chronic lowering of groundwater levels and depletions of interconnected surface waters, provide specifics on what biological responses (e.g., extent of habitat, growth, recruitment rates) would best characterize a significant and unreasonable impact to GDEs. Undesirable results to environmental users occur when 'significant and unreasonable' effects on beneficial users are caused by groundwater conditions in the subbasin. Thus, potential impacts on environmental beneficial uses and users need to be considered when defining undesirable results in the subbasin. Defining undesirable results is the crucial first step before the minimum thresholds can be determined.	See Technical Appendix 3B and Section 3's Table 3-2 (The Freshwater Trust, 2020). GDE area and NDVI declining below historical observed levels are used as quantitative metrics to define when significant and unreasonable impacts occur.
71	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/29/2021	Section 3			Provide maps that overlay monitoring well locations with the locations of DACs, domestic wells, and tribal areas to clearly identify potentially impacted areas. Ensure that existing and proposed representative monitoring sites adequately cover DAC, domestic well, and tribal portions of the subbasin.	We provide both maps of monitoring well locations (Section 3.3.1.3) and DACs (Appendix 1D, page 69). Analysis of reaching 100% of MTs at all RMPs suggest the avoidance of significant and undesirable results to domestic wells. Thus impacts to all user groups - which include DACs - are already considered.
72	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/30/2021	Section 3			Provide specific steps to fill data gaps relating to representative monitoring sites that lack historical data or well screen information for wells on private lands.	A management action to fill the described data gaps has been provided in Section 4 and a budgetary item has been provided in Section 5.
73	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	8/31/2021	Section 3			Determine what ecological monitoring can be used to assess the potential for significant and unreasonable impacts to GDEs or ISWs due to groundwater conditions in the subbasin. The GSP (Appendix 3-B) describes GDE analyses using NDVI. Describe more fully if NDVI will be used to assess impacts to GDEs during the GSP implementation phase.	Groundwater level monitoring and NDVI monitoring will occur throughout the implementation period.
74		Carl Werder	7/5/2021	Section 3	Page 7	Lines 104 and 105	Section 3 – Page 7 of 85, Lines 104 and 105., This sentence should include remediation as a major use of groundwater in the basin since they extract approximately 30,000 AF/yr.	We see the reviewer's perspective, but technically remediated groundwater is either returned to the groundwater system (and hence not consumed), or consumed for one of the already mentioned uses including agricultural, domestic, industrial, and municipal categories. Thus, we keep the text as-is.

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75		Carl Werder	7/5/2021	Section 3	Page 14	Line 363	Page 14 of 85, Line 363., Introduction of a new project called "Harvest Water Project " without any explanation of what this is or maybe I missed it? Need to refer reader to Section 4.4.1 at this location.	This comment is well taken, and the requested cross-reference has been made.
76		Carl Werder	7/5/2021	Section 3	Page 32	Line 791, Table 3-3	Page 32 of 85, Line 791, Table 3-3., The 50th percentile column has figures carried out to the hundredths while all other columns are not. Recommend dropping the decimal point figures in this column.	This comment is also well taken, and the requested rounding has been made.
77		Carl Werder	7/5/2021	Section 3	Page 40	Line 852, Table 3-4	Page 40, Line 852, Table 3-4., It is assumed that the 'Well ID' in this table is DWR's, but again it would be better to add SCGA's numbers to locate the hydrograph that goes with the information in the table.	This comment suggests using the shorter, more easily-readable well IDs associated with SCGA well IDs in the SMC table. Unfortunately, not all DWR state well IDs are also SCGA wells. Hence, we revise the entire ordering to be consistent with a direction (south to north) and a more easily readable scheme ("RMP_number"). See updated Figures 3-4 and 3-5.

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1	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	4.4.1			<p>8. Comment #8 Water Storage Investment Program, Harvest Water Project: The Department’s dedicated Water Storage Investment Program (WSIP) staff have completed additional review of the GSP’s inclusion of the Harvest Water Project as a PMA and provide the following comments for GSA consideration.</p> <p>a. Background: In July 2018, the Sacramento Regional County Sanitation District (Regional San) received a maximum conditional eligibility determination of \$287.5 million from the California Water Commission for the public benefits to be provided by the Harvest Water Program. The California Water Commission is administering funds dedicated by Proposition 1 through the WSIP for public benefits associated with water storage projects. The Department is the administering agency for public ecosystem benefits. As required by regulations, to receive funding, the Department will be contracting with Regional San for administration of Harvest Water’s proposed ecosystem benefits to riparian, wetland, Greater sandhill crane, and vernal pool habitats, as well as increased Cosumnes River flows.</p> <p>More specifically, three of Harvest Water’s proposed public ecosystem benefits are dependent upon increasing groundwater levels: enhancement of riparian habitat, enhancement of wetland habitat, and increased flows in the Cosumnes River to support fall-run Chinook salmon. The implementation of the GSP and the resultant groundwater levels in the subbasin will influence Harvest Water’s ability to increase groundwater levels within their project area to elevations necessary for these public ecosystem benefits. The WSIP contract between the Department and Regional San will constitute a long-term commitment by the Harvest Water Program to administer public ecosystem benefits for the life of the project, estimated during the WSIP application process to be 84 years.</p>	See response to comment No. 3
2	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	4.4.1			<p>b. Issues:</p> <p>i. Groundwater Levels: The GSP states the Harvest Water project is expected to restore “depleted groundwater levels up to 35 feet within 15 years” (page 4-8) but elsewhere states “model simulations indicate groundwater levels will increase upwards of 25 feet in the main recharge zone” (page 3-44). The GSP also notes that the measurable objectives for eight of the representative monitoring points “within or near the Harvest Water recharge project” are increased to reflect “an aspirational goal of increasing groundwater levels in the southern SASb” (page 3-44).</p> <p>ii. Measurement Frequency: The GSP states “All wells will collect at least biannual measurements... Wells in or adjacent to the Harvest Water Recharge management zone will collect monthly measurements” (page 3-57). However, Figure 3-23 (page 3-60) indicates that most of the RMPs near the Harvest Water program area will be monitored biannually (indicated by the green dots) while other areas will be monitored on a 15-minute frequency. This mapping leaves the reader to guess which of these “biannual” RMPs will be monitored on a monthly frequency.</p> <p>iii. Model Assumptions: The GSP describes only limited assumptions utilized to model the Harvest Water project (page 4-21).</p>	See response to comment No. 3
3	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	4.4.1			<p>c. Recommendations:</p> <p>i. Groundwater Levels: The GSP should clarify expected groundwater levels in the Harvest Water program area and their relation to minimum thresholds and measurable objectives. Further, the GSP should explicitly describe how GSP implementation will meet these aspirational goals, which will support Harvest Water’s groundwater elevation targets.</p> <p>ii. Measurement Frequency: For the sake of clarity, the GSP should indicate which RMPs will be monitored more frequently than biannually.</p> <p>iii. Model Assumptions: Due to the importance of this project in the subbasin, the GSP should more thoroughly describe the inputs and assumptions utilized when modeling Harvest Water. Specific topics on which the GSP should elaborate include:</p> <ol style="list-style-type: none"> 1. The locations of in-lieu recharge and winter application recharge. 2. The total volume of water delivered to the subbasin. Specifically, the volume of the in-lieu net recharge (22,500 Acre Feet per Year [AFY]) and the winter application (8,750 AFY) do not correctly sum to the total delivery volume (41,250 AFY). 3. Restrictions to delivery of recycled water imposed by the 2019 Wastewater Change Petition. 4. Project ramp-up timing (i.e., as the project ramps up delivery volumes from startup to full operation). 	<p>i. The description of expected benefits described in Section 4.4 comes from available documentation for the Harvest Water Project, and may differ from the results of modeling simulated for the GSP due to differences in project or baseline assumptions. Refinements of groundwater level benefits for the project will be developed by the Harvest Water program going forward.</p> <p>ii. We apologize for the confusion. The RMP network (Figure 3-23) shows biannual well monitoring within and near Harvest Water; these wells will be monitored biannually as part of the GSP for comparison to SMC and assessment of the avoidance of significant and unreasonable impacts to beneficial users. Importantly, monthly monitoring is not necessary or required for GSP purposes in the South American Subbasin. However, the Harvest Water Program may incorporate additional monitoring wells and may incorporate higher frequency monitoring, to the extent necessary to support the needs of that program. The GSAs have coordinated with Regional San on the Harvest Water Program during GSP development and anticipate future data sharing so that data collected under the Harvest Water Program can be incorporated into analyses for GSP purposes, to the extent relevant.</p> <p>iii. The information provided is sufficient for purposes of describing the model simulation performed for the GSP. For more detailed assumptions regarding potential project parameters and operations, please refer to documentation developed by the Harvest Water program.</p>

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4	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Project and Management Actions (PMA); 4.6 Results of Model Scenarios; starting page 4-20		page 4-20	<p>7. Comment #7 Project and Management Actions (Project and Management Actions (PMA); 4.6 Results of Model Scenarios; starting page 4-20): Projects and management actions that would support demand management in the subbasin lack specificity.</p> <p>a. Issue: The modeled project and management action scenarios presented in the GSP include two demand management scenarios that would involve reductions in both urban and agricultural water use (Table 4-3). Though the GSP provides detailed explanations for the three supply augmentation scenarios included in the PMA modeling, similar specificity is not provided for demand reduction scenarios. The GSP states that 2020 urban water management plans, developed by water supply agencies within the subbasin, are anticipated to lead to increased conservation and encourage demand management scenarios (line 786). However, as water management plan specifics are not provided, it is unclear whether it is reasonable for the GSP to assume that these plans will be able to collectively meet the demand reductions modeled in Scenario 1 and 2, or when and how they would be implemented within the subbasin. PMA Scenario 5, which includes implementation of the Harvest Water, Omochumne-Hartnell Water District (OHWD) Recharge, and Regional Conjunctive Use projects (Table 4-4, Scenario 5) results in an annual net storage change deficit of 100 acre-feet per year with climate change. Should any of the three projects encounter delays or result in less than the projected benefit to groundwater storage volumes, annual subbasin storage deficits could increase significantly. Only six of the 172 potential projects and management actions presented in Appendix 4-A are categorized as demand management; the lack of specificity for how and when these demand reduction actions would be implemented within the subbasin could delay implementation and undermine the subbasin's ability to achieve sustainability goals, particularly if the expected</p>	See response to Comment 23 for Section 3. If, in the future, the need for demand management arises, the GSA may consider demand management as a management action under a revised GSP.
5	California Department of Fish and Wildlife	Kevin Thomas	8/17/2021	Project and Management Actions (PMA); 4.6 Results of Model Scenarios; starting page 4-20		page 4-20	<p>b. Recommendation: The Department recommends detailing when and how demand reduction projects and management actions would be implemented to meet the targets outlined in Scenarios 1 and 2. Add specific measures that would lead to initiation of demand reduction actions should planned projects within the basin fail to provide the necessary benefit to groundwater levels in the subbasin.</p>	Failure to meet SMC and avoid undesirable results could lead to further exploration of demand management and/or implementation of additional recharge projects as an element of the GSP. These triggering mechanisms will be evaluated annually and considered in 5-year updates to the GSP. Best available information does not indicate that such actions will be necessary.
6	Community Member	Suzanne Pecci (916) 893-3139 slpecci@aol.com	8/18/2021	Section 4			<p>Section 4. Projects and Management Action, 4.1 History and Context</p> <p>8. Regional Water Reliability Plan prepared for Regional Water Authority—</p> <p>2019 Neither a discussion of the RWA Reliability Plan nor an overview of the general concepts of water banking were provided in the Public Outreach and Engagement Meetings or workshops conducted by SCGA or OHWD. It is my understanding water banking is an overarching goal in the SASb for both SCGA, and OHWD. There is the potential to participate in a regional water bank in the SASb facilitated by staffing of SCGA by SGA and RWA which is currently under consideration. In my opinion there was sufficient time and opportunity for the public to be informed about water banking in the SASb, but the conversation seem to get stuck on SGMA 101 The public requires an overview of water banking before GSP adoption.</p>	Regional water banking discussions are ongoing among key players in the North American and South American subbasins. A complete public process will occur as those plans become more detailed. Discussions of water banking were described in GSPWG meetings and are described in Section 4 and Appendix 4-A. Text has been added to Section 4 to provide greater clarity regarding the management action in the GSP which calls for action by the GSAs to work with the parties involved in regional water banking discussion to develop a regional water bank and associated accounting system. This measure was widely supported by GSPWG members and public participants in public meetings.
7	Community Member	Suzanne Pecci (916) 893-3139 slpecci@aol.com	8/18/2021	Section 4.2			<p>4.2 Projects and Managements Actions under SGMA.</p> <p>In my understanding, recycled water projects, recharge projects,conjunctive use and water banking are the basis for achieving sustainability in the SASb. Water quality implications of these innovative new concepts and projects were not appropriately disclosed to the large community of shallow well owners whose wells could potentially be impacted by poor water quality resulting from implementing these projects. Recently, in attempting to compare recent water tests results from our private well to wells locations similar to my ag res parcel, directly adjacent to agriculture, I found there were no monitoring wells in the SASb monitoring network or the GAMA network with which I could compare results. A monitoring network, of shallow wells including water quality monitoring is a data gap in the GSP that needs to be addressed. Existing water monitoring data, including water quality data needs to be readily accessible to owners of shallow wells. GSAs that are participating in groundwater level monitoring and/or water quality monitoring programs through the State Water Board, DWR or any County or State Agency must be required as Public Agencies to be transparent and share their data with the public by making it readily accessible to the public on their websites. An good example is the UC Davis Well Monitoring project in OHWD. Water quality should be as an element of the shallow well monitoring network PMA with wells located in a variety of areas throughout the rural area in the SASb. Shallow monitoring wells should be included in GSP annual reports and the five year update of the GSP as the data is gathered and quantified and made available for inclusion.</p>	Modifications were made to Section 4 to describe the activities associated with a well protection program in greater detail, including additional data collection for groundwater levels and groundwater quality in shallow wells in the SASb. A volunteer monitoring network is described in Section 4 as a vehicle for implementation of such data collection activities.
8	Community Member	Suzanne Pecci (916) 893-3139 slpecci@aol.com	8/18/2021	Section 4.4.1			<p>4.4.1 Harvest Water</p> <p>Harvest Water is an innovative and costly recycled water project, in my opinion, designed for agriculture and environmental interests with targeted outreach to specific participants and potential participants in the Harvest Water program. There is no evidence of significant outreach to the general public by the public agencies involved since 2011 to the present as the design and construction phases begin. An overview of Harvest Water Program by Regional San introduced the project to the General Public in the last few Public Engagement and Outreach Meetings, There are lots of moving parts to the project and the public has not been made aware of the entire scope of the Harvest Water Program and financing for the project.</p>	The Harvest Water project has moved forward over the past decade with broad-based support among State and local agencies and stakeholders. A public engagement program has been conducted for Harvest Water, including development and adoption of a program-level and project-level EIR conforming to CEQA requirements by Sacramento Regional County Sanitation District (Regional San). Responsibility for continued public outreach and engagement rests with Regional San as he implementing agency for Harvest Water.

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9	Community Member	Suzanne Pecci (916) 893-3139 slpecci@aol.com	8/18/2021	Section 4.4.3			Section 4.4.3 Regional Conjunctive Use Program 4.4.3.8 Estimated Cost and Funding Funding of these highly innovative concepts and innovative technologies planned for the SASb carry big price tags for construction, operated and ongoing maintenance. Transparency has been lacking from GSAs planning and developing these projects and more detailed information is required in this GSP for public review and comment. Public/Private Partnerships as potential funding mechanisms for development and operation of many of these projects in the planning stages has not been discussed in Public Outreach and Engagement meetings. It is my opinion Public/private partnerships are required to be addressed as a matter of The Public Trust.	The regional conjunctive use project described in the GSP and modeled using the CoSANA model will be implemented by the individual entities described in Section 4 of the GSP. These entities have performed similar projects over the past several decades and will be responsible for following applicable regulatory requirements, meeting public outreach requirements and acquiring funding for continued implementation of conjunctive use projects in the SASb. GSAs will communicate and coordinate with these water supply agencies, as described in the GSP, but will not bear the direct burden of implementation.
10	Community Member	Suzanne Pecci (916) 893-3139 slpecci@aol.com	8/18/2021	Section 4.4			4.4 Near Term Projects Additional detail and information needs to be provided in the GSP for public review and comment which would include proposed funding sources. For instance the Interconnection between the City of Folsom and Omochumne-Hartnell Water District at the Folsom South Canal Project. The public should be provided more than a few words about this project which a review of public records and LAFCo documents in, my opinion, indicate proposed construction and operation of a direct potable reuse recycled water facility in OHWD. At least those of us in the district should know about this project.	Prior to implementation of specific elements of the regional conjunctive use project, the implementing agencies (in this case, the City of Folsom and OHWD) will need to fulfill all regulatory, CEQA and public notification requirements. Some of these projects are at the concept level where additional detail is unavailable. In general, detailed descriptions of the elements of the regional conjunctive use project are beyond the scope of the GSP.
11	Community Member	Suzanne Pecci (916) 893-3139 slpecci@aol.com	8/18/2021	Section 4.7			Section 4.7 Management Actions 4.7.1 Shallow/vulnerable Well Protection Program There is a large agricultural presence in the SASb dependent on private individual shallow wells as their sole source of drinking water. Through Public Outreach and Engagement SCGA successfully reached a large number of these rural residents who expressed their great interest in having a Shallow Well Protection Program. There have been numerous presentations at Public Engagement Meetings, Agricultural Workshops and at a recent SCGA Board meeting to articulate the many decisions and considerations that have to be addressed in developing a Well Protection plan, including the lack of funding. There has been no decision by the GSAs in the SASb to move forward with a Well protection Plan for the agricultural wells owners. I understand in order to be funded in the GSP, there has to be an identified Project. I suggest this section of the GSP be amended to include: a formal decision by SCGA and the affected GSAs in the SASb supporting development of a Well Protection Plan Framework; a Project framework be developed for inclusion in the current GSP that includes application for grant funding currently available from DWR and a request for technical support and funding from DWR for development of a Pilot Well Protection Plan for the SASb.	As noted by the commenter, significant time and energy has been spent in GSPWG and public meetings to discuss inclusion of a well protection program in the GSP. The result of those discussions is captured in Section 4 of the GSP, where a commitment to implement a management action and the process to develop and a framework for the program is described at a level of detail acceptable to members of the GSPWG.
12	Environmental Council of Sacramento (ECOS)		6/18/2021	Section 4			Section 4 provides complete discussions of the Projects contemplated as part of the GSP. However, we believe that water purveyor and Agriculture demand reduction should be added. The GSPD discusses a 10% demand reduction programs for water purveyors and Agriculture. While time may not be sufficient to redo the analysis to incorporate these programs, they should be described in the GSPD and included in the next GSP five-year update as Group 1 and 2 projects.	See response to Comment No. 69 for Section 3. Demand reduction is anticipated to occur in the future through actions by others, but has not been assumed in Scenarios 4 and 5 described in Section 4. Since demand reduction is planned to occur through the implementation of UWMPs by urban water purveyors in the SASb, the results described in Scenarios 4 and 5 are conservative estimates of future conditions.
13	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	9/1/2021	Section 4			For DACs, include a discussion of whether potential impacts to water quality from projects and management actions could occur. For example, groundwater recharge projects can have potential negative impacts to water quality which could cause undesirable results to drinking water beneficial users. Ensure that appropriate monitoring and mitigation aspects are included in the project development plans for recharge projects. Refer to Appendix B for drinking water well impact mitigation guidance.	The project proponents for each project included in the GSP will be responsible for monitoring water quality effects of their projects and for mitigating any potential impacts. These aspects will be addressed as the projects are implemented.
14	The Nature Conservancy Audubon California Local Government Commission Union of Concerned Scientists Clean Water Action	Ngodoo Atume J. Pablo Ortiz-Partida, Ph.D. Samantha Arthur Danielle V. Dolan EJ Remson Melissa M. Rohde	9/2/2021	Section 4			Develop management actions that incorporate climate and water delivery uncertainties to address future water demand and prevent future undesirable results.	Currently planned PMA substantially improve groundwater elevations (Appendix 3A, Figure 8) and avoid undesirable results. PMA also include regional conjunctive use, which incorporate climate and water delivery uncertainties.
15		Carl Werder	7/5/2021	Section 4	Page 6	Line 64	Section 4 – Page 6 of 44, Line 64., Again the 273,000 AF is a red flag. By using the words, “development of a sustainable yield value of 273,000 AF” makes it sound as though this number was based on some criteria. It was not, it was simply negotiated between parties such as developers and environmental folks. Recommend deleting this part of the sentence.	Information pertaining to the development and utilization of the existing sustainable yield estimate is a matter of record. A new sustainable yield figure has been developed for the SASb based on consideration of the SMC described in Section 3. The basis for this estimate and the methodology used in its derivation is described in Section 2.
16		Carl Werder	7/5/2021	Section 4	Page 6	Lines 66 and 67	Page 6 of 44, Lines 66 and 67., It should also be pointed out that the 2006 Groundwater Management Plan has in its action plans if the criteria is exceeded and in 15 years not once has any of these actions been taken.	As required by SGMA, the GSP for the SASb clearly outlines the SMC and monitoring network that will be implemented to ensure that undesirable results do not occur. The GSP outlines the process that will be used to address problems that may arise in the attainment of SMC at representative monitoring points in the SASb. Past performance in implementing the 2006 GMP is not indicative of future actions taken by GSA under this GSP.

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17		Lynn Wheat Wheat91@yahoo.com	8/18/2021	4.4.1			<p>Will the new urban areas be using recycled water for domestic use? Will this project be adding additional future drinking water for the region? Is this in the conceptual stage? I have presented this question at SCGA meetings and what I heard is that SCGA is not a land use agency. How can there be coordination between land use agencies and SCGA if the GSP is not based on updated General Plans of the cities and counties? How can this be a transparent process when the agencies involved in serving Elk Grove are not coordinating meetings to reach out to the ratepayers in a meaningful understandable way? Ratepayers are Stakeholders and have not been identified as such in the draft GSP. However, ratepayers have been identified as a financial source for the funding of projects.</p>	<p>Section 4.4.1 provides a description of the Harvest Water Project, which is in the design phase. The recycled water will be provided for agricultural uses. Regional San is in the process of fulfilling all permitting requirements for the construction and operation of the Harvest Water. As described in Section 5.1.4, implementation of the GSP includes coordinating activities with other GSAs and other entities such as those with land use jurisdiction, and the GSAs will need to develop governance and communication processes to support these activities.</p>

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1	Community Member	Suzanne Pecci	8/18/2021	Section 5			<p>Section 5 Plan Implementation The governance structure for the 5 GSAs in the SASb has not been successfully negotiated after 6 years of meetings, 2x2s, ad hoc committees, MOUs... At this point in time when the 60 day period of public review is closed the GSP is missing a governance agreement, a funding structure, a framework for management and coordination for shared projects ,as well as funding plans for individual GSAs for public review and comment, Section 5 —Plan Implementation is reliant on these agreements between the 5 GSP. The public requires a public review and comment period on these essential agreements.</p> <p>Finally, a few comments on the August 17, 2021 OHWD Board Meeting Agenda item 7 .Expansion —a public discussion of OHWD possibly pursuing in the coming months an expansion of its GSA boundaries through DWR —annexation of thousands of acres of agricultural land currently in SCGA territory going through the LAFCo process in the next few months, including CEQA, —a transfer of assessments and fees recently levied by SCGA for the area —and the removal of the Ag Director position from the SCGA Board —all being done in conjunction with the review and response to the GSP draft comments,approval and adoption of the current GSP and DWR final plan submittal by the end of January 2022 —and OHWD pursuing these actions at this time seems a distraction and, in my opinion, jeopardizes the SASb GSP process that is at a critical juncture. The discussion of 22,000 - 33,000 acres being added to OHWD, and even the idea of crossing into San Joaquin County adds a whole new dimension to “Local Control.” There was an OHWD comment that ‘this expansion could make us very powerful ‘ leads me to question SGMA’s intent with respect to Local Control. and was the intent really to facilitate power and not to facilitate public</p>	Discussions among the GSAs in the SASb regarding the governance structure and funding contributions for GSP implementation have been ongoing for most of 2021. The MOU developed by the GSAs will be submitted to DWR with the GSP.
2	Environmental Council of Sacramento (ECOS)		6/18/2021	Section 5			Section 5 needs to be strengthened with the additional Projects and Actions we recommend. If the GSP does not include the full list of Projects and Actions that need to be accomplished, then those left off the Plan’s published list will likely not be addressed.	This comment was addressed in response to comments on Section 4, where projects and management actions were thoroughly described.
3	Huhtamaki Foodservice, Inc.	Amy Steinfeld	8/17/2021	Section 2.4.3 Section 5.4 Section 2.1.6			The Draft Plan indicates that three sections are missing: (1) Sustainability Yield Estimate (Section 2.4.3); (2) Funding Sources and Mechanism (Section 5.4); and (3) Interconnected Surface Water Monitoring (Section 2.1.6). The public and stakeholders must have the opportunity to review and comment on these sections prior to approval of the Final Plan by the groundwater sustainability agencies. (Cal. Code Regs., tit 23, § 355.4(b)(10); Plan, App. 1-D, p. 16.) Because these are fundamental sections of the Plan, we request that these sections be posted for review and comment as soon as possible.	The draft Section 2 subsection describing the sustainable yield estimate was posted on the SASb website for public review in September 1, 2021. The draft section was discussed and refined at publicly accessible GSPWG meetings in August and September, 2021. The final GSP includes this publicly vetted subsection. The other sections noted by the commenter are included in the final GSP and will be considered in the public process for GSP approval by each of the GSA Boards.
4		Lynn Wheat Wheat91@yahoo.com	8/18/2021	5.1.6			5.1.6 Projects are group 1, group 2 and group 3. What are the projects under each grouping? Understandably the Projects are further discussed in another area of the document. How about listing the projects in the Executive Summary? Projects in group 3 are supplemental and in a “conceptual stage”. What are the concepts being contemplated? A description of the “conceptual stage” lends transparency to this document. Funding by the individual entities and sponsors should be included.	The breakdown of projects into categories 1, 2 and 3 is described in Section 4 of the final GSP.
5		Lynn Wheat Wheat91@yahoo.com	8/18/2021	5.1.7			5.1.7 Continuation of education, outreach and engagement should and needs to include property owners and ratepayers.	The GSP acknowledges and supports the need for ongoing outreach to property owners and stakeholders after approval of the GSP. A budget estimate is provided for continued outreach by GSAs in Section 5.
6		Lynn Wheat	8/18/2021	5.2.2			5.2.2 Needs to include the costs for each GSA. The GSP should be able to give an estimate of the “unknown” costs for the potential projects or infrastructure need. This needs to be a transparent process with the financial obligations defined. Harvest Water Project is still seeking an additional \$100 million in funding. An area within the Harvest Water Project will be urbanized under Elk Grove City’s general plan and will not remain Agricultural. This needs to be discussed in the GSP as I understand Harvest Water is to bring recycled water to area farmers easing groundwater pumping.	Estimates for costs to be incurred by GSAs in their normal conduct of business and estimates for costs to be shared by the GSAs in implementing the GSP are included in Section 5. Apportionment of these costs to each GSA is being addressed in the GSP implementation MOU being developed by the GSAs. Distribution of individual GSP costs to landowners and groundwater users in each GSA will be determined by each GSA. This information is not available for inclusion in the GSP.