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Appendix 1-A
Comments Received on Sonoma Valley
Groundwater Sustainability Plan

SONOMA VALLEY GSP COMMENTS: EXECUTIVE SUMMARY

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
COMMENTS RECEIVED FROM AUGUST 2021 VERSION			
9/12/2021	Vicki Hill	<p>26 pges is too long. Eliminate eliminating some unnecessary text (for example, the number of times the GSA meets each year). Also, I assume that the text will be formatted so that there aren't large blank spaces.</p> <p>Global comment: It should be "impacts on" instead of "impacts to"</p> <p>P. 1: SGMA mandated that GWE resourources be sustainably managed THROUGH DEVELOPMENT AND IMPLEMENTATION OF A GROUNDWATER SUSTAINABILITY PLAN to ensure that groundwater will be ..." Add text in all caps to text.</p> <p>P. 2 type: "This GSP presents detailed, technical information to build upon the work OF done in the GSP.." delete OF</p> <p>P. 4: The following sentences are not necessary in the ES (level of detail not appropriate): Between June 2017 and Sept 2021, the AC met 37 yimes... "Both the Board and AC continued to meet despite.."</p> <p>Fig ES-3: Need to cite the data source and why are we using 2012 data? There must be more current land use data.</p> <p>Figure 4 references Fig 3-3b geologic units, but there is no such figure in the ES</p> <p>p. 6 hydrogeolgic conceptual model (HCM) for the lay reader it may be odd and consusing to see this reference to the model as a subsection heading but not see any explanation of the model (like how it is used in the pan, etc). Can we just explain the existing setting without referring to the model here? Model is explained elsewhere, right?</p> <p>p. 7 -- type, 'sallow'</p> <p>Fig ES-5 -- Put the dashed blue line in the map key rather than just using text to refer to it.</p> <p>p. 11 the discussion of the GW depression areas should include a reference to a map/figure</p> <p>p. 13, second paragrpah reference to surveys: clarify that these were the wll owner surveys (I assume). Or some other surveys?</p> <p>p. 13: third paragraph typo: "the relatively small amount of land dedicated to hay, grains, berris and row vegetable is projected to grow modestly growth."</p> <p>p. 13, third paragraph: I would changed 'will' in both places of the following sentence to 'expected to' -- irrigated pastures will decline by 65 percent...</p> <p>p. 21, at first reference to montiroing netoworks, insert the word 'well' before monitoring, just to be very clear.</p>	<p>Comment noted. Section shortened.</p> <p>Corrected</p> <p>Revised per suggestion.</p> <p>Corrected</p> <p>Revised per suggestion.</p> <p>Using 2012 data, as it is DWRs most relevant land use data eliminated that figure</p> <p>HCM is a key component of the GSP, so retained reference in Exec Summary.</p> <p>Corrected</p> <p>Figure revised</p> <p>Comment noted.</p> <p>stakeholder surveys; made this change</p> <p>Corrected</p> <p>Revised per suggestion.</p> <p>The monitoring network also includes InSAR and GIS stations, so is larger than just wells.</p>

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		p. 23, list of projects: Why is water conservation limited to rural domestic GW users and not other GW users (commercial, industrial, wineries)? I'm probably missing something but this needs to be explained, if others are exempt. And why wouldn't municipal users be subject to conservation, if some of their water supply comes from groundwater? And why only vineyard irrigation mentioned and not all ag?	This is being adjusted in Section 6 (the projects will include comml/industrial and non-vineyard farmers, but the projects were modeled with rural residents and vineyards). Language has been added to exec summary to clarify. Municipal water users have had access to water conservation programs since 2009, and municipal per capita use has declined by 37%.
9/6/2021	Gregg Carr	<p>-The draft plan does not provide for groundwater sustainability. There are data gaps, uncertainties in groundwater conditions, unknown availability of new water sources, etc that remain to be addressed and resolved. In addition, the plan does not establish a rationale for application of the management actions that will likely be necessary to achieve sustainability over time, particularly in the latter half of the planning period. The Group 2C actions were not modeled in the plans due to the lack of a methodology to predict how effective those actions would be. However, these potential actions are then largely written off as future studies. The plan should be redrafted to clearly state that the plan does not assure sustainability and that policy options will likely be necessary to achieve sustainability. There should then be a commitment to include appropriate policy options as part of a focused effort in the first 5 year period so that they are ready to be applied as soon as necessary.</p> <p>-ES-6: a summary section should be added pertaining to groundwater levels. ES-6: A summary sections should be added pertaining to GWLS</p> <p>-ES-7 and Fig ES-10: on the implementation schedule the group 2A and 2B projects should be moved further ahead</p> <p>-changes in the Exec Summary will be needed to reflect any changes in the body of the plan</p>	<p>The projects simulated with the model (voluntary conservation, ASR, recycled water and stormwater recharge)collectively do eliminate undesirable results, with the exception of 2 years in the middle of simulated 20-year drought (making this more clear in section 6). Based on comments received we have modified Section 6 and 7 to more clearly describe potential benefits from projects and strengthened the description of the planned assessments of the voluntary conservation project and policy options management action. Making clear that these will be initiated at outset of GSP implementation to assess need for mandatory measures and prioritize policy options for the GSA Board consideration within first year of GSP implementation.</p> <p>Comment noted. Added GWLS. Will consider this in section 7.</p> <p>Acknowledged</p>
9/7/2021	Robert Pennington	<p>General comment - I recommend shortening this section where possible. A few suggestions of sections that could be shortened include:</p> <ol style="list-style-type: none"> Discussion of pre-SGMA GMP History related to basin boundary Geology section (paragraph 2 of HCM). Water Budget. Perhaps methods, description of climate scenarios and other details could be reserved for the main body of the report. 	<p>Revised per suggestion.</p> <p>Changed Changed Changed Changed</p>

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		Page 9 - "The deep aquifer system is generally confined to semi-confined and is not physically connected with surface water". It is unclear what is meant by "physically connected". Spatially or hydraulically? Though spatially disconnected, it should be made clear that there is expected to be hydraulic connection between the deep aquifer and shallow aquifer, which therefore results in hydraulic connectivity between the deep aquifer and surface water.	Changed this to spatially connected.
8/26/2021	Fred Allebach	<p>Overall sense: it flows and reads well, figures follow the text for explanation. This is good. This kind of simple clarity will help all readers, the public and DWR staff, to be able to understand quickly.</p> <p>p. 3 "Unfortunately, despite the best efforts of the BAP, groundwater levels continue to decline." -does this mean we have pre-existing URs?</p> <p>P 5 Figure ES-3 very hard to tell the diff between vineyards, irrigated ag and rural residential; suggestion, make the colors and patterns more distinct; many figures have this same issue; somebody with a really good color eye could go over all to make sure each map category is distinct</p> <p>P 7 Suggest to add a geologic formations key, maybe on a duplicate map on the next page</p> <p>p. 10 figure shows the core deep aquifer depletion area locations.... Just sayin'</p> <p>p.11 "Although the deep and shallow aquifer systems are grouped separately, the boundary between the shallow and deep aquifer systems is not a distinct boundary to groundwater flow." -this sentence seems to contradict two paragraphs later where it says "The deep-aquifer system is generally confined to semi-confined and is not physically connected to surface water." Suggest a clearer statement here, maybe say something along the lines of "there is a boundary separating the aquifer systems, but it is not distinct -maybe a general graphic that shows the kind of variety the basin has right up front, juts to key the reader in conceptually</p> <p>p. 12 maybe Baylands salinity is also sourced from being leftover from the dike building era at the turn of the century?</p> <p>p. 13 "Municipal groundwater pumping is projected to range between 150 AFY to 738 AFY (it currently averages about 590 AFY)." -for combined city and VOMWD? Maye just a few sentence breaking it into city and VOMWD? - Since VOMWD uses so much more, it's not fair to lump municipal</p> <p>"a projected sea level rise of 3.5 feet by the end of the projected 50-year model simulation." -if we have this, why no maps showing what that will look like? With storm surge. -See attached map</p> <p>p. 14 if total cumulative storage loss between 2021 and 2070 is expected to be, 21,000 af, yet the basin is now losing 1600 af per year, then the cumulative loss over the 49 years from 2021 - 2070 would be (based on 1600 afy) 78,400 af -is this exec summary saying that the GSP will mitigate 57,400 af of storage loss through the SV GSP? -doesn't the 1600 af loss per year count in the water budget and get subtracted from storage? -for a general reader or DWR, this needs to be cleared up</p>	<p>Comment noted</p> <p>This sentence was removed from the text.</p> <p>Comment noted. Figure revised.</p> <p>Comment noted. Geologic key in Section 3.</p> <p>Comment noted.</p> <p>Text revised</p> <p>Comment noted.</p> <p>This is addressed in Section 2.</p> <p>Comment noted.</p> <p>Current losses (described in ES 3.5 are about 900 AFY). This is projected to change to -300 AFY in the projected period, as shown in Table ES-1. The water budget sections provides much greater detail.</p>

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		<p>p. 15 In light of the above, Chart ES-1 doesn't make sense, or if I can come to the conclusion I did, maybe the info needs to be stated in a diff way so that whatever tripped me up is clearer -</p> <p>"The sustainable yield of the Subbasin is an estimate of the quantity of groundwater that can be pumped on a long-term average annual basis without causing undesirable results. Basinwide pumping within the sustainable yield estimate is neither a measure of, nor proof of, sustainability."</p> <p>-If 5400 af per year is a sustainable yield and the GSP arrives at this number, why is there no figure in the math showing the 1600 af loss per year and how that figures in?</p> <p>-If SMCs are the heart of the GSP, and a UR is an SMC criteria, how can sustainable yield-level pumping not be a measure or proof of sustainability? This smacks of the kind of shell game insurance companies and hospitals play with the cost of a service, entities insist on funny math in order to hide the ball - maybe a point to make here is that sustainable yield is going to be a flex number based on other factors, and as the GSP says here, future project and management actions are being counted on to mitigate the numbers</p> <p>p. 15 "allowing for reasonable and managed growth...". -this means the GSA and GSP are committed to business as usual and increasing supply?</p> <p>-Nada about conserving in the sustainably goal seems to be wishful thinking and against the whole notion of sustainability as more at an S-curve carrying capacity, not enabling more J- curves -increasing supply at all in dry CA, and in an equitable way will be difficult; this seems to me to be a fundamental disconnect in the Plan, reliance in increased supply; this was core message from the GRA conferences, all GSAs rely on more supply, no one wants so to sacrifice and deal with demand reduction -more realistically, as more straws (wells) go in for "growth", the less each will get. DEMAND REDUCTION is not coming through as a salient message in the exec summary; I think something needs to be said on that, esp since voluntary reduction is the first of the project and management actions listed.</p> <p>p. 21 doesn't the ISW UR have something about three years? Is that missing?</p> <p>p. 23-run-on sentence - "While a DWR Technical Support Services grant for 12 new shallow monitoring wells near streams and DWR Proposition 68 grant funding for four new multilevel monitoring wells have helped address some data gaps, the early years of GSP implementation will specifically focus on filling additional data needs to better monitor interconnected surface water, seawater intrusion and specific groundwater levels."</p> <p>just out of curiosity, are the two ASR wells in Group 2A intended for the city and VOMWD, as municipal supply enhancers? If so, good. If so, why not say it up front?</p>	<p>The current loss is -900 AFY and this is projected to decline to -300 AFY. Not sure where 1600 AFY number comes from. Sustainable yield is a different concept than SMCs, as described in Section 3.</p> <p>The GSA is not a land use agency and does not have land use authority. The GSP utilized projected growth from municipalities and a practitioners land use working group. Sections 6 and 7 have been revised to more clearly articulate demand reduction, and this change was made in the Executive Summary.</p> <p>No. Change made.</p> <p>Project locations have not been determined.</p>

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		<p>P 24 I see that if current GW (storage?) loss is earlier stated as 1600 af per year, here it says it is 400 af on a baseline, no projects scenario, and with a projects scenario, the GSA hopes to save 16000 af! -Somehow this all feels overly optimistic, esp when normal use and growth is assumed. - -as a reader with a bit if education on the topic, I come away with “these guys are either really ambitious or they are sugar-coating things” - -this could all be bc the ball is hidden by SGMA rules about storage, GWLs etc; if SGMA forces a hiding of the ball, maybe the GSP could clarify some of that for the lay reader, like there are diff formulae and scales at play for the same basic phenomena</p>	<p>Text revised.</p>
		<p>surface inflows from the Baylands: The GSA is hoping to offset 3.5’ in sea level rise with GSP projects and management actions?</p> <p>-10 years to the new RW pipeline on Napa Rd; are there intended end users already or this is all TBA as property owners along the route find out and put in dibs?</p>	<p>The GSP does not manage for sea level rise. Reductions in pumping will reduce the potential for seawater intrusion.</p> <p>The lead agency, the Sonoma Valley County Sanitation District, will work with property owners.</p>

SONOMA VALLEY GSP COMMENTS: SECTION 1 INTRODUCTION			
DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
COMMENTS RECEIVED OCTOBER 1-31, 2021			
10-31-2021	Coalition including: The Nature Conservancy, Audubon California, Local Govt Commission, Union of Concerned Scientists, Clean Water Action/Clean Water Fund (Coalition)	<p>Stakeholder engagement during GSP development is insufficient. SGMA's requirement for public notice and engagement of stakeholders is not fully met by the description in the Community Engagement Plan (Appendix 1-E). The GSP states that the GSA Advisory Committee includes representatives from the environmental stakeholder community, and that the Advisory Committee will continue to meet during GSP implementation. However, we note the following deficiencies with the overall stakeholder engagement process:</p> <p>The GSP documents opportunities for public involvement and engagement through monthly informational emails, the GSA website, public forums, presentations to stakeholder groups within the subbasin, a rural community engagement program, and GSA Board, Advisory Committee and community meetings. There is no explicit identification of a DAC representative on the Advisory Committee or other outreach targeted to DACs and drinking water users.</p> <p>Other than representation on the Advisory Committee, outreach to environmental stakeholders is described in general terms. The role that the Advisory Committee plays during the GSP implementation process is unclear.</p> <p>RECOMMENDATIONS: 1. In the Community Engagement Plan, describe active and targeted outreach to engage DACs and domestic well owners throughout the GSP development and implementation phases. Refer to Attachment B for specific recommendations on how to actively engage stakeholders during all phases of the GSP process.</p> <p>2. Provide more information on the role of the Advisory Committee during the GSP implementation process.</p> <p>3. Utilize DWR's tribal engagement guidance to comprehensively address all tribes and tribal interests in the subbasin within the GSP.</p>	<p>Specific stakeholder engagement during various phases of GSP development and implementation is described in Sections 1.4.2.</p> <p>Language added describing DAC representation on the Advisory Committee and on specific outreach to drinking water users (rural residential well owners).</p> <p>Language added to Section 1.4 regarding outreach to tribes, environmental and other stakeholders, and in Section 1.4.2.4 regarding the ongoing role of the Advisory Committee.</p> <p>Language added to Section 1.4. The community engagement plan will be updated during the GSP implementation process.</p> <p>Language added.</p> <p>Comment noted. Language added regarding post-GSP tribal engagement.</p>
COMMENTS RECEIVED ON AUGUST 2021 VERSION			
NONE			
COMMENTS RECEIVED ON JANUARY 2021 VERSION			
2/9/2021	Matt Stornetta	No comments	Comment noted
2/3/2021	Jane Whitsett	Overall, this section is a good introduction to the program and the GSP. There were no technical problems or errors noted. Provided comments on punctuation, clarity and tense.	Comment noted. Edits made to grammar, etc.
2/3/2021	Matt Fullner	Good introduction and background information!	Comment noted

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
1/27/2021	Greg Carr	OK	Comment noted
1/16/2021	Vicki Hill	Multiple small edits; overall suggestion to include a summary of GSP document	Made suggested edits.
	Fred Allebach	No comments	Comment noted

SONOMA VALLEY GSP COMMENTS: SECTION 2 PLAN AREA			
DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
COMMENTS RECEIVED OCTOBER 1-31, 2021			
10-31-2021	Coalition	RECOMMENDATIONS: Provide a map of DACs and more information about the population of each identified DAC. 1. Identify the sources of drinking water for DAC members, including an estimate of how many people rely on groundwater (e.g., domestic wells, state small water systems, and public water systems). 2. Include a domestic well density map for the subbasin. 3) Include a map showing domestic well locations and average well depth across the subbasin.	Figure 2-3 modified to show DACs and tribal lands in trust and text was added to Section 2 to describe main sources of drinking water for DACs. Regarding the well density map, there is not a requirement that well density for each use type is prepared. The well density map required by the GSP regulations in included as Figure 2-6a shows density of all known water suppl wells in the Subbasin. Figure 2-6b added to display the approximate known depths of water wells and language added regarding estimated number of domestic wells. Current information regarding specific well types are inadequate to reliably display the densities of all different well types, including domestic wells.
COMMENTS RECEIVED ON AUGUST 2021 VERSION			
9/7/2021	Robert Pennington	Discussion and a map identifying areas where there is low, intermediate and strong evidence for confined deep aquifer conditions would be useful. It would be useful to identify streams that are listed as critical habitat for threatened and endangered aquatic species.	Comment noted. Streams are listed in Section 4.
COMMENTS RECEIVED ON FEBRUARY 2021 VERSION			
3/2/2021	Jane Whitsett	Overall, this section is well written. My comments are as follows: 1. Throughout this section I think "city" in "city of Sonoma" should be with a capital C, i.e. City of Sonoma. 2, Figure 2-1 A space is needed between Water and Resources under "Data Sources: Groundwater Basins - California Department of WaterResources, Bulletin 118". Add "12" to the label for Hwy 12. 3. Figure 2-2 Suggest adding a label identifying Sonoma Creek and Schellville on the figure since these are the locations that define the principal stream and area of tidal influence. 4. Page 4 - Table 2-1 seems to be missing. 5. Page 10 - First bullet lists CIMIS (Figure 2-7c) but I do not see CIMIS on this figure. 6. Suggest adding Class 1, 3 and 4 definitions to this figure. Page 22 - delete space before "Class 1" in the 3rd paragraph. 7. Page 10 paragraph 3 - suggest we define "synoptic" and last paragraph, last bullet suggest we define "theodolite".	Corrected. Corrected. Corrected. Revised figure Corrected. revised figure Added explanation to figure. Made correction. Revised.

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		<p>8. Page 4 2nd paragraph - define NBWD and RCD acronyms.</p> <p>9. Page 20 last paragraph - delete extra period.</p>	<p>Acronyms are defined at first use in GSP. A glossary is provided. Corrected.</p>
3/1/2021	Greg Carr	<p>Consider changing "City" to "Town" for all references to the Town of Sonoma. This is not anything technically necessary...its just that many folks in Sonoma want to be thought of as a town. your choice...maybe ask Joan</p> <p>page 4: At beginning of Section 2.2, modify first sentence to say: "Maps of existing land uses for..."</p> <p>page 4 and later: It appears that the land use maps identify parks and golf courses as agricultural land...is there some way to modify the maps to improve the accuracy of agricultural lands and data?</p> <p>page 6: in two locations (para 1 and para 2) the term "water demands" seems to really mean "water supply" and should be changed</p> <p>page 19: Consider adding to Section 2.6 regarding Land Use Planning for the subbasin that the city and county general plans have a shorter term planning horizon than the GSP and it is therefore necessary to extrapolate land use and water demand beyond these plans. Also that the Association of Bay Area Governments (ABAG) has adopted longer term plans that have been used in that extrapolation.</p> <p>page 21: under "Specific and Area Plans"...drop area from title and first sentence and add at the end of that paragraph that the Springs Specific Plan will be incorporated once it has been adopted</p> <p>page 22: somewhere in these two sections should be some mention of the Permit Sonoma effort to upgrade well permitting requirements for monitoring in light of the grant funds.</p> <p>maps: the graphics are excellent!</p>	<p>Comment noted.</p> <p>Revised.</p> <p>Comment noted. Database doesn't currently allow for this change.</p> <p>Revised.</p> <p>Revised.</p> <p>Revised.</p> <p>Comment noted.</p> <p>Comment noted.</p>
2/28/2021	Fred Allebach	<p>p. 3 Add Buena Vista, Vineburg, and Schellville, as basin eastside and south side locales.</p> <p>p. 4 I suggest explicitly noting that inflows from out-of-basin contribute to GW recharge.</p> <p>p. 4</p> <p>-DWR land use adds up to 100% without classifying any urban land</p> <p>-2.2 first paragraph, conflates commercial/ industrial with "urban"</p> <p>-(technically to ABAG, Sonoma Valley is "urbanized", not urban)</p> <p>p. 5 GW paragraph, I suggest" "municipal well fields within the basin and watershed"</p> <p>p. 6 For recycled water, give a percent number for the "significant portion" that goes to the Cargill salt ponds.</p> <p>p. 8 Public water supply well monitoring does not include arsenic and boron?</p> <p>p. 12 It's interesting to note that in the 10 years of the SVGMP, no notable actions to conserve or replenish GW were taken. If so, they should be noted.</p> <p>p. 17 Who would ASR water be available to? Is it general benefit or to those who pay to have it delivered?</p> <p>p. 20 Housing Elements are updated every eight years, to correspond with eight year RHNA cycles.</p>	<p>Revised.</p> <p>Described in Section 3.</p> <p>Clarified</p> <p>Comment noted.</p> <p>Revised.</p> <p>Revised.</p> <p>Percentage varies. Provided acre feet.</p> <p>Text revised</p> <p>Comment noted.</p> <p>Sections 6 and 7 provided additional information on ASR.</p> <p>Corrected.</p>

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		<p>The note that the county aspires to not exceed GW replenishment rates over time is good! The link to the county GP, WRE is very good!</p> <p>p. 21 I think the current units per year of the city GMO is in the 60s</p>	<p>Acknowledged</p> <p>Checked with City; 65 units annually. Corrected.</p>
		<p>p. 21 The SSP will be supplied with VOMWD's 20-30% GW municipal mix</p> <p>p. 22 Refers to map (Fig 2-9), for the link, note the name of the map "GW Availability Classifications"; the link drops you to a general site where without the map name, you have to fish for the map</p> <p>-the map is from a 1980 study that shows the two depletion areas as in a Class 1 GW area for ministerial permitting. Is Permit Sonoma not beholden to now see these two areas as significant impact areas and make them Class 3 discretionary? That is an outdated, 40 year-old map as the basis for current land use and GW availability. The depletion areas go against the WRE, "to not exceed GW replenishment rates over time." Permit Sonoma needs to their game on this map.</p> <p>Nice touch to put Arroyo Seco on the map!</p> <p>Fig 2-8 The city graphic blots out the Springs urban area; the city boundaries are clear without the red box</p>	<p>Comment noted.</p> <p>Removed link.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Corrected.</p>
3/7/2021	Vicki Hill	<p>Provided multiple grammatical, punctuation and usage edits in Word document. More substantive comments as follows:</p> <p>It would be great to have a breakdown of all land uses and their percentages in a table, for easy reference. I can provide a template, if you need it.</p> <p>Define well-screen or include in glossary</p> <p>Including WQ regulatory programs with groundwater monitoring seems out of place.</p> <p>Re streamflow measurements: Need to state date and clarify – are the measurements ongoing now? Will they be conducted at the final stages of the plan? Present could mean a range of times from time of Draft, or Final.</p> <p>Need to define streamflow gains and losses in glossary or add footnote</p> <p>Add IRWM and Water Supply Strategies Action Plan to definitions</p> <p>Need to add a sentence to briefly explain what ASR is – injection of water, etc. Otherwise, people have no idea. Or add a footnote.</p> <p>Re General Plans and water: I don't think this is a correct reference. It is the Conservation Element, not Land Use Element. I made some edits. I checked the code section and this is what it states:</p> <p>"(3) Upon the next revision of the housing element on or after January 1, 2009, the conservation element shall identify rivers, creeks, streams, flood corridors, riparian habitats, and land that may accommodate floodwater for purposes of groundwater recharge and stormwater management."</p> <p>Under Specific Plans: Mention the SDC Specific Plan that is currently being developed? If you need a blurb, I can provide it.</p> <p>Re well tests: Are these permit requirements and guidelines part of the well ordinance? Please clarify.</p>	<p>Revised.</p> <p>Revised.</p> <p>Revised.</p> <p>Clarified</p> <p>Added to glossary</p> <p>Corrected.</p> <p>Revised.</p> <p>Corrected.</p> <p>Revised.</p> <p>Revised.</p>

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		<p>Refer to County ordinances (if that what they are versus codes)</p> <p>Figure 2-1 –</p> <ul style="list-style-type: none"> · missing Hwy 12 label and other highway labels (there are several blank hwy symbols) · Typo in first data source – missing space between Water and Resources · Typo in second data source – should be Resources (not Resource) <p>Figure 2-3 (Jurisdictional and Protected Areas) –</p>	<p>Revised.</p> <p>Revised.</p> <p>Revised.</p> <p>Revised.</p>
		<ul style="list-style-type: none"> · If you're showing all the protected lands, there are some missing. See Sonoma Land Trust website maps. I'm not sure it is necessary to show every open space conservation, etc. · The Bouverie wildflower preserve is in wrong location – it abuts Hwy 12 next to Glen Oaks Ranch. · I don't think it's necessary to label Kenwood Plaza Park especially since you don't label Maxwell Regional Park or Sonoma City Plaza or any of the other parks in City of Sonoma. · Move the label for Sonoma Valley Regional Park so it is legible · There's a small blue outlined area north of the City of Sonoma that doesn't have the slanted lines through it. Not sure what that is. · The key shows "City Footprints" but they aren't shown on the map (e.g. Sonoma). · Under data sources, there's an extra space in "Water" (Department of Water Resources) · Shouldn't it be Department of Forestry and Fire Protection? <p>Figure 2-4a</p> <ul style="list-style-type: none"> · It is incorrect to label SDC as commercial/industrial. It was an institution and is currently zoned Public Facility. I'm pretty sure that even under the new specific plan being developed for the site it won't be industrial. · Why do ag lands include parks and golf courses? That doesn't seem to make sense. · Under Data Sources, list the date of the land survey (general note – all data sources should have dates) <p>Figure 2-5</p> <ul style="list-style-type: none"> · The key box is cut off on the bottom. <p>Typo in "Agricultural" in Note under data sources</p> <p>Figure 2-6</p> <ul style="list-style-type: none"> · Under Data Sources, the date that the information was accessed should be provided for each data source · Under Data Sources, Water Wells and Well Density – delete "by" <p>Figure 2-7a</p> <ul style="list-style-type: none"> · Subbasin boundary is incomplete · Key is cut off on bottom · The title is "Monitored Wells" but the key says "Monitoring" wells. It seems that it should be "Monitored" since monitoring implies that the wells are just for monitoring purposes, which is not the case. · Data sources – add dates 	<p>Revised</p> <p>Revised.</p> <p>Revised</p> <p>Revised</p> <p>Revised</p> <p>Corrected.</p> <p>Corrected.</p> <p>Corrected.</p> <p>Revised.</p> <p>Comment noted.</p> <p>Data sources moved to references; Section 8.</p> <p>Comment noted.</p> <p>Corrected.</p> <p>Corrected.</p> <p>Corrected.</p> <p>Corrected.</p> <p>Revised.</p> <p>Comment noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		Figure 2-7b <ul style="list-style-type: none"> · There is a dark blue square in middle of Sonoma that is not in the key · Fix label in southern watershed – not sure what is supposed to say · Data sources – add dates Delete large lettering on Napa Side – Calabastas Creek Figure 2-7c	Corrected. Corrected. Comment noted. Corrected.
		<ul style="list-style-type: none"> · Fix border around key · Some of the labels are partially blocked out by white circles · Data sources – add dates Figure 2-8 <ul style="list-style-type: none"> · What is the County land use SPLIT? · Data source dates – city of Sonoma Figure 2-9 <ul style="list-style-type: none"> · Key is cut off · Include Class 1, 2, etc. in key next to descriptor · Fix Class 1 label 	Corrected. Corrected. Comment noted. Revised. Comment noted. Corrected. Revised. Corrected.
COMMENTS ON 2018 COMBINED INTRODUCTION AND PLAN AREA DRAFT SECTIONS			
	Greg Carr	any time that we use the terms "land use mapping" or "land use survey" and the like it would help to distinguish between policy (land use in a general plan or zoning) vs data (identification of existing or past land use on the ground) need to explain what portion of the basin falls within this plan area re water conservation programs: should explain whether these programs are voluntary or mandatory I realize that this is preliminary at this point, but can we reorder the elements at some point so that descriptions of conditions are separated from policies and implementation so that plan interpretations in the future are clear on which is which? Just say "Specific Plans". The area plans that still exist in parts of the basin are old and really have no bearing on land use planning or groundwater issues because they have been superceded by the General Plan. It seems to me that we should state in here that another section of the plan will include not only the info re the hydrologic connection to neighboring basins, but also the identification of any monitoring or other activities that might be needed in the adjacent basins in order to assist in managing gwtr in the SV basin	Comment noted. Revised. Comment noted. Comment noted. Revised. Addressed in Section 5.
	Matt Stornetta	Can specific well information be provided when we discuss "The majority of wells monitored in the program are..."	Addressed in Section 5.

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>Many water quality and surface flow programs have been listed. I would like to see added the San Francisco Bay Regional Water Quality Control Board's, Water Discharge Requirements that only apply to vineyards of 5 ac or more.</p> <p>In referencing the GMP so heavily I think it is worth our time to discuss its relevance and what has and has not changed as well as how it was conducted.</p>	<p>Revised.</p> <p>Comment noted.</p>
		<p>Suggest adding following at the end of section, bottom of page: Sonoma County Winegrowers – promoted 100% sustainability among all Sonoma County vineyards by end of 2019. Some certifying agencies Fish Friendly Farming, California Sustainable Winegrowing and Sustainability in Practice. All programs verifying increased vineyard irrigation efficiencies.</p> <p>Suggest adding more thorough implications of increased marshland restoration in Southern Sonoma Valley.</p>	<p>Revised.</p> <p>Comment noted. This topic is outside the scope of the GSP.</p>
	Vicki Hill	<p>Numerous editorial and grammatical suggestions. Additional substantive comments as follows:</p> <p>Add size of subbasin</p> <p>Add at end of first graf under 2.1, 'The Subbasin is located within the Sonoma Creek watershed and is a subset of the larger watershed.'</p> <p>Make following changes In sentence in middle of third graf on page, "The Kenwood Valley Basin is a very low priority basin that lies immediately to the north and abuts of the Sonoma Valley Subbasin. The Napa-Sonoma Lowlands is currently a very low priority basin located in Napa County that occupies lowland areas immediately northeast of San Pablo Bay...</p> <p>Comment: This paragraph needs some revision. What kind of jurisdiction? Need to clarify. RCD is advisory. Why call out Ag and Open Space District? I don't think of them as having "jurisdiction." What about County PRMD (see comment below)? County Regional Parks? BCDC? BCDC requires permits for all development within 100 feet of the bay shoreline. I don't know if that type of jurisdiction is relevant here.</p> <p>Additionally: use VOMWD, for "county of Sonoma" use "permit Sonoma".</p> <p>For 'state lands' reference: Is any of Jack London state park in basin?</p> <p>Should be noted that the Sonoma Creek watershed begins within Sugarloaf Ridge State Park</p> <p>Comment regarding "13 percent of the watershed": Of watershed or subbasin? Previous 2 sentences refer to subbasin so it seems that there should be info for the subbasin here. If we don't have info for the subbasin, let's make it clear and note that info is not available.</p> <p>Note that BAP was discontinued in graf that starts "In 2017"</p> <p>Check use "subbasin" sted of "basin" at end of graf 1</p> <p>Graf 2, were 3 UWMPs all done in 2015. Should clarify.</p> <p>In second bullet, are projected water demands also based on <u>land uses</u> designated in general plans?</p> <p>First bullet, last graf, suggest deleting the first sentence "Water Master Plans.."</p> <p>Mention advisory County Climate Action Plan? City of Sonoma measures regarding climate action policies?</p>	<p>Revised.</p> <p>Revised.</p> <p>Comment noted.</p> <p>Revised.</p> <p>Revised.</p> <p>Corrected or revised for all comments.</p> <p>Comment noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>2nd graf, after "Petaluma River and the Sonoma Creek watersheds" add "(including portions of the Plan area)." Does this sentence refer to subbasin or larger watershed? " Through the planning process, over 60 projects were identified and submitted by proponents for consideration and inclusion."</p>	Revised.
		<p>General Plan and Related Plan Land Use Categories 2nd graf in section, is "provide growth estimates" Based on buildout of the land use designations in the plans, right? I would add that for clarification. There are numerous other growth projections (ABAG, etc.) that don't always match GP projections. 3rd graf in section, and land use planning agencies will also be needed Add sentence to end of graf that begins "Counties and cities", as follows: <i>Developing and updating general plans involves significant community involvement through workshops, hearings, and public review of draft plans and policies.</i> 3rd graf: The Conservation element of a general plan is typically where water resources are addressed in a general plan, although other water related topics may also be addressed in other elements. The Sonoma Valley Subbasin includes areas covered by the County of Sonoma's general plan and the City of Sonoma's general plan within the City's jurisdictional areas. The entire city of Sonoma is located within the subbasin. Re. well permitting: I would expand/clarify this discussion with information from the Pennington presentation at our last advisory committee meeting. First sentence in 2.9, is Permit Sonoma responsible for administering well permits in both unincorporated & incorporated areas? Should clarify, if Permit Sonoma administers wells in city. Re. well studies: Bennett Valley and Mark West Study areas aren't in plan area, are they?</p>	<p>Corrected.</p> <p>Revised.</p> <p>Revised per Permit Sonoma edits.</p> <p>Revised per Permit Sonoma edits.</p> <p>Revised.</p>

SONOMA VALLEY GSP COMMENTS: SECTION 3 BASIN SETTING

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
COMMENTS RECEIVED OCTOBER 1-31, 2021			
10-31-2021	Coalition	<p>The GSP presents analysis and figures illustrating each line of evidence. However, conclusions for the SW assessment, as appearing on Figure 3-23 (Interconnected Surface Water and Potential Surface Water depletion Representative Monitoring Point Locations) appear to neglect some of the analysis. For Example, Figure 3-20 (Depth to Groundwater Along Stream Reaches, Spring 2015) shows depth to groundwater as 0 feet on stream segments in the south to southeastern portion of the subbasin in the Napa Slough area, but these same reaches are not considered ISW on Figure 3-23. Note the regulations [23 CCR §351(o)] define ISW as “surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted”. “At any point” has both a spatial and temporal component. Even short durations of interconnections of groundwater and surface water can be crucial for surface water flow and supporting environmental users of groundwater and surface water. Appendix 3-D provides further analysis of interconnected surface water based on shallow well data. In this appendix or elsewhere in the GSP, it would be helpful to see the depth to groundwater contours used to create Figure 3-20 (Depth to Groundwater Along Stream Reaches, Spring 2015) and depth to groundwater contours at other time periods as data is available. Using seasonal groundwater elevation data over multiple water year types is an essential component of identifying ISWs. The use of one date does not reflect the temporal (seasonal and interannual) variability inherent in California’s climate.</p> <p>RECOMMENDATIONS: 1. Consider stream reaches with connection for any percentage of time as interconnected. On the map of streams in the subbasin, clearly labeled reaches as interconnected (gaining/losing) or disconnected. Consider any segments with data gaps as potential ISWs and clearly mark them as such on maps provided in the GSP.</p> <p>2. Provide depth-to-groundwater contour maps using the best practices presented in Attachment D, to aid in the determination of ISWs. Specifically, ensure that the first step is contouring groundwater elevations, and then subtracting this layer from land surface elevations from a digital elevation model (DEM) to estimate depth to groundwater contours across the landscape. This will provide accurate contours of depth-to-groundwater along streams and other land surface depressions where GDEs are commonly found.</p>	<p>Stream reaches in the areas identified by the comment (corresponding to the Baylands area) where interpolated depth to groundwater is at or above the streambed bottom have been added as interconnected surface water on Figure 3-23. It is noted that this is an area of very low risk of surface water depletion due to the absence of known groundwater pumping in these areas.</p> <p>Comment noted. The depth to water maps shared with the practitioners work group have been added to Appendix 4-C. This analysis will also continue with additional surface water and groundwater data collection in the future during GSP implementation.</p> <p>One motivation to use the 'multiple-lines-of-evidence' approach was to account for the uncertainty in the available data. This approach allowed us to make stronger inferences from the data. With multiple sources of evidence capable of indicating interconnected surface-water/groundwater, locations and times in which only one line of evidence indicates interconnection and reasonably be removed. This approach reasonably accounts for scientific uncertainty in the data.</p> <p>This procedure was used in mapping depth interconnected surface water. The depth to water maps shared with the practitioners work group have been added to Appendix 4-C.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>3. Use seasonal data over multiple water year types to capture the variability in environmental conditions inherent in California’s climate, when mapping ISWs. We recommend the 10-year pre-SGMA baseline period of 2005 to 2015.</p>	<p>The multiple lines of evidence approach integrates information from different datasets spanning different time periods, including 2015, 2016 through 2018 and 2019.</p>
		<p>4. Reconcile ISW data gaps with specific measures (shallow monitoring wells, stream gauges, and nested/cluster wells) along surface water features in the Monitoring Network section of the GSP.</p> <p>The identification of Groundwater Dependent ecosystems is incomplete. The GSP maps GDEs using the Sonoma County Veg Map, which we agree is the best available data for the subbasin. To identify where the potential GDEs are likely to have connection with groundwater, the rooting depths of common tree species were compared to available depth-to-groundwater data. The GSP states (p. 3-102): “The DTW mapping used available contoured springtime datasets for the shallow aquifer system (from 2015 and 2016) and high-resolution LiDAR data. To address GDE Work Group member concerns that groundwater levels were generally at lower levels in 2015 and 2016 due to dry conditions, minor adjustments in some areas were made to incorporate the shallowest depth-to-water on record for each well based on review of all available data from 2005 to 2020.” However, no further details on the available data from 2005 to 2020 was provided.</p> <p>The GSP states (p. 3-102): “Following guidance from TNC, potential vegetation GDEs were mapped for areas with DTW of 30 feet or less to incorporate the potential rooting depths of oak trees (TNC 2018).” If Valley Oaks exist in the subbasin, we recommend instead that an 80-foot depth-to-groundwater threshold be used when inferring whether Valley Oak polygons in the Veg Map derived potential GDE map are likely reliant on groundwater. This recommendation is based on a recent correction in TNC’s rooting depth database,2 after finding a typo in the max rooting depth units for Valley Oak. This resulted in a specific change in the max rooting depth of Valley Oak from 24 feet to 24 meters (80 feet). For all other phreatophytes, we continue to recommend that a 30-foot depth-to-groundwater threshold be used when inferring whether all other vegetation polygons are likely reliant on groundwater.</p> <p>RECOMMENDATIONS: 1. Discuss available shallow groundwater data. Use depth-to-groundwater data from multiple seasons and water year types (e.g., wet, dry, average, drought) to determine the range of depth to groundwater around Veg Map derived potential GDE polygons. We recommend that a baseline period (10 years from 2005 to 2015) be established to characterize groundwater conditions over multiple water year types. Refer to Attachment D of this letter for best practices for using local groundwater data to verify whether polygons in the Veg Map derived potential GDE map are supported by groundwater in an aquifer.</p>	<p>Data gap areas for Interconnected Surface Water monitoring are depicted on Figure 5-8. Multi-level monitoring wells are proposed in 3 out of the 4 identified data gap areas. Additional stream-adjacent shallow monitoring well sites will be identified during GSP implementation. Maps generated to support the analysis of areas with depth to water shallower than 30 feet using all available data from 2005 to 2020, which were shared with the GDE practitioner work group, have been added to Appendix 4-C.</p> <p>The citation provided in comment refers to Valley Oaks inhabiting "fractured and jointed metamorphic rock". Vegetation inhabiting such geologic conditions are not relevant to the GSP as these conditions are not found within the boundary of the Subbasin. (Lewis DC Burgy RH (1964) The relationship between oak tree roots and groundwater in fractured rock as determined by tritium tracing. J. Geophys. Res. 69(12):2579-2588.) Rooting depths for vegetation GDEs are planned to be further assessed as part of the additional studies described in Section 7.2.4.1. Comment noted. As described above, all available groundwater level data from 2005 to 2020 were used to evaluate areas with depth to water shallower than 30 feet (results added to Appendix 4-C). These areas will continue to be refined during GSP implementation as new monitoring locations are added.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>2. 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-ft threshold, such as Valley Oak (<i>Quercus lobata</i>). We recommend that the reported max rooting depth for these deeper-rooted plants be used if these species are present in the subbasin. For example, a depth-to-groundwater threshold of 80 feet should be used instead of the 30-ft threshold, when verifying whether Valley Oak polygons are connected to groundwater.</p> <p>3. Further discuss data gaps for GDEs, including specific plans and locations for additional shallow monitoring wells.</p> <p>Native vegetation and Managed Wetlands: Native vegetation and managed wetlands are required to be included in the water budget.^{3,4} The integration of native vegetation into the water budget is insufficient. The water budget includes a separate item for evapotranspiration, but combines crop, native vegetation, and riparian Evapotranspiration into one term. The omission of explicit water demands for native vegetation is problematic because key environmental uses of groundwater are not being accounted for as water supply decisions are made using this budget, nor will they likely be considered in project and management actions. Managed wetlands are not mentioned in the GSP, so it is not known whether or not they are present in the subbasin.</p> <p>RECOMMENDATIONS: 1. Quantify and present all water use sector demands in the historical, current, and projected water budgets with individual line items for each water use sector, including native vegetation. 2. State whether or not there are managed wetlands in the subbasin. If there are, ensure that their groundwater demands are included as separate line items in the historical, current, and projected water budgets.</p> <p>RECOMMENDATIONS (Water model and climate change):</p>	<p>The citation provided in comment refers to Valley Oaks inhabiting "fractured and jointed metamorphic rock". Vegetation inhabiting such geologic conditions are not relevant to the GSP as these conditions are not found within the boundary of the Subbasin. (Lewis DC Burgy RH (1964) The relationship between oak tree roots and groundwater in fractured rock as determined by tritium tracing. J. Geophys. Res. 69(12):2579-2588.) Rooting depths for vegetation GDEs are planned to be further assessed as part of the additional studies described in Section 7.2.4.1.</p> <p>Data gap areas for Interconnected Surface Water monitoring are depicted on Figure 5-8. Multi-level monitoring wells are proposed in 3 out of the 4 identified data gap areas. Additional stream-adjacent shallow monitoring well sites will be identified during GSP implementation. Data gaps are also discussed in section 7 of the GSP.</p> <p>The presence of wetlands are shown on Figure 2-3 and described in Section 2. The water budget components of native vegetation and managed wetlands will be assessed in future implementation. However, because these managed wetlands are mostly intertidal wetlands, openwater, or other saline environments (https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=97155&inline), their groundwater use would likely be low to zero.</p> <p>The native vegetation component of the water budget will be incorporated in future updates to the GSP.</p> <p>It is assumed that managed wetlands shown on Figure 2-3 within the Subbasin do not rely on groundwater. However, this is an area of uncertainty that will be evaluated during GSP implementation.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>1. Consider other GCM projections to account for uncertainty beyond median statistics.</p> <p>2. Integrate climate change, including extreme climate scenarios, into all elements of the projected water budget to form the basis for development of sustainable management criteria and projects and management actions.</p> <p>3. Incorporate climate change into surface water flow inputs, including imported water, for the projected water budget.</p> <p>4. Incorporate climate change scenarios into projects and management actions.</p>	<p>The median statistics were generally used to compare various GCM's and their appropriateness for the Sonoma County GSP's. The downscaled, transient GCM output for the Sonoma Valley Subbasin was used for the projected simulation model, not the median statistic. The chosen model includes an unusually dry and hot period near the last 20-years of the simulation period.</p> <p>The chosen model includes an unusually dry and hot period near the last 20-years of the simulation period.</p> <p>This was performed for the GSP. See appendix 3-G, section 3.5, which shows that the Russian River is capable of meeting demands for all climate scenarios.</p> <p>This was performed for the GSP.</p>
COMMENTS RECEIVED ON AUGUST 2021 VERSION			
9/7/2021	Robert Pennington	<p>Discussion and a map identifying areas where there is low, intermediate and strong evidence for confined deep aquifer conditions would be useful.</p> <p>“Interconnected surface waters are defined in the GSP Regulations as “surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted.” A stream segment is interconnected where (and when) the groundwater water table elevation equals or exceeds the streambed elevation.” See strike out above. This statement is inconsistent with the preceding definition interconnected surface water, and inconsistent with text lower down in the same paragraph. If groundwater levels must be at or above the stream, then interconnected-losing streams would not be considered interconnected.</p>	<p>Comment noted, though nearly all deep aquifer appears to be confined especially in deeper portions</p> <p>Does not apply to SVGSP.</p>
9/6/2021	Fred Allebach	<p>Appendix 3B Comments p. 53</p> <p>why not a synopsis of the basin from 1848? Some real context would be fine, use Arthur Dawson’s historical research material. He gave a detailed SVGMP presentation on the development of a ditching system in the valley over time. He knows about the history of the dikes on the Baylands and when they all went in, he knows about wetlands and early, redwood pipe water systems. Then there is the windmill era of shallow GW pumping, water towers... that with the advent of the industrial revolution, of public electricity and gas engines morphed to electric pumps and deeper wells. Then there was hillside ag, silting in of creeks, increased flooding and concentration of floods away from urban areas (towards Schellville) by pavement and channelization.</p>	<p>Comment noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>-shouldn't there be an attempt at a full sketch of basin and valley water use history? This seems like it would be a really nice touch for the GSP, even something super short. When I'm reading the water budget and it's talking about historical conditions, I know the world did not start in 2010 or 2015; 1971-2018 historical records is a paltry measure</p> <p>-suggestion do a sketch to bring the prior history up to the GSA and 2015</p>	<p>See Section 2.3.</p> <p>Comment noted.</p>
		<p>- at least a few paragraphs to sum up basin water history from the start of the Anglo period in 1848, ask Arthur to do it. I covered the outlines just right here</p> <p>-in 1838, Richard Henry Dana looked at California and said, "what an enterprising people could do with this land..." and now we have deep wells, aqueducts, dams, reservoirs, trains, highways, the Yankees came out here and made CA the 5th largest economy in the world, then we used too much timber, fish, overgrazed the range, and now we have to manage groundwater...</p> <p>-look what a liberal arts major can do for the GSP!</p> <p>p. 54</p> <p>"The projected water budget is based on information from the historical budget and includes an assessment of uncertainty." -the GSP rationale, that great past variety (in the 1971-2018 period) will handle future variety, is good. - if we are in period of great climate change, and past norms will not apply, and the new normal is that there is no normal, how can a GSP projected water budget be based on the past? Maybe more of a disclaimer is needed than including an assessment of uncertainty? And that uncertainty even says basically that we didn't have time to run more than one model... so the new abnormal only gets a one-model assessment and the role past conditions takes on an outsized role</p> <p>p64 "Agricultural groundwater pumpage was the biggest stress followed by surface leakage for the historical and current time periods."</p> <p>-it makes sense ag puts the biggest stress bc it is the biggest user, how about a pie diagram of basin users and the percent of GW they use here in the Water Budget section? The graphs show all the data, but alternate series of pie diagrams might be easier to read for the public</p> <p>"Estimated groundwater pumping was relatively flat in the 1970's, increased in the early 1980s with land use changes, flattened out again in the early 1990s, peaked in the mid-1990s to 2005, and has shown a slightly declining trend since."</p> <p>-this is good info, why not mention the reasons for the creation of the aqueduct too?</p> <p>-also, does a <i>slight declining trend since</i> mean that GW levels themselves are declining or use overall is declining?</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>The GSP Regulations specifically require assessment of uncertainty. The subsequent p. 54 sentences explain further so please consider: "The projected water budget estimates the future baseline conditions concerning hydrology, water demand, and surface water supply over a 50-year planning and implementation horizon. It is based on historical trends in hydrologic conditions, used to project forward 50 years, while considering projected climate change, and sea-level rise (if applicable)."</p> <p>Comment noted and will be considered if there are time and resources to address</p> <p>See Section 2.3</p> <p>Use</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>p. 67 here it says, median storage loss 2012-18 is -1,600 AFY, yet above it says there is a declining trend in use?</p> <p>-this -1,600 AFY could be a signal from the 2015 drought, a lot more wells went in, and could indicate that this is the rate the basin is going down now, esp in a new drought, yet previous accounting of current and future losses seemed to take a much rosier forecast, with less losses, quite a bit less than 1,600 AFY; why am I picking up on this? what is the diff scale or criteria the GSP needs to explain more clearly so other readers won't make the same confusion</p>	<p>-1,600 AFY is a declining trend. groundwater use does not equal change in storage. there are other factors such as climate.</p> <p>Comment noted.</p>
		<p>-is it bc storage loss total is diff than GW levels at specific locations?</p> <p>-the GSP is using the 1971-2018 mean of -300 instead of the 2012-2018 median of -1,600?</p> <p>-I later see that the GSP is using the means and not mixing mean and median</p> <p>-why the mean and not the median? When measuring annual income for housing, the median # is used, never the mean, this is bc a few really rich outliers will skew a mean # and drag it up to make it seem that average income is higher than it really is for most people; is using the mean bc for the GSP the mean is a lower # and doesn't look as bad? I'm just concerned for accuracy and that anyone can see what is being measured and why</p> <p>-further thoughts on mean and median: explain to the public why one metric is used and not another, give examples of why for the GSP, the mean is more accurate</p> <p>-I could be tipping my hand at how dumb I am at math here....</p> <p>p. 68 Figure 3-37 show a net GW decreasing discharge to streams that might be cause for concern for the ISW SMC and for GDEs</p> <p>p. 69 "A comparison of the historical water budget and current water budget shows greater stress on the Subbasin in the current period than historically on average. Conditions are drier in the current periods with approximately 10 percent less precipitation. This, along with other consumptive uses in the mountain-front sub-catchment areas, results in approximately 33 percent less recharge to groundwater in the Subbasin."</p> <p>3.4.2 Subbasin Water Supply Reliability</p>	<p>Question is unclear, however, change in groundwater levels causes storage changes. Change in groundwater levels are not homogenous throughout basin.</p> <p>They represent different statistical measures. in this case the mean value is more representative.</p> <p>Correct.</p> <p>A mean value better represents a trend. we are not worried about statistical distribution of the declines (generally) that a median value represents.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>“Based on analysis conducted for Sonoma Water’s 2020 UWMP (Sonoma Water 2021), Sonoma Water has adequate water supply to deliver imported surface water through the 2045 planning horizon analyzed in the 2020 UWMP. The exception are single-dry years, starting after 2025.</p> <p>-how about increased wells as a factor? Some stats from Permit Sonoma on how many wells in since 2014-15? If pumpage increased 16% in the current period, how many new wells are now in the mix from prior to 2014-15?</p> <p>For single-dry years, model simulations predict that storage levels in Lake Sonoma will drop below 100,000 AF prior to July 15th, thus requiring demand curtailments by Sonoma Water customers per SWRCB Decision 1610 (SWRCB 1986) for some portion of the year. In these circumstances, Sonoma Water will work with its customers to reduce demands on the imported surface water. Based on efforts over the last five years during dry conditions, Sonoma Water does not anticipate any difficulty in maintaining an adequate supply of imported surface water during the single-dry year. The magnitude of these single-dry year potential shortfalls is</p> <p>estimated to be about 19 percent of average annual demand by 2045. This condition is accounted for in the baseline projected water budget developed for this GSP by assuming higher levels of groundwater demands from Sonoma Water contractors during dry conditions.”</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p>
		<p>-this is good info to know!</p> <p>p. 70</p> <p>3.4.3 Uncertainties in Water Budget Calculations</p> <p>-as I noted in earlier comments, if the total losses appear to have been reduced rather dramatically from the days of the SVGMP, maybe from a past estimated 38,000 AF total loss, to much less than that now, yet we see here a hedging on uncertainty and that there are a lot of variables and unknowns, and “few WB components are directly measured” it seems possible then that with new data, the total storage loss could go way back up again?</p> <p>-I’m skeptical that the GSA found new input data that definitely reduces the total GW AF loss number, but that in many other respects there is a lack of data; I know people in all walks of life find what they are looking for, and it being a modeler or a hydrogeologist, I just can’t look at the info and say, OK I get it, 38,000 Af loss total was wrong and now whatever the newer lower number is, is accurate</p> <p>p. 72</p> <p>“after review of DWR Climate Change Guidance and recommendations..,”</p> <p>-recommendations by who? earlier in the GSP it notes the AC and GSA Board role, here that is assumed, but logically <i>recommendations</i> with no reference could be by anybody</p>	<p>Comment noted.</p> <p>The total storage loss could go up or down with improved datasets.</p> <p>The GSA did in fact find newly available data that detailed information on well depths (released by DWR after initial model was developed). When this data was incorporated, it resulted in a smaller groundwater storage change. Incorporation of this data should be seen as a model improvement rather than a biased approach you describe.</p> <p>Comment incorporated.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>“two different Representative Concentration Pathways (RCPs), RCP4.5 and RCP8.”</p> <p>-is the current drought something either one if these RCPs predicted? The public and DWR may want to know, and to know how nimble the GSP will be to respond to conditions that turn out to not be predicted by the model?</p> <p>-for example if this drought goes on another year without substantial rains, what if an unpredicted stress test happens right away? it seems to me that SMCs will need to be revised, and therefore climate projections too; the whole model house of cards may come under question; if not, maybe the GSP can go into more detail to address the scenario I bring up, even if just to say, we have a really bad drought covered up front by SMC drought buffers</p> <p>-isn't it true that the model climate scenarios don't have a bad drought up front?</p> <p>-I guess my point is that the GSP and model need to be nimble enough to recalibrate if that is called for: the public be assured that the GSP process will and is capable of <i>seeing the actual</i></p> <p>“each are categorized as a RCP.” <i>an</i> RCP?</p>	<p>That is unknown and not answerable.</p> <p>Comment noted. The GSA has the authority to modify the GSP at anytime, so if basin conditions change significantly the GSP can be updated.</p> <p>"Significant drought" - correct - later in the 50 years, projected conditions are drier and drought cycles.</p> <p>Comment noted. Actually, the metrics that will be relied on are the representative monitoring points, not the model.</p> <p>Comment noted.</p>
		<p>-here we get into a thick acronym forest, suggestion: spell acronyms out as they are used and esp if they are dropped in, even if sometimes it seems redundant; I can pretty much tell Andy wrote this, and it is cool and fun to get in his head and see the world through the eyes of a PhD modeler (like an “ensemble” of potentials), but, the reader is like in first grade for acronyms and for GW concepts; GSP editors need to keep that in mind, and to also not tick off DWR readers by making them look at the acronym list too much</p> <p>p. 73</p> <p>“Exchange between the aquifer and San Pablo Bay is simulated in both the historical and future period as a head-dependent flow using the General Head Boundary (GHB) package”</p> <p>-I get this but maybe some of the GW concepts and interactions here could be fleshed out and explained for the public; the public could then feel, ah OK, I get it</p> <p>p. 75</p> <p>-don't split Table 3-10 between two pages bc the future #s can't be easily compared</p> <p>p. 79</p> <p>“Mean agricultural pumping is projected to increase by 500 AFY, which is primarily due to an increase in crop ET and agricultural water demands. M&I and rural domestic pumping is projected to increase by 300 AFY on average, due to anticipated population growth.”</p> <p>-and so rather than asking users on an unsustainable GW trajectory to go on a diet, the GSP is prescribing to order more truckloads of chips? i.e.. increase supply?</p> <p>p. 81</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted. Actually, the GSP calls for conservation as a first step, and then projects and actions.</p> <p>On the basis of the model and GSP, yes for now. But the basin</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>“The total cumulative storage change between 2021 and 2070 is projected to be -21,000 acre-feet with the selected climate change projections and assumed water demand increases.”</p> <p>-thus, 21,000 AF total (400 AFY) is what PMAs will have to make up, right?</p> <p>-maybe this chapter will have a simple chart that shows total projected losses, and how the whole GSP adds up to addressing those losses with the total PMAs</p> <p>-any budget should have an exec summary itself with an easy chart to get the 30,000’ view</p>	<p>conditions, climate models, and technologies will change and the GSP will be updated in five years and that may present a different picture.</p> <p>With the uncertainties in the model projections, which increase as projections go out further and further to 50 years, the PMAs are not expected to address the 50 year uncertain projections. This is not a simple black and white that we are here now and in 50 years will be there. The PMAs are focused on the first five years and will be revised along with the model in the five year GSP update. Adaptive management will be used to adjust along the way during the first five years to adjust to basin condition and hydrologic changes.</p> <p>Comment noted.</p>
		<p>“The mean annual change in groundwater storage over the future period is -400 AFY. The projected rate of annual groundwater storage loss is slightly higher than during the historical period (300 AFY), but substantially lower than the rate of groundwater storage loss during the relatively dry current period (900 AFY; Table 3-10).”</p> <p>--what I take home from this, is that these AFY losses are projections, and all the graphs are based on a certain flavor prediction; if reality ends up being different to a significant degree, then a new modeling house of cards will need to be constructed</p> <p>-it can maybe be emphasized here somewhere, as a clear disclaimer for the public, that the GSP is reality-based, that the SMCs and actual conditions are what will really be running the show; if things get bad (or better), the GSA will adjust; the question then is, if conditions can vary between bad and good over time, how long does the GSA ride with averages and models before saying, OK, we have a real problem here and we need to recalibrate?</p> <p>-presumably all rides with the SMC criteria, which are goals and aspirations that are set by people’s interests and not by a model; given that the GSA and GSP is predisposed to giving more chips rather than prescribing a diet, I fear that if conditions worsen outside the model parameters, that the GSA will simply lower the SMC bars and say, OK, we can now keep eating the same amount of chips even though the delivery trucks have been cut back, i.e. a race to the bottom</p> <p>Table 3-15</p> <p>it is hard to read a table split between two pages</p>	<p>Not a "house of cards", but a widely accepted and regulated scientific approach required by SGMA. We expect there to be differences in the assumptions made versus metrics and outcomes and are ready to adjust as needed and update the model in a few years as more datasets are collected.</p> <p>Comment noted. The SMCs and RMPs are designed to inform progress and direct changes as conditions may vary over time.</p> <p>Comment noted. This is not correct though, as minimum thresholds are not "goals or aspirations" but regulatory metrics that DWR will be monitoring along with the GSA, so they cannot be easily ignored or changed if exceeded.</p> <p>Comment noted and will be incorporated.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>p. 82. 3.4.4.6</p> <p>-this uncertainty statement seems to say that it would be common, better, more valuable, and more accurate to run more model scenarios, but since we don't have time, we'll just go with one bc climate is not the only variable</p> <p>-this reader wonders, how would possible model futures be different if more options were thrown in? would the current drought have come into focus?</p> <p>"Changes in the projected water budgets compared with the historic and current water budgets reflect assumptions about future population growth, land use, and climate. These assumptions reflect the best information currently available.."</p> <p>-I think realistically these assumptions are not the "best info available" but, particularly for ag stakeholders, rather reflect the aspirations for a business as usual future, that the GSP then caters to with PMAs that increase supply rather than suggest demand reduction overall may be a worthy strategy too</p> <p>-as an aside, Jerry Garcia's doctor said, "who is going to tell Jerry Garci not to eat more hamburgers?"</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p>
		<p>-this gets back to deep primary assumptions about the need for growth in finite systems, that is fundamentally, scientifically unrealistic, and thus, at the end of the day, the GSP ends up being "enabling management criteria", not sustainable, bc SGMA does not require actual sustainability bc of political limitations; SGMA splits the diff between resource conservation and people who can't limit themselves bc they think they need to grow to be healthy; SGMA tries to finesse a middle ground between S-curve carrying capacity and J-curve growth and crash, with the basic cure being tech salvation PMAs of water supply increases</p> <p>pp 82-83</p> <p>"Actual future land use changes, water demand estimates, and potential alternate climate projections will be tracked and evaluated during implementation of the GSP, and revisions and updates to the projected water budget assumptions will be considered for future GSP updates to reduce this uncertainty, as described in Section 7 (Implementation Plans)</p> <p>-good! Maybe I jumped the gun on many of my comments. Maybe put thus statement up front in the intro to this WB section.</p> <p>p. 83</p> <p>"sustainable yield estimate (5400 AFY) is neither a measure of, nor proof of, sustainability."</p> <p>-this has never made sense to me, why even have it if it has no meaning or teeth? The WB has to have totals, but this seems to say to disregard the total, disregard the goal, maybe bc conditions are diff in diff parts of the basin?</p>	<p>Comment noted. SGMA recognizes that groundwater conditions in the state have been created over the last 150 years, that SGMA came into effect in 2015 and also recognizes that there will be socioeconomic impacts to correct groundwater deficits that cannot and should not be cured overnight, and therefore gvies a minimum of 20 years for locals to collaboratively develop reasonable multi-benefit solutions that minimize impacts to local economies, while achieving sustainability.</p> <p>Comment noted.</p> <p>The simple answer is that the SMCs and RMPs drive the process, not the sustainable yield (SY) or model. The basin pumping could be less than the "estimated" SY yet there could still be undesirable results based on monitoring, and that is what the regulators will be assessing on an annual basis based</p>

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		<p>-I guess it means that the diet is the goal, while the actual calories (SMCs) are where the rubber meets the road</p> <p>-this 5400 AFY sustainable yield includes making up for -400 AFY in losses?</p> <p>-the public may want to see, in an easy to read graph how much this sustainable yield is contingent on PMAs, that is to say, sustainability can only be reached in this GSP by supply enhancements?</p>	<p>Correct.</p> <p>Correct.</p> <p>Comment noted.</p>
COMMENTS RECEIVED ON APRIL 2021 VERSION			
5/7/2021	Vicki Hill	<p>Submitted multiple grammatical, usage and punctuation comments in a separate document. Substantive comments include:</p> <p>Re this sentence, wasn't new information developed for water budget? The Basin Setting draws upon previously published studies and reports including the following primary data sources that document the conditions of the Sonoma Valley Subbasin and contributing watershed areas:</p> <p>p. 5 Something is not right here. Do you mean that gravelly and cobbly loams are more prevalent along alluvial fans and hilly areas? Need a comma and some word edits.</p> <p>GENERAL FORMAT COMMENT: USING 5 DIGIT SUBSECTION NUMBERS IS VERY CUMBERSOME. Especially since it appears as the same level heading (same indent and font) as the 4th level heading (4 numbers). Change to a subsection without numbers, as is done in Section 3.1.5.</p> <p>p. 13: It would be helpful to add just a brief explanation that more recent studies (2006) resulted in the 10% number. As it is now, first sentence says 3 to 15 percent, second sentence says 10 percent but there's no explanation for the different numbers.</p>	<p>Revised per suggestion.</p> <p>Revised per suggestion.</p> <p>Revised per suggestion.</p> <p>Revised per suggestion.</p>
		<p>p. 14 Define storativity</p> <p>p. 18 Should define what is meant by "current" – what year?</p> <p>p. 25 re subsidence: Need to clarify that this has occurred in other areas, not Sonoma. Without clarification, it's implied that it's happening here.</p> <p>p. 29: clarify when mean watershed and when mean Subbasin and contributing watershed</p> <p>p. 33: Unclear what this means: Notwithstanding where the precise seawater/freshwater interface exists,</p> <p>p. 35: Clarity 'in these conditions' in following 'In these conditions, the stream is hydraulically connected with the groundwater system.'</p> <p>p. 39: The GDE definition is broader than just critical species. It does not specify that only critical species are considered GDEs. Need to explain why not all aquatic species were evaluated.</p> <p>p. 39: What does 'target' mean in this sentence?: The distribution of target species</p>	<p>Revised per suggestion.</p> <p>Text modified with explanation.</p>
5/3/2021	Jane Whitsett	<p>Section 3 was well organized and generally clearly written. The only part that I found challenging was getting myself oriented on some figures. Most figures list commonly known landmarks and roads, which I found very helpful for determining where I was in Sonoma Valley. However, figures with few or no named landmarks or roads were not as easy to follow in terms on location in Sonoma Valley.</p>	<p>Comments noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
5/10/1931	Norman Gilroy	<p>106 and 110. Usually the word "Range" is used locally when referring to the hills along the sides of the Sonoma Valley - "Mayacamas Range" is usual, as is "Sonoma Mountain Range". The terminology occurs in several publications pertaining to the Sonoma Valley.</p> <p>132. It should be clarified that the Kenwood Valley Groundwater Basin is considered separate from the Sonoma Valley Groundwater Basin, and is not required to file a groundwater plan. That it is separate becomes evident later in the text, but it would be appropriate to make it clear at the outset since the decision to not include it in the Sonoma Valley plan was an early determination by the GSA Board.</p> <p>179 to 181. It should be made clear that this is a footnote, and not part of the Chapter text.</p> <p>192 to 195. A reference would be appropriate here to the connections between the two local faults and the earthquake fault system in the broader San Francisco Bay Area - the Hayward Fault in particular.</p> <p>Note: It would also be appropriate to reference the local areas of geothermal activity in this introduction. It is not by accident that the Agua Caliente and Boyes Hot Springs areas, and Mortons Hot Springs, are named as they are</p> <p>Is geothermal water part of the groundwater system which SGMA requires us to manage, and perhaps even regulate, in the future? If so, should it have its own paragraph (the next reference to the subject does not occur until line 361).</p>	<p>Comments noted. Reviewed figures for possible addition of landmarks and roads as appropriate.</p> <p>Comment incorporated with explanation of Kenwood Basin SGMA priority.</p> <p>Note deleted in subsequent text.</p> <p>Comment incorporated with additional narrative and figure.</p> <p>Comment incorporated.</p> <p>Geothermal waters are described in Section 3.2.6.4. GSAs do not regulate water quality as multiple existing regulatory programs are responsible for WQ - only if a GSA project affects water quality is there GSA responsibility.</p>
		<p>623. It would be appropriate to add a mention of the close proximity of the Eastside Fault to the large area south-east of the City Sonoma where groundwater levels are already as much as 126 feet below sea level (I continue to question whether there could be a connection between these two conditions, and will bring it up as a question in the future, but this comment is made in the hope that at least a mention of the proximity of the two could be included in the introduction to the report).</p> <p>692 to 720. There should be mention here of the need to improve our understanding of the relationship of the fault zones to recharge and discharge in the basin.</p> <p>1217. This section references "upwelling of thermal water" near the Eastside Fault. If water can "upwell" in such circumstance (presumably up from lower strata through breaches that occur in the geologic substructure), can water also "downwell" through the same geologic breaches, and so could that be at least part of the cause of the lowering of groundwater levels in that area? Is it enough for the report to refer only to pumping as the cause of the significantly depressed groundwater level in that area?</p>	<p>Comment noted. The data suggest demand in excess of recharge is the main driver of depletion; insufficient data related to the faults exists to suggest the faults may be causal to depletion.</p> <p>Provided in Sections 3.1.2 and 3.1.8.</p> <p>Unlikely that warm water would go down, although pumping can cause downward vertical gradients. If there were downward vertical gradients, the upwelling and evidence of thermal water quality would be less likely.</p>

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		<p>1345. This section deals with hazardous materials that could contaminate groundwater in the study area, but makes no mention of the mile long hazardous materials (LNG) rail-storage site that has operated south of the 8th Street East/Hwy 121 interjection since 2016. The yard has an estimated capacity in excess of 5 million gallons of LNG at any one time, and it operates without local or State permits. It also has no spill-containment or other features that would prevent contamination of the surrounding marshlands and their underlying groundwater should a leak occur, and seepage there could contribute to the spread of contamination inland that could affect wells that are already in danger from sea water intrusion and the pressures of sea level rise. If the other inland sites that are now subject to mitigation are worthy of mention in this respect, so is this site too.</p> <p>That is the extent of my comments, other than to make the general comment that the use of commas (mostly missing commas) in the draft text needs to be reviewed by an experienced editor before the text is finalized. Good job in general though. Thanks to all who have made this happen. N.</p>	<p>Comment noted - the purpose of the subsection is to identify existing, documented, regulated sources of groundwater contamination, and not the unregulated possible sources of contamination, which is accomplished by water supplier wellhead and source water protection programs.</p> <p>The entire document will receive final editing.</p>
5/2/2021	Jim Bundschu	<p>Please allow me to pound on one of my favorite drums, relatively recent velocity increase of surface water run off into our basin's creek system. This subject, while for whatever reason, is not mentioned in scientific data concerning stream gaining and losing conditions displayed in section 3.2.5.1 (page 36). Briefly, in this section it is noted seepage measurements were taken in 2003 and 2010. Thereafter, beginning in 2014, annually. Is there any data reflecting how much faster the rise and fall stream flow occurs after precipitation? Any more historical data measuring this trend?</p> <p>It seems logical that the longer high water remains in any stream bed, the more time it has to infiltrate and recharge nearby ground water. Also, higher head pressure resulting from higher stream water level, might be assumed to push more stream water to nearby ground water.</p> <p>I belabor this possibility because vineyard land provides a sink for rain water through soil percolation, thereby slowing rain water run off's velocity.</p> <p>On the other hand urban and suburban surfaces inhibit soil percolation and cause most of the increased velocity.</p> <p>The above observations and occurrences play but a small role in our ground water challenge, but when it comes time to finance solutions to our Basin's GW problem, all stakeholders need to contribute.</p>	<p>There is not data to support the statement.</p> <p>Comment noted. Stream gages are the only data collected that can capture this phenomenon.</p> <p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p>
5/6/2021		<p>The following observation regarding Sec 3 content is made with the intent of helping the CDWR, and others, recognize that with the development of proper projects and strategy, GW can become sustainable in our basin.</p> <p>Section 3.2.5 states the mean annual discharge of Sonoma Creek at the Aqua Caliente gage is 50,241 AF. A related set of data, not included in Section 3, gathered from the discharge monitoring station located further down Sonoma Creek near the Highway 116-121 bridge shows an annual surface water discharge of 40,000 to 90,000 AF annually in most years.</p>	<p>Comment noted</p> <p>Comments noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>This amount of water flows from Sonoma Creek into the San Pablo Bay, which as a result of climate change, is already forecasted to be anywhere from 2 to 5 feet higher. Some of this fresh water outflow could instead be captured and used to help achieve our basin sustainability.</p> <p>This data should to be considered and evaluated when considering projects. Capturing surplus storm water is an evident tool. There is enough water, combining both ground and surface, to reach sustainability if stakeholders and the GSA can agree on projects and management plans to reach the goal.</p>	
5/10/2021	Ken Johnson	<p>251: Re specific yield defined as 'ratio': Ratio of volume of water to what? Per change in head? Need to distinguish from porosity.</p> <p>259: sp between formation and is</p> <p>559-568: (handwritten note) Do we have enough data to plot tertiary(?) or ternary (?) or stiff diagrams to illustrate the distinction between general WQ in shallow and deep systems (refer to section 3.2.4.1 where they are presented</p> <p>708: Consider adding geochemical characterization/distinction, too</p> <p>1007: Missing well information "SV-MW1-455 and XXX" (need 2nd well reference for upward gradient</p> <p>References: There are a number of citations missing including LS. GEI & other data sources. Please comb through document and add full references here.</p>	<p>Comment incorporated - sentence modified.</p> <p>Comment addressed.</p> <p>Please refer to Piper Diagram Figure 16A.</p> <p>Added "geochemical sampling and analyses"</p> <p>Comment incorporated - added information on vertical gradients.</p> <p>Missing references corrected.</p>
5/10/2021	Catilin Cornwall	<p>Fig 3-17a and associated text on page 35: It's just not telling the whole truth to only show the Agua Caliente gage record starting in 2004, when it goes back to 1951. Please either add a figure showing that whole record (i know, there's a gap), or expand the x-axis of Figure 3-17a to start at 1951.</p> <p>Fig. 3-17b: I am not usually very good at remembering numbers, but it sticks in my memory quite clearly that during the 12/31/2005 flood, the Agua Caliente gage got way above 10,000 cfs. Richard created this link to the exact data: 20,000 at 5:45am on 12/31/05: https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fnwis.waterdata.usgs.gov%2Fca%2Fnwis%2Fuv%3Fcb_00060%3Don%26cb_00065%3Don%26format%3Dhtml%26site_no%3D11458500%26period%3D%26begin_date%3D2005-12-30%26end_date%3D2006-01-02&data=04%7C01%7Cann.dubay%40scwa.ca.gov%7Cdbac30a6912a4c91068a08d914413200%7Cc93b7179f57841648fe1c2704c730887%7C0%7C0%7C637563092534564725%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzliLCJBTiI6IjEkaWwiLCJXVCi6Mn0%3D%7C1000&sdata=8CdFJsv0qLg7nUHjzJm1koeMO3y%2F2umqZBm7bU8url%3D&reserved=0</p>	<p>Comment addressed - a figure of the long term Agua Caliente record is included.</p> <p>Comment noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>Fig. 3-20 The legend is incomplete. The legend should include the time of year for the groundwater elevations. More importantly, the text says the groundwater elevations used in this figure are from spring. But I think you should use fall groundwater elevations. The whole issue with interconnected surface water is a water shortage issue that occurs in late summer and fall, so you want to show how far apart the gwtr and streambed elevations are.</p> <p>Fig 3-21 The binning of categories seems arbitrary. This could be interpreted as skewing the results. I haven't been noticing your binning until I looked at this particular figure. Is there a standard method you use to bin data, throughout this report? If so, best to say so. Or say why you binned in a particular way for a particular figure.</p> <p>3-23 and all subsequent figures are missing.</p> <p>Line 142: This is an odd set of "tributaries". Tolay Creek is not in the sub-basin. It isn't a tributary of Sonoma Creek. It drains directly to San Pablo Bay. Graham and Stuart Creeks provide quite a bit more water than some of the more southern creeks.</p> <p>579 and 580: The two depth ranges (200-400 versus 160-350) are presented with almost the same description, so it's confusing how they are different.</p> <p>P. 35: As discussed with Marcus, somewhere in this part of the document I would like to see a figure/graph showing the entire record of baseflow (late summer streamflow levels, maybe avg daily cfs for July, Aug, and Sept) for the Agua Caliente gage. This figure/graph would show whether or not there is a problem for the GSP to solve in terms of historic declining baseflows. I think this is essential context for setting SMCs for interconnected surface water. I have to take a break from reviewing right now, and I'll come back with more comments.</p>	<p>Comment addressed.</p> <p>Comment addressed with modification.</p> <p>Comment addresssed. · The southernmost corner of the basin is aligned with Tolay Creek for 5 miles, from the mouth of Tolay Valley to Tubbs Point. The shoreline of San Pablo Bay is the boundary from Tubbs Point to the outlet of Sonoma Creek. From Sonoma Creek to near Highway 121, the boundary is the Sonoma and Napa county boundary.</p> <p>Comment addressed with text modification.</p> <p>Complete record for Caliente gage added to Section 3.</p>
5/2/2021	Fred Allebach	<p>Line 396: define and locate specifically where "some areas" are (lines 585, 592), maybe refer to a figure, as this will be key to recharge projects</p> <p>Line 421: Possible to give some sense of deep aquifer recharge rates? Or is that too conditional?</p> <p>Line 431 indicates a 50,000 year scale (I see later there is a Figure that shows recharge probability by basin area, that is a good Figure)</p> <p>Line 472: Awkward sentence</p> <p>line 518: I thought deep started at @ 200' and below, unless we are talking 200' of clay aquitards? I guess in some places, 200' of aquitard, yes.</p> <p>p. 12 It's interesting to note that in the 10 years of the SVGMP, no notable actions to conserve or replenish GW were taken. If so, they should be noted.</p>	<p>Comment noted.</p> <p>Comment noted - see paragraph beginning on Line 431.</p> <p>Comment noted.</p> <p>Comment noted - text revised.</p> <p>Comment noted - text revised for clarity.</p> <p>Comment noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		Line 631: Deep recharge more likely on Felder, Carriger and Rodgers Creeks? Refer to that here rather than line 651?	Comment noted. Line 631 is focused on deep recharge and 651 on shallow recharge.
		<p>Line 801: It seems with proxy evidence of historical wetlands, that we can assume a “full” aquifer system in 1848</p> <p>Line 829: If “pumping in excess of recharge” is what has caused deep aquifer depletions, and loss of base flow for creeks from the surface aquifer, then can any reference be made to full conditions in 1848, just prior to the advent of the Anglo regime?</p> <p>-there is no direct data for glaciers either, but through proxy evidence, their presence can be accurately inferred</p> <p>-compartmented to full, or even from the 1960s, a case can be made for pre-existing URs, all depends on how the issue is bracketed and framed; a deficit situation can be framed as not that bad, as per Ken Johnson surmising that depletions areas could be reversed.</p> <p>Line 841: Since localized pumping caused the depletions, should those locally who did it pay to mitigate? this for when we get to taxes, oh I mean fees</p> <p>Line 867: Why not have the Figure right in the text like with the Water Budget section? How many in the public are going to toggle back and forth?</p> <p>Line 879: No surmise as to what caused the declines in the text?</p> <p>Line 909: This data can be correlated with ISW data?</p> <p>Line 917: Can the location of these increasing deep aquifer wells be given generally? North part of basin? Are any mixed in with depletion areas?</p> <p>Line 1063: Arsenic water has resulted in the city annexing a trailer park by Sonoma Creek on the west side. There is a string of wells along 8th Street East/ East Side Fault/ Arroyo Seco, where deep aquifer well water is outside federal drinking standards, and has resulted in warnings to small water systems, some shut down in the past. This is perhaps localized, but not just a few wells either. This is to say, for those affected, arsenic and boron are serious issues. (line 1379)</p> <p>-maybe put a note on line 1218 about local impacts to drinking water</p> <p>Line 1135: Do the upper reaches of the altitude gradient in Sonoma Basin qualify as “higher altitude”? It would seem not... Higher altitude would be above 8000’ or 9000’ for altitude sickness.</p> <p>Line 1153: This colder, wetter regime could also be from Pleistocene era recharge, i.e. from 10,000 ya and before.</p> <p>Line 1256: This may be the place to be clear that chloride signatures inland are not “seawater intrusion.”</p> <p>Fig 3-8a, 3-8b very good!</p> <p>Figs 3-13a and b: the trend colors for more than 3’ don’t match, one is red the other brown, they should both be red</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted. Who pays will be addressed in a rate and fee study subsequent to the adoption of the GSP.</p> <p>Commented noted - was this addressed?</p> <p>Comment noted.</p> <p>Comment addressed - text revised.</p> <p>Comment noted.</p> <p>Comment addressed.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>Fig 3-16b there are lots of arsenic and boron wells at the top end of 8th East too, including mine at the corner of 8th Street East and Napa St East</p> <p>ALL COMMENTS BELOW PERTAIN TO WATER BUDGET</p> <p>p. 4, 1. Be sure to clearly define historical right off the bat; actually historical? Or from a proscribed date range?</p> <p>p. 6. Fig 1 The colors are hard to read; make easier to see the sub basin budget area</p> <p>p. 8. GW inflows do not include recycled water return flow and infiltration? This gets counted as imported water as an input?</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Model does not account for leakage from SVC Sanitation District.</p>
		<p>p. 9 ModFlow simulation domain seems to leave out a huge are of the upper Arroyo Seco drainage, where wells from vineyards and wealthy estates intercept a large amount of GW, particularly well clusters associated with foothills homes and hobby vineyards along Lovall Valley Rd</p> <p>p. 10. I suggest a short historical narrative of valley water use:</p> <ul style="list-style-type: none"> -historical conditions; Thomas Harter said it is reasonable to assume all aquifers were full in 1848, at the beginning of the Anglo regime; the GSP should make a best call on what this full volume was, this was before ditching and draining, when historical records show many wetlands, malaria, artesian conditions, plus salmon, elk, grizzly, big valley oak woodlands etc. -the 2015? USGS paper has a number of diff estimates of full volume -IMHO, 1848 full GW volume should be estimated and stated, as a true baseline reference. -historical should also give a synopsis of 1950-60s GW overuse, perhaps a concomitant shift to deeper wells, foothills development, and the advent of the Sonoma Aqueduct, and kick off the real “current” period as time after the aqueduct and during the rise of vineyards, as a transition between the Redwood Empire phase- Depression-WW2-post war econ boom- and the “wine country” phase; get Arthur Dawson to write it up; DWR and the public will enjoy the context. -the current period could be post SGMA, when GW started to be regulated -if “projected” is 50 years in the future, historical should stay 50 in the past too -SGMA is like, basins have been ill for many years, and we will then call peak illness the normal, current baseline, there is something fundamentally unrealistic about it, (the GSP needs to stick to historical as 1971 - 2018) 	<p>Comment noted.</p> <p>Comment addressed in Section 2.</p> <p>Comment noted. SGMA does not require a baseline going back 150 years; SGMA focuses on addressing undesriable results post January 1, 2015, although GSAs can address UR conditions occrujing before January 1, 2015.</p> <p>Comment noted. DWR requires a minimum of 10 years historical, and the main rationale for consideration is that the historical data be reliable and high quality, not tied to 50 years.</p> <p>Comment noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>-I get that GSPs have to be politically feasible, and account for current facts on the ground, which include an overdrawn level of “beneficial use”</p> <p>-I think some of my sentiments above here are what also plays into how ISW and GDEs are getting the short shrift as beneficial uses, it’s like there has to be a willful suspension of known conditions in order to comply with SGMA, and to favor the Big Two, ag and rural residential; it seems with ISW that it is politically feasible to the Board to give environmental use a weak hand, this may not be seen as feasible from an environmental interests standpoint</p> <p>p.14. Mountain front run off; I’d like some clarity as to the exact extent of the area measured for surface and subsurface and GW inflows; where does the model stop geographically? Does it go to the edge of the watershed?</p> <p>-however, given that eastside depletion area is very old GW, it may be that upper Arroyo Seco inflows turn out to not be a factor in eastside deep aquifer depletion</p> <p>-I see this is a significant model limitation on p.15</p> <p>p.15: rural domestic and ag pumpage as a significant data gap: why doesn’t the Farm Process module account for this?</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted. Refer to Figure 1 of Appendix SVIGFM V2</p> <p>Comment noted.</p> <p>Comment noted. FMP does estimate ag pumping</p>
		<p>-in the Model section, there seems to be plenty of estimated well pumpage; does the ag community buy that the Farm Process is accurate?</p> <p>-this gap needs to be addressed in management actions, metering, like with the Atlantic cod fishery, you got to know how many fish people are catching, got to know how much GW ag and RR is pumping</p> <p>-maybe like the IRS, if you don’t report all income and they audit you, they’ll estimate how much they think you made, maybe the Farm Process, plus aerial photos can serve a similar function as metering?</p> <p>p. 20: is this saying that the current period is @ 50% drier than the historical? So that current, or 2015 SGMA baseline is actually quite compromised compared to the historical mean?</p> <p>-case for pre-existing URs? Or can parameter be set to avoid that?</p> <p>p.23: The info is fantastic however it gets to be technical overload in trying to read and get the take home message from all the graphs and charts, maybe take the reader by the hand and lead them to an abstract of the take home points in plain English</p> <p>-the overwhelming technical aspects, numbers, complicated graphs, are going to lose 99% of the public as to what all this means, what the significance of each graph is; some parts get to be like numbers soup, I blank out, it’s too much to take in</p>	<p>There is a wide range in vineyard water use with very little published data from Sonoma County. We have convened workgroups with vineyard managers and they indicated our estimates are reasonable.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Regarding the 50% drier question - not exactly. The noted inflows are different by the noted values. Precipitation does not equal recharge.</p> <p>Climate being drier is not a case for UR s?</p> <p>Comment noted. This will be handled in the Exec Summary</p> <p>Comment noted.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>-the format here does intersperse figures with text, which I suggested for the chapter 3 main text, this flows nicely</p> <p>-I suggest here to leave the text as is for scientific accuracy, but also give a plain English version (where a pro editor deems for clarity) so the public can interpret the figures more easily, this can either be done immediately with each Figure and segment of text, or in an abstract that will tell the public what this all means</p> <p>-I have the feeling sometimes of being turbo encabulated https://www.youtube.com/watch?v=Ac7G7xOG2Ag</p> <p>-possibly the GSA could hire a special editor adept at making complex science points clear in lay terms?</p> <p>-if DWR is the main audience, science literacy and writing style may be less of an issue</p> <p>-maybe an executive summary at the beginning of the GSP, state the context, problems and possible solutions</p> <p>p.26 for example for clarity: current text reads: "On average, the historical period shows a negative change of groundwater in storage with a larger magnitude negative change of groundwater in storage during the current period, which includes the recent drought." 32 words</p> <p>-this could read as: "On average, the historical period (1971-2018) shows a loss of groundwater storage, with a larger loss during the current period (2014-2018), which includes the recent drought." 27 words</p> <p>-also, the "initial storage" here should maybe be noted as the GSP proscribed 1971-2018 historical period; staff know this stuff cold, but the reader can't necessarily be expected to remember fine points and acronyms, so that it helps to restate things for clarity and context</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Technical editor being used.</p> <p>Comment noted.</p> <p>An Exexecutive Summary is planned and required by SGMA.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p>
		<p>p.26 can you give me a quick explanation of how estimates of storage loss went from @ 40,000 af to 14,000 af?</p> <p>-anyone who has been paying attention might want to know the reasons why the estimate of total loss decreased so much?</p> <p>p. 29 1st paragraph, distinguish inflows to surface or deep aquifer systems? What is source is recharging to what system?</p>	<p>The depth of agriculturals wells was revisited. Changing the layers from which the wells pump utilized better available data. this generally caused wells to pump from shallower layers which are more readily capable of inducing recharge, thus limiting groundwater storage decline.</p> <p>Comment noted.</p> <p>All forms of recharge noted are occurring in the shallow aquifer. From there water can move vertically into the deep aquifer. It would be better to address the source questions other places in text.</p>

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		<p>p.31 1.7 This may be a comment for another context; I'm concerned that the GSA Board is getting the idea that if SMCs result in the need for expensive projects and management actions, that instead of acting out the plans that have been carefully considered, that "normal" beneficial use will have pressure to continue at current levels, and the SMC/ UR bar will just be lowered, and that will be called sustainable.</p> <p>p. 33 the summary is reading well..</p> <p>GHG scenarios: -it turns out the RCP 4.5 scenario is right on, as we are getting a drought up front, any thoughts from staff about switching from 8.5 to 4.5? Will there be dissonance with 8.5 bc reality now and the 8.5 forecast are different? The GSP may have less projects and management action pressure up front with modeled scenarios from 8.5, and so then, with a current drought of record, the Board may lean to lowering SMC URs so as to stay consistent with 8.5?</p> <p>-8.5 maybe allows putting off a reckoning until later, or maybe 8.5 has a drought of record up front too?</p> <p>-if the GSP only accounts for pumping effects and does not have to account for climate, i.e. sea level rise and drought, there will be an effect on pumping from these things, and that then becomes a GSA responsibility, for example drought will cause more pumping, since drought will be big now, a thorough breakdown of climate model, drought reality, SGMA etc would be good to do somewhere, at least for the public conservation to have any effect? Is this "normal use" projected to the future?</p> <p>-it seems 8.5 inflows will be about the same or greater, but since the eastside depletion area doesn't recharge naturally on a 50-year scale, i.e. it is very old GW, then the only scenario here with increased ag pumping is for this depletion area to keep going down and down, faster with no conservation</p> <p>-recall one recent GRA take home point: GSAs are more wanting to increase supply and keep up normal use when in reality, demand reduction is written all over the wall in water-uncertain California, with a -400 af per year projected rate of deficit, my summary for SV GW sustainable yield would have red flags up for conservation and reduced use: the more straws, the less per straw</p> <p>p. 46 re: sustainable yield, repeat my concern from p. 31</p> <p>COMMENTS BELOW PERTAIN TO MODEL</p> <p>There is no way I could ever assess the model; I have to have faith it is good.</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted. The SVGSA AC made a recommendation and the Board made a decision and that will not change at this point in the process. A reminder that these are models that are simulations of potential future scenarios, and none will track reality accurately.</p> <p>Comment noted.</p> <p>it is 'normal' projected use in the baseline scenario.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted.</p>
		<p>p. 12 make the colors more distinct, the yellow and green are hard to tell apart</p>	
		<p>p.22: I wonder if there is accounting for mountain front GW storage and volume of surface water runoff from rain, and what rate that is being used compared to replenishment rate? If so, then this would be calibration for volume of output from mountain fronts, and then whatever does not actually come in to the basin as in input, could be attributed to out-of-basin human use?</p> <p>p.28: it's easy to see where all the action is in the basin for pumping, and where the conservation needs to happen</p> <p>p.67: forget to put the green color in?</p>	<p>We considered and attempted to take into account during calibration. There are large datagaps that prohibit direct comparisons and use in such processes however. for model we assume no GW storage in the mtn front.</p> <p>Comment noted.</p> <p>Comment noted.</p>

SONOMA VALLEY GSP COMMENTS: SECTION 4 SUSTAINABLE MANAGEMENT CRITERIA			
DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
COMMENTS RECEIVED OCTOBER 1-31, 2021			
10/31/2021	Community Alliance with Family Farmers	<p>Sustainable Management Criteria. We are concerned that the metric for wells with historical declines then recovery uses 2010-2019, which include drought years when a number of local wells went dry and other significant impacts occurred. Setting these relatively low water levels as a base standard could allow for far greater impacts during future droughts.</p> <p>Regarding Depletion of Interconnected Surface Water – Setting a minimum threshold at 40 percent of representative monitoring point wells during drought years would allow for significant impact to riparian habitat including vegetation, aquatic species and all related ecosystems. Sustainable agriculture depends on healthy, diverse surrounding ecosystems that support populations of beneficial birds, insects and other creatures, and could have a significant impact on the potential loss of recharge opportunities.</p>	<p>Comment not applicable to Sonoma Valley Subbasin.</p> <p>As described in Section 4.10.4.1, these percentages for the number of minimum thresholds exceedances that cause undesirable results were selected based on input from the Interconnected Surface Water Practitioners Work Group (Appendix 4-B). Recognizing that sources of depletion are varied, and likely include lack of precipitation during drought years, placing the different weights on drought and non-drought years helps address concerns expressed by some Work Group and Advisory Committee members by ensuring that during normal/wet years the higher levels of estimated streamflow depletion from 2014-2016 are avoided. Additional details on potential effects of beneficial users related to undesirable results were added to Section 4.10.4.3. These potential effects will be further assessed through the studies and information gathering described in Section 7.2.4.</p>
10/30/2021	Milo Baker Chapter of the California Native Plant Society	<p>These comments were created after reviewing Section 4 of the Draft Groundwater Sustainability Plan (DGSP) for the Santa Rosa Plain Ground Water Subbasin; however, these comments are general enough that they can be applied to all three subbasins in Sonoma County.</p> <p>The DGSP for the Santa Rosa Plain Groundwater Subbasin states that shallow aquifer is between 40 feet and 200 feet and a deep aquifer is 200 feet or more. We understand that it takes millennia for groundwater to percolate into the bedrock and up to centuries for water to percolate into the various formations. The surface flows from rain feed the watercourses. How is the DGWSP proposing to slow and recharge the aquifers and basins along the various creeks that run east to west to the Laguna? The Laguna is currently acting as a large recharge area but many of the creeks in the sub basin have been channelized. Are there any plans to improve our creeks through retention basins, flood plains and increasing canopy cover?</p>	<p>Comment not applicable to Sonoma Valley Subbasin.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		<p>The DGSP identifies various tools for evaluating the groundwater, from remote sensing to stream gauges and weather monitoring instrumentation, but this is monitoring, and the report does not discuss how they will apply this information. We are concerned that this is relying too much on deeper ground water resources and ignoring the shallower resources that are sustaining our native plants and vegetation communities. An additional cross check could be to use tree health, not only along riparian corridors but also in the plains. For example, valley oaks and their regeneration could be used for monitoring sub- surface waters levels. It has been documented that the best growth is attained when water tables are about 33 feet (10 m) below the surface and the trees are inundated every 5 years (Howard 1992). Often associated with seasonal wetlands, this species could be used to show the health of near surface water storage.</p> <p>One of the sustainability indicators of the DGSP (Table 4-1) is depletion of interconnected surface water, but the emphasis on streamflows ignores the seasonal wetlands and seeps that are also direct indicators and can be evaluated and mapped on Google Earth based on size. We are concerned that depletion of water levels below 40 feet will likely change the native vegetation within the Santa Rosa basin, especially wetland endemics that are some of the more rare and endangered plants in the County.</p> <p>The DGSP identifies surface and groundwater budgets and estimates groundwater overdraft but how can that be known if you don't have a baseline. There are two periods identified, historical (1976-2018) and current (2012 – 2018). According to ca.water.usgs.gov drought years in the “historical period” occurred between 1976-1977 (2 year of drought), 1987-1992 (6 years), 2001-2002 (2 year), 2007-2009 (3 years), with normal or above normal rainfall in between years. In the “current year” drought years occurred between 2012-2016 (5 years) with only barely normal rainfall. Since 2000, the longest duration of drought in California lasted 376 weeks (December 27, 2011 – March 5, 2019) (7 years) (ca.water.usgs.gov) and that has been classified as a severe to extreme drought (ncdc.noaa.gov). NOAA also states that the 1980s and 1990s were characterized by unusual wetness with short periods of droughts of extensive droughts, while the first two decades of the 2000s saw extensive drought and extensive wetness. What will the baseline be after a 3-year extreme drought (2019-2021) that is classified as intense with higher evapotranspiration rates (due to higher air temperatures)?</p>	<p>Section 5 of the GSP includes detailed monitoring plans, with information about monitoring the shallow aquifer. Comment noted on monitoring using tree health. Section 7.2.4.1 of the GSP describes the use of available remote sensing tools and datasets, such as the GDE Pulse tool developed by the Nature Conservancy will be assessed for tracking and comparing vegetation health with groundwater conditions.</p> <p>Seasonal wetlands and seeps that are considered groundwater-dependent are also included within the freshwater marsh/aquatic classification that is incorporated within the GDE map (Figure 3-21). As described in Sections 4.10.2.1 numerous and significant information and data gaps limit the GSA's ability to characterize the potential effects of groundwater conditions on biological response impacts to GDEs. Section 7.2.4 describes plans to fill these data and information gaps during the initial years of GSP implementation, which would be used to consider future refinements of the SMC for chronic lowering of groundwater levels.</p> <p>The impact of climate (including the current drought) on groundwater conditions will be monitored and evaluated during GSP implementation. Data and information obtained through this monitoring will be incorporated into future 5-year updates to the GSP.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		References: Howard, J.L. 1992. Quercus lobata. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: https://www.fs.fed.us/database/feis/plants/tree/quelob/all.html [2021, October 28].	
10-31-2021	Coalition	<p>The consideration of beneficial uses and users when establishing sustainable management criteria (SMC) is insufficient. The consideration of potential impacts on all beneficial users of groundwater in the basin are required when defining undesirable results and establishing minimum thresholds.</p> <p>RECOMMENDATIONS:</p> <p>1. Chronic Lowering of Groundwater Level. Describe direct and indirect impacts on users when describing undesirable results and defining minimum thresholds for chronic lowering of groundwater levels.</p>	<p>DACs in the GSP are grouped into beneficial user types based on their source of water supply, which is primarily municipal water or water from private domestic wells. The effects of minimum thresholds and undesirable results for chronic lowering of groundwater levels on all beneficial users, including DACs, drinking water users and tribes, are described in Sections 4.5.2.4 and 4.5.4.3, respectively. Additional language has been added to Section 4.5.4.3 to clarify that these specific beneficial users are considered. The methodology for establishing minimum thresholds for chronic lowering of groundwater levels incorporates the statistical evaluation of known completion information for water supply wells located within the vicinity of each potential RMP, to avoid potential impacts on existing well users, including DACs, drinking water users and tribes.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		<p>2. Degraded Water Quality. Describe direct and indirect impacts on users when defining undesirable results for degraded water quality. For specific guidance on how to consider these users, refer to "Guide to Protecting Water Quality Under the Sustainable Groundwater Management Act."</p> <p>3. Evaluate the cumulative or indirect impacts of proposed minimum thresholds for degraded water quality on DACs and drinking water users.</p>	<p>DACs in the GSP are grouped into beneficial user types based on their source of water supply, which is primarily municipal water or water from private domestic wells. The effects of minimum thresholds and undesirable results for degraded water quality on all beneficial users, including DACs, drinking water users and tribes, are described in Sections 4.8.2.7 and 4.8.4.3, respectively. As described in Section 4.8.2.7, the minimum thresholds are designed to avoid negative effects to groundwater quality associated with implementation of the GSP. Avoiding degradation of groundwater quality from the identified COCs helps maintain drinking water quality providing benefits for domestic well users. Additional language has been added to Section 4.8.4.3 to clarify that these specific beneficial users are considered.</p> <p>As described in Section 4.8.2.7, the minimum thresholds are designed to avoid negative effects to groundwater quality associated with implementation of the GSP. Avoiding degradation of groundwater quality from the identified COCs helps maintain drinking water quality providing benefits to DACs, drinking water users and tribes.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		<p>4. Set minimum thresholds and measurable objectives for all water quality constituents within the subbasin that are impacted by groundwater use and/or management. Ensure they align with drinking water standards</p> <p><u>Groundwater Dependent Ecosystems and Interconnected Surface Waters</u></p> <p>RECOMMENDATIONS:</p> <p>When defining undesirable results for chronic lowering of groundwater levels, 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 one of the sustainability indicators (i.e., chronic lowering of groundwater levels, degraded water quality, or depletion of interconnected surface water). 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.</p> <p>When defining undesirable results for depletion of interconnected surface water, include a description of potential impacts on instream habitats within ISWs when minimum thresholds in the subbasin are reached.¹⁵ The GSP should confirm that minimum thresholds for ISWs avoid adverse impacts to environmental beneficial users of interconnected surface waters as these environmental users could be left unprotected by the GSP. These recommendations apply especially to environmental beneficial users that are already protected under pre-existing state or federal law.</p>	<p>As described in Section 4.8.1, the GSP identified COCs based on three criteria:</p> <ol style="list-style-type: none"> 1. They have an established level of concern such as an MCL or secondary maximum contaminant level (SMCL), or a level that reduces crop production 2. They have been found in the Subbasin at levels above the level of concern and are routinely analyzed and reported through existing regulatory monitoring programs 3. The occurrence of the COC is extensive throughout the Subbasin <p>New or additional water quality constituents may be identified as potential COCs applicable to the GSP implementation activities through the planned routine consultation and information sharing with other regulatory agencies described in Section 7.2.2. The GSA would then consider adding potential COCs and assigning SMC during the 5-year GSP updates.</p> <p>As described in Sections 4.10.2.1 numerous and significant information and data gaps limit the GSA's ability to characterize the potential effects of groundwater conditions on biological response impacts to GDEs. Section 7.2.4 describes plans to fill these data and information gaps during the initial years fo GSP implementation, which would be used to consider future refinements of the SMC for chronic lowering of groundwater levels.</p> <p>As described in Sections 4.10.2.1 numerous and significant information and data gaps limit the GSA's ability to characterize the potential effects of groundwater conditions on biological response impacts to GDEs. Section 7.2.4 describes plans to fill these data and information gaps during the initial years fo GSP implementation, which would be used to consider future refinements of the SMC for chronic lowering of groundwater levels.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		When establishing SMC for the subbasin, consider that the SGMA statute [Water Code §10727.4(l)] specifically calls out that GSPs shall include “impacts on groundwater dependent ecosystems”.	GDEs are identified as beneficial users within the GSP and potential impacts on GDEs are specifically addressed with other ecological land uses and users in Section 4 for each sustainability indicator.
10/28/2021	California Dept of Fish and Wildlife	<p>Sustainable Management Criteria (SMC) for Depletion of Interconnected Surface Waters (ISWs)</p> <p>Comment: The GSA has established the following Minimum Threshold (MT) for the SMC for Depletion of ISWs sustainability criteria: “Maintain estimated streamflow The Department understands the need to use “placeholder” Sustainable Management Criteria and Minimum Thresholds due to the current lack of groundwater and stream</p> <p>Recommendation: The Department recommends reconsidering this Minimum Threshold and revising the GSP to address and describe:</p> <ul style="list-style-type: none"> · How Minimum Threshold prevents undesirable results; <p>RESPONSE: Thank you for the recommendation. As outlined in Section 4.10.4.2, groundwater pumping is one of several factors that can contribute to depletion of</p> <ul style="list-style-type: none"> · The effect the Minimum Threshold will have on environmental beneficial uses and users of groundwater, and what impact it will have on fish and wildlife <p>RESPONSE: Thank you for the recommendation. As stated in Section 4.10, it is recognized that low summer baseflow in certain years can impact aquatic species, but until the</p> <ul style="list-style-type: none"> · How the Minimum Threshold accounts for climatic/water year type variability <p>RESPONSE: Thank you for the recommendation. As described in Section 4.10.4.1, undesirable results would occur if MT exceedances occurred at 40% or 10% of RMPs during</p> <p>Groundwater Elevations as a Proxy for Depletion of Interconnected Surface Water Minimum Thresholds</p> <p>Comment: While the GSP relied on a 15-year simulation to evaluate the correlation between surface water depletion from groundwater pumping and shallow groundwater</p> <p>Recommendation: The GSP should include discussion on what additional data will be collected to better inform the model and more details on when the simulation will be</p> <p>RESPONSE: Thank you for the recommendation. The Sonoma Valley Integrated Groundwater Flow Model, Version 1 (SVIGFM V1) is a sophisticated MODFLOW OWHM[1] Where data are limited, the uncertainty of simulated hydrologic processes increases. The GSP notes that—like for nearly all GSAs—data are particularly limited for</p> <p>As noted in the comment, the GSP shows that two of ten RMP locations show poor correlations between simulated surface water depletion and simulated groundwater</p> <p>[1] Boyce, S.E., Hanson, R.T., Ferguson, I., Schmid, W., Henson, W., Reimann, T., Mehl, S.M., and Earll, M.M., 2020, One-Water Hydrologic Flow Model: A MODFLOW based</p>	
COMMENTS RECEIVED ON AUGUST 2021 VERSION			
9/7/2021	Robert Pennington	<p>MTs and MOs reference “historical” or “recent”. It appears that “historical” for the MOs and MTs is not being used consistently with the model periods from the Basin Setting section. It also appears that different data ranges are used for RMPs with different trends. It could be confusing 20 or 50 years to know what date ranges should be compared against. This could be particularly problematic for RMP with “No Trend” or no data within the “historic” range, it may be useful to develop alternative MOs and MTs for these.</p> <p>I suggest creating a table that specifies the date ranges or definitions of “recent” and “historic” for RMPs</p>	<p>Comment noted - Except for the reference to the recent drought, the phrases recent and historical are used consistently in the GSP</p> <p>Comment noted</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
8/27/2021	National Marine Fisheries Service	<p>Comment re: Minimum Thresholds: To develop sustainable management criteria for the depletion of interconnected surface water, the GSAs of the Sonoma County subbasins convened a “Sonoma Sustainable Management Criteria for Depletion of Interconnected Surface Water Practitioner Work Group”, which met several times in early 2021. NMFS was a participant in this group, and generally agrees with the sequential approach being proposed within the Sonoma County subbasins for developing sustainable management criteria addressing streamflow depletion caused by groundwater pumping. Essentially, the approach is to develop and use interim criteria until more appropriate and precise criteria, informed by studies relating groundwater levels, streamflow depletion rates, and instream habitat effects, can be developed.</p> <p>We understand the need to use “placeholder” sustainable management criteria due to the current lack of groundwater and stream discharge data throughout the County. Gathering this data during the first few years of GSP implementation and updating the sustainable management criteria accordingly is a sound plan. However, as raised numerous times during the Work Group meetings, we do not feel an interim minimum threshold that maintains estimated streamflow depletions at historical maximum amounts, as is currently proposed for the Santa Rosa Plain and Sonoma Valley subbasins, is appropriately protective when dealing with ESA-listed salmonids. Basic hydraulic principles dictate that groundwater flow is proportional to the difference between groundwater elevations at different locations along a flow path. Using this basic principle, groundwater flow to a stream, or conversely seepage from a stream to the underlying aquifer, is proportional to the difference between water elevation in the stream and groundwater elevations at locations away from the stream.</p> <p>Minimum thresholds and measurable objectives consistent with the lowest groundwater elevations on record would likely create historically high streamflow depletion rates that, when combined with low surface flow input, would be very likely to adversely affect ESA-listed salmonids and their critical habitat. Analysis within the draft Sonoma Valley subbasin Sustainable Management Criteria chapter confirms the significant impact to instream flow volume that would likely occur under the proposed minimum criteria – simulated instream flow within Sonoma Creek during 2014, 2015, and 2016 was diminished by approximately 90 percent due to groundwater pumping (Figure 23).</p>	<p>Comment noted</p> <p>Minimum thresholds represent the groundwater elevation below which significant and unreasonable depletions of streamflow occur and represents a condition the GSA seeks to avoid, not "maintain". The objective of SGMA is not to maintain levels at minimum thresholds but rather to be at the more aspirational measurable objectives by 2042, or even higher. Maintaining levels at minimum thresholds could certainly cause undesirable results and that is not the intention of SGMA nor this GSP.</p> <p>Measurable objectives have been established to represent the average dry-season groundwater levels between 2004 and 2020 and are not "consistent with the lowest groundwater elevation on record".</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		<p>Recommendation: NMFS is committed to working with GSAs, CDFW, and other stakeholders in determining what streamflow depletion level avoids significant and unreasonable impacts to beneficial uses of surface water, as those beneficial uses relate to ESA-listed salmon and steelhead survival and recovery. However, while data is collected to inform that analysis, we suggest the GSA follow guidance by the California Department of Fish and Wildlife that recommends conservative sustainability management criteria be established to ensure groundwater dependent ecosystem protection (CDFW 2019).</p> <p>Comments re: Measurable Objective: The stated measurable objective (i.e., “maintain groundwater levels within historical observed ranges”) is likewise inappropriate when considering streamflow depletion impacts on ESA-listed salmon and steelhead. According to DWR (2017), “measurable objectives are quantitative goals that reflect the basin’s desired groundwater conditions and allow the GSA to achieve the sustainability goal within 20 years.” Within groundwater subbasins where past streamflow depletion likely impacted ESA-listed salmonids and their habitat (e.g., near 90 percent depletion during 2014-16), maintaining groundwater levels within historical ranges is unlikely to result in sustainable groundwater management (i.e., avoiding all undesirable results) as required by SGMA regulation.</p> <p>Recommendation: We recommend the GSA craft measurable objectives that avoid potential streamflow depletion impacts on beneficial uses of surface water.</p>	<p>Comment noted</p> <p>Measurable objectives have been established to represent the average dry-season groundwater levels between 2004 and 2020 and are not "consistent with the lowest groundwater elevation on record". In addition to the description of measurable objectives the commentor provides, DWR (2017) also states that measurable objectives shall "...take into consideration components such as historical water budgets, seasonal and long-term trends, and periods of drought, and be commensurate with levels of uncertainty". As additional information and data is collected during GSP implementation and potential impacts to beneficial users, including ESA-listed salmon and steelhead, the measurable objectives will be further evaluated and refined as needed.</p> <p>Comment noted</p>
9/3/2021	Jessie Maxfield (CDFW)	CDFW suggests the GSA consider implementing projects that have a multi-benefit approach. For example, groundwater recharge projects that include floodplain inundation as a way to increase groundwater recharge while also providing additional habitat for fish and wildlife (all while reducing the potential for downstream flooding).	Multi-benefit projects will be a high-priority. Specific projects will be evaluated on their benefits as they are studied and prepared for implementation.

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		<p>It is inappropriate to use data collected from the previous historic drought period (2014-2016) to set minimum thresholds and measurable objectives. CDFW and NMFS participated in the Sonoma Sustainable Management Criteria for Depletion of Interconnected Surface Water Practitioner Work Group and raised this issue multiple times during discussions. It is disappointing to see that poor feedback during those discussions was seemingly completely ignored. The use of historic drought information to set minimum thresholds and measurable objectives will likely result in a lack of suitable flows and habitat to support salmonids and other species.</p>	<p>Recognizing the significant information and data limitations, as well as the importance of ISW to beneficial users in the basin, the depletion of ISW by pumping SMC is set using an adaptive approach. The current Minimum Thresholds for each RMP were chosen to approximate the average amount of depletion during the 3 years with the highest levels of simulated streamflow depletion between 2004 and 2018. Mathematically, this 3-year average value over the 15-year evaluation period roughly corresponds with the 10th percentile of historical streamflow depletion at that location, by year, during 2004–2018. Undesirable results would occur if MT exceedances occurred at 40% or 10% of RMPs during drought and non-drought years, respectively. As described in Section 4.10.4.1, these percentages were selected based on input from the Interconnected Surface Water Practitioners Work Group (Appendix 4-C). Recognizing that sources of depletion are varied, and likely include lack of precipitation during drought years, placing the different weights on drought and non-drought years helps address concerns expressed by some Work Group and Advisory Committee members by ensuring that during normal/wet years the higher levels of estimated streamflow depletion from 2014-2016 are avoided.</p>
COMMENTS RECEIVED ON JULY 2021 VERSION			
7/14/2021	Greg Carr	<p>overall great job! very difficult to follow the technical stuff, but you have done the best that can be done</p> <ul style="list-style-type: none"> -page 5 (definition of interconnected surface water): clarify that the interconnection between surface and groundwater may be seasonal -page 7 (description of sustainability goal): 3rd bullet. how about dropping "plentiful" and just say that all we need is "enough" -page 19 (bottom page under "Deep aquifer system wells" what is bgs? -page 24/25: add "Although some restrictions may be necessary, " at end of ag, urban, domestic and eco <p>-page 28 (top of page potential causes: bullet #1 is not a cause. cause might be "continuation of groundwater pumping at current or increased rate"</p> <p>page 28: add "commercial" to first sentence under 4.5.4.3</p>	<p>Comment addressed</p> <p>Language previously approved by Board</p> <p>below ground surface - defined in abbreviations</p> <p>Narrative text modified</p> <p>The cause refers to undesirable results which could be caused by continuation of groundwater level declines.</p> <p>Text revised</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		<p>-page 41 (5th bullet mid page): how about deleting "appropriate" as needed should be the standard</p> <p>-page 41 (end of last paragraph of 4.7.4.1): wouldn't we also want to say that we might change the minimum threshold and undesirable result?</p> <p>-page 60: (4.9.4: the paragraph following the 3 URs should explain why result #3 includes "a minimum threshold exceedance of the chronic lowering of groundwater levels SMC</p> <p>-page 65 (just before Table 4-10.1): maybe revise sentence to say "The goal of the minimum threshold is to maintain groundwater levels conditions above historical..."</p> <p>page 66 (in paragraph under "Adaptive Management...": modify last sentence "If and when As the state agencies..."</p> <p>-page 67 (4.10.2.4): drop "low" from first sentence in first paragraph</p> <p>page 68 (4.10.2.5): change 2nd paragraph "If and when As new standards..."</p>	<p>Comment acknowledged</p> <p>Statements that the minimum threshold will be refined with additional data collection are included in Section 4.7.2</p> <p>Comment addressed. The following language was added to the end of section 4.9.4: "The undesirable result is tied to groundwater pumping and an exceedance of the chronic lowering of groundwater levels SMC to isolate subsidence caused by groundwater pumping from other causes such as plate tectonics and hydrostatic loading."</p> <p>Comment acknowledged</p> <p>Comment acknowledged</p> <p>Added historical low levels to bullets below</p> <p>Comment addressed</p>
7/29/2021	Jim Bundschu	<p>Throughout the document there are references to "historic levels" with no definitions of how far back is "historic" is intended to be.</p> <p>Examples:</p> <p>Page 9,- - Historical,pre 2010</p> <p>Page 25, " -at or above historical levels"</p> <p>Page 67, - -"depletion that exceeds historical levels"</p> <p>Page 68, - -"historical ranges and above historical lows"</p> <p>At least the first year of any referenced "historic levels" should be included to provide a starting point. Perhaps staff could supply their opinion using existing accumulated historic data about what the starting year could be for each section (page).</p> <p>If "historic" is too hard to define, the reason for such difficulty should be included so everyone can begin on the same page.</p>	<p>I believe this term is defined in the current and historical conditions section</p>
7/29/2021	Jane Whitsett	<p>P. 8: Change rational to 'rationale'</p> <p>p. 19 The discussion of calculation of well impact depths is difficult to follow. Could there be some figures added that show the RMP polygon areas and associated well locations to give the reader an idea of the data points used for the statistics? Perhaps add a table of well data in an RMP with statistics to better illustrate the approach</p>	<p>Comment incorporated</p> <p>A simple well graphic will be provided in the public review draft</p>

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		<p>P. 22: This may be a good place to explain that the GSP manages to the RMP MTs derived in Table 4-5-1 and on hydrographs in App 4-5-1 and not the individual MT for each well in the polygon.</p> <p>P. 26: When using the phrase "above minimum thresholds" in the last sentence here, does this mean GW elevations that have a higher msl than the MT msl or lower then the MT msl? Is the GSP consistent in its use for the meaning of "above minimum thresholds"? I think there has been some confusion on this in the Advisory Committee.</p> <p>P. 31: Change "4.4.3.2" to "4.6.3.2".</p> <p>P. 43: My understanding is that arsenic MCL exceedances are due to naturally occurring arsenic. Hence, arsenic is not a point source contaminant. I think it is important to make this distinction where applicable.</p> <p>P. 54: Insert "be" between "will" and "used".</p> <p>P. 74, Suggest adding the MT depth of 117 feet msl here in parenthesis from Table 4-5-1 for all hydrographs, plus add the well impact depth in parenthesis to the dashed orange line (98th percentile shallowest well + 10 ft buffer) to all hydrographs. This helps clarify which is the the final MT and is consistent with Table 4-5-1.</p> <p>P. 73: Suggest we identify this as "well impact depth" on each hydrograph for clarity and to be consistent with the text in "Calculation of Well Impact Depths" on page 19.</p> <p>P. 73: Since all other values on these hydrographs are msl suggest we list well depths in msl rather than bgs to make it easier to interpret.</p>	<p>Comment noted</p> <p>This is addressed in the basin setting. We also don't discuss the sources of nitrate or TDS here.</p> <p>This is to be added to graphics before final draft version</p>
8/1/2021	Ken Johnson	<p>TOC: Good practice to include a table or listing of abbreviations used in the document and their full explanation</p> <p>P. 4: First graf: suggest replacing "constitute" with "will be used to evaluate". We are looking at indicators only - what constitutes sustainable is a much bigger issue!</p> <p>P. 4: Second graf: are there criteria outlined in SGMA that do not apply to our basin? If so, maybe se should call them out and explain why they aren't applicable.</p> <p>p. 7, re 'measures to be implemented'" Should we add a sentence of two to include appropriate monitoring as a key element of ensuring sustainability? Seems this is missing here.</p>	<p>Abbreviations will be included at the beginning of the report</p> <p>Comment noted</p> <p>Sentence modified for clarity</p> <p>Added "improve monitoring", after fill data gaps in the list of measures in the previous sentence</p>

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		<p>P. 9 (table) need to define abbreviations. Representative Monitoring Points (RMPs) doesn't appear earlier. See comment about abbreviation table after Table of Contents. (GWLS, INTERIM) how about adding a check in at the 5-yr update in this column? (GWLS, S&UR): can we define "significant" in this context? maybe refer to threshold definitions in the next column? GWLS, INTERIM: milestones for monitoring should not depend on modeling. should be driven by RMPs GWLS, stable wells: four-year drought assumption. What will that translate to in terms of water levels? Need to be clear! GW storage: should we acknowledge that storage is different than water levels, but that water levels provide the best surrogate for storage?</p> <p>Table, cont: SWI, Min Thresh: should we qualify what about the 250mg.L criteria is undesirable? crop impacts? taste and odor criteria? something else? Also, inferred sounds uninformed. we are using existing, but limited data. Can we somehow indicate that more monitoring points will help clarify the boundary in the future? Table: SWI, min threshold: should be 'are' not 'is' (data is plural) TABLE: WQ: MT -- I am uncomfortable with how vague this is. what does additional supply well mean? something in our RMPs? A new supply well that won't comply? I recommend considering a more focused way of looking at water quality. TABLE: WQ, MO: so do some exceed now? If yes, we should acknowledge them and incorporate that into our MO criteria evaluation. TABLE: WQ, UR: so here we are talking about arsenic, nitrate and TDS? 'direct result' this seems to open the GSP for blame in excursions of the criteria. Perhaps we can make this more general to provide some opportunity for other explanations. TABLE: ISW, SU: underline 'caused by groundwater pumping' to focus the discussion TABLE: Inferred sounds uninformed. we are using existing, but limited data. Can we somehow indicate that more monitoring points will help clarify the boundary in the future?</p> <p>p. 19: 2ND GRAF: features that appear to have a direct influence on groundwater movement, p. 23: LAST GRAF: Limited by what? Given we have heard that development of this area may be in lay, should we identify "future groundwater use" as a factor to consider?</p>	<p>Abbreviations available in GSP frontage materials and spelled out for the first use in the GSP</p> <p>See separate M&A response to individual comments. Mostly, think these can be acknowledged and point Mr. Johnson to the sections for more info. In general, don't want to include more in this table, it is already a bit too much to digest.</p> <p>Change "inferred" to "approximate" in minimum threshold column</p> <p>Comment incorporated Text modified to address limitations</p>

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		<p>P. 24: 2ND GRAF: Here is a "basin" that may be indistinct from Sonoma Valley. Should we discuss it as a contiguous and likely connected basin? To be considered in the future? I know we have chosen to not address it now, but this seems like a significant enough boundary to be actively paying attention to.</p> <p>p. 25: FIRST GRAF: Is it just municipal pumping or commercial also?</p> <p>p. 25, 4.5.2.6: Should this section address the fact that some of our RMPs are operating wells? What measures will the monitoring program take to catalog representative water levels from these operating wells?</p> <p>p. 27: 2nd graf: Seems like we shouldn't rely on the simulations for our interim milestones. They are in the future and not yet real. Can we develop a more measureable method for the wells with declining trends?</p> <p>p. 28: Last graf: Add 'commercial -- we don't say 'industrial' earlier, but maybe commercial is a better term anyway?</p> <p>p. 29: last graf: stable levels don't limit depletion, but they indicate depletion is not occurring. Only control of pumping can "limit" depletion!</p> <p>p. 30: can we somehow qualify the extent of connection with Petaluma Valley - as a percentage of the SV boundary this area is a very small fraction of our basin boundary. We should capture that somewhere in the document. Similar to Napa and Kenwood in that way, though Kenwood may better be administered by appending to SV.</p> <p>p. 33, 2nd graf: where the primary source of seawater intrusion in the basin is anticipated. These data gaps currently</p> <p>p. 33, 2nd graf: looking for different word than 'appropriate' : comprehensive?, thorough? not sure appropriate is the right word here...</p> <p>p. 33, 2nd to last graf: I don't think it is the brackish water tha obscures the interface, but rather the lack of a monitoring system to detect and monitor it.</p> <p>p. 34, 2nd graf: Shouldn't we take a wait and see approach. If there are actions we can take to mitigate climate change impacts that exacerbate seawater intrusion, shouldn't we take those despite that fact they weren't caused by groundwater management?</p> <p>p. 42: 1st graf: and yet - as mentioned in a previous comment, if there is some action we can take to mitigate, we probably should!</p>	<p>Clarifying sentence added</p> <p>Typically commercial businesses are supplied w/ municipal water. Term commonly used for private business supply wells is "industrial".</p> <p>Added reference to the measurement of "static water levels" per protocols.</p> <p>This is a common approach for developing IM for GSPs, as these are mgmt goals, not enforceable targets, so is not detrimental if they are exceeded</p> <p>See response aboveAllebach</p> <p>Addressed with revision</p> <p>Addressed with revision</p> <p>Comment noted</p>

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		<p>p. 44: middle of page: Do the analyte lists for these monitoring programs all include arsenic, nitrates and TDS? If so, we should say that to help build the case that our proposal is robust. The tables that follow can provide that statement.</p> <p>p. 46: table 4-8-4: I know we are focusing on these two monitoring programs, but what about the areas where domestic wells have shown excursions? I am thinking of As in Sperring Road area.....do we turn a blind eye or do we acknowledge the network may need to be widened?</p>	<p>Think this is getting outside of the purview of the GSP, and perhaps the responsibility of coastal commission/county/state climate change resiliency planning related to sea level rise</p> <p>Rather than initiate a new sampling program, the GSP relies on existing programs. If domestic wells are in existing programs, they are included in our program.</p>
8/1/2021	Vicki Hill	<p>MULTIPLE EDITS FOR GRAMMAR AND PUNCTUATION NOT NOTED HERE. THE COMMENTS BELOW ARE SUBSTANTIVE/TECHNICAL.</p> <p>P. 4: This section defines the conditions that constitute sustainable groundwater management; discusses the process by which the GSA will characterize undesirable results; and establishes minimum thresholds and measurable objectives for each applicable sustainability indicator. SHOULD REFERENCE THE SUSTAINABILITY GOAL IN THIS INTRODUCTORY SECTION.</p> <p>P. 5: • Representative monitoring site refers to a monitoring site within a broader network of well sites that typifies one or more conditions within the basin or an area of the basin.: Shouldn't this say "monitoring well site" to make it clearer? The word "well" should be mentioned somewhere here.</p> <p>P. 7: <i>Note: The list of projects and actions will be included here once finalized. The text in the previous paragraph states that the projects and actions are in Section 6 so not clear why they would be listed here too. Seems out of place.</i></p> <p>p. 7: Description of how the sustainability goal will be achieved: Seems out of place. Shouldn't this be in Section 6.</p> <p>p. 7: General process: it seems like we should list the general data sources – monitoring wells, State info, etc.</p> <p>Given State comments on other plans, you might want to make this section more robust to convey transparency and public input.</p> <p>p. 16: Give examples of who stakeholders are (Note from Ann: stakeholders, including Advisory Committee members who represent residential well owners, agriculture, environmental representatives, business interests and representatives of municipal water suppliers)</p> <p>p. 21: Table 4-5 - final criteria - Clarify which column that is for the lay reader</p> <p>p. 24: last paragraph - "...groundwater use is limited".. Due to the presence of brackish water? Please clarify.</p>	<p>Comments to be addressed by Technical Editor</p> <p>Sustainability goal added</p> <p>These can be used to define subsidence networks, stream gauges, and other monitoring sites that aren't wells so removed the word "well"</p> <p>This is a required part of the Sustainability Goal. See the first three bullets in this section</p> <p>This is in the DWR GSP outline so is included to facilitate DWR review</p> <p>Comment incorporated. See bullet three regarding public input and transparency</p> <p>Stakeholders are defined in the outreach section</p> <p>A graphic and explanation will be added to help clarify the table</p> <p>Text revised to clarify</p>

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		<p>P. 25: Why only priority species? (Note from Ann, this question arose in Section 3 -- perhaps can say 'species identified in the Critical Species LookBook (Rohde et al. 2019) were identified and include steelhead, Chinook salmon, coho salmon, California red-legged frog, and California tiger salamander.)</p> <p>p. 26: Suggest rephrasing "GSP would include a plan to expand the monitoring network" (This IS the GSP plan. Refer to section where this is addressed.)</p> <p>p. 26: Rephrase "GSA would like" This sounds a little awkward – isn't it more than just something they would like? Aren't the objectives intended to ensure sustainability?</p> <p>p. 27: "1) balance the protectiveness to beneficial users with potential impacts related to response actions " Can this be rephrased to be clearer and less awkward?</p> <p>p. 28: L• a significant reduction in natural recharge as a result of climate change . Why only climate change? Natural recharge areas could be reduced by new development that paves over recharge areas.</p> <p>p. 29: Need more introduction, similar to Sction 4.5</p> <p>P. 33: ... <i>an adaptive approach for setting the initial SMC described in this section for seawater intrusion will be completed in order to allow the GSA time to develop a refined SMC during GSP implementation after additional data are collected and studies are conducted</i> . Needs to be revised for clarity and simplified. "An adaptive approach for setting the SMC described in this section will be completed" doesn't make sense. If the initial SMC are already described than completing something in the future will refine the SMC.</p>	<p>Comment incorporated</p> <p>Simplified</p> <p>Good point, added a couple other options</p> <p>Comment incorporated</p>
7/31/2021	Fred Allebach	<p>p. 5 and 6</p> <p>-on p. 5 it says significant and unreasonable conditions "is not specifically defined in the GSP Regulations" yet on p. 6 URs specifically cite that "Undesirable Result means one or more of the following effects caused by groundwater conditions occurring throughout the basin, as described in Water Code Section 10721(x):" Significant and unreasonable conditions is a part of four SMC UR definitions. If the text is going to say significant and unreasonable conditions is an undefined phrase in GSP Regulations, yet the next page appears to define URs by using "significant and unreasonable conditions", then the text needs to be clearer here what is really being said.</p> <p>-then on p. 6 it says URs are not defined but the text proceeds to define them, and says they should not be confused with "significant and unreasonable conditions" which are actually part of four UR definitions. I am confused! Here we have critical definitions at the core of the GSP, that are not defined in GSP regulations? Something does not seem right here.</p> <p>-GSP needs better clarity or an explanatory footnote, as the public will be reading too, not just DWR</p>	Text revised to clarify

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		<p>P 7: -I suggest changing the Sustainability Goal to “The goal of this GSP is to adaptively and sustainably manage, protect and enhance groundwater resources to allow for reasonable groundwater management through:”</p> <p>I took out “growth” bc in the management of an increasingly scare common pool resource, the emphasis should be on rational management, not continuing to grow against all reason. This is like saying fisheries, timber, and grazing should all be able to grow when in fact, sustainable now is about being more careful and more people using less each. The “growth” assumption is outdated and unsustainable, “sustainable yield” means having to get by with less.</p> <p>-Fred’s one liner for the GSP: “more people with straws in GW have to use less water each”</p> <p>p. 9-11: Having the chart broken up between three pages makes it very hard to read</p> <p>-suggestion: give each chart a dedicated page so the reader can see each SMC criteria all at once,</p> <p>-always choose for ease of reading, keep as simple and clear as possible, take the reader by the hand</p> <p>P. 14: “Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.”</p> <p>This is vague, the recovery-offset increases are not specified with any metrics; this statement allows too much wiggle room. In a GSP dominated by data, why have a weasely statement like this?</p> <p>-the rate of decline otherwise is a criteria, why not the rate of recovery after a drought?</p> <p>on the GW level chart on page nine it does not say “reverse declining trends” but it does say this on point #2 for overall approach</p> <p>-is “reverse declining trends” part of this SMC MO or not? If so, put it in the definition right away</p> <p>p. 15: -“Falling groundwater levels that cause impacts to groundwater-dependent vegetation (shallow aquifer only)” [SEP]</p> <p>-Should this say GDEs, not just vegetation?</p> <p>p. 15 - it is nice to have a map come in the text rather than to refer to an appendix later -suggestion, put a few maps that show depletion areas in the previous text for the GW levels and storage SMCs</p> <p>p. 16: “evidence of recovery”, specify this better? Is complete recovery in wet years the benchmark? Just to be in the operational range? More specifics would be better here.</p> <p>“RMPs with relatively stable long-term groundwater levels (less than 0.5 foot per year of decline with evidence of recovery following wet years); and [SEP]</p> <p>“RMPs exhibiting chronic groundwater level declines (greater than 0.5 foot per year of decline with no or incomplete recovery in wet years).</p>	<p>Not revised as is a Board decision</p> <p>Not revised as is a Board decision</p> <p>Comment incorporated</p> <p>This is intended as a general statement summarizing the SGMA legislation, don’t think need to expand here.</p> <p>The table referred to above is intended to be a brief summary. More info on the MT/MO is provided later in this section, which addresses these concerns.</p> <p>Groundwater dependent vegetation can be monitored and will be a key indicator for GDE</p> <p>Figures 4.5.1 and 4.5.2 show RMSs with trends</p>

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		<p>-what does <i>recovery</i> consist of? [SEP]</p> <p>p. 19: #3 “drought factor”, this has also been referred to as a “drought buffer”</p> <p>-maybe add “drought factor or buffer”?</p> <p>p. 21: “drought buffer” is mentioned</p> <p>-suggestion, introduce the term ASAP on p. 19</p> <p>p. 24: Would it be worth mentioning that the Kenwood Basin was looked at by the SVGSA for inclusion in the SV basin and that Kenwood is a substantial source of recharge, and that Kenwood will be monitored to see that such recharge remains constant?</p> <p>Ag land uses and users: -thank you for acknowledging there have to be some limits on beneficial use</p> <p>p. 25: Urban and uses and users</p> <p>-the notion of limits starts to add up to a qualifier for the idea that GW is like a bank account that can be drawn down in times of drought, yes GW can be leaned on, but not indefinitely and with no limits; this is why I’d like to see more specificity on: p. 14 “Overdraft during a period of drought is not sufficient to establish a chronic lowering of groundwater levels if extractions and groundwater recharge are managed as necessary to ensure that reductions in groundwater levels or storage during a period of drought are offset by increases in groundwater levels or storage during other periods.” [SEP]</p> <p>This is vague, the offset increases are not specified with any metrics; this statement allows too much wiggle room. In a GSP dominated by data, why have a weasely statement like this?</p> <p>-the rate of decline otherwise is a criteria, why not the rate of recovery after a drought</p> <p>upshot of my comments here: the GSP is acknowledging the reality of limits if there are not projects to increase supply; here is an opportunity to frame “the story” as one of SMCs needing to put limits on demand; demand can only be increased if there are augmentations to supply; if reductions to pumping (SMCs) need to be put in place to protect all existing beneficial users, then only by increasing supply can more demand be met</p> <p>-increasing supply is hard to come by in California</p> <p>Domestic land uses and users: Given that @ 30% of basin GW is rural residential, yet no serious regime of limits seems to be in play for this group, an unregulated 30% of use seems problematic to me; relying on voluntary measures should not go on for too long</p> <p>“4.5.2.5 Relation to State, Federal, or Local Standards No federal, state, or local standards exist that are specific to chronic lowering of groundwater”: -this is not true, the County General Plan Water Resources Element says that GW withdrawals should not exceed replenishment rate; maybe this is not a “standard”, but why say stuff like this if it’s meaningless with no teeth?</p>	<p>Comment addressed</p> <p>Comment addressed</p> <p>Comment noted</p> <p>Comment noted</p> <p>The GSA has the right to limit the pumping, but no real way to enforce it because they cannot meter rural residential wells.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		<p>-the county General Plan WRE says that the GW availability map should be kept up to date with the latest info, but they have been using a 1983 map, in 2021. Is this not a standard? To keep critical maps pertaining to natural, common pool resources and land use up to date?</p> <p>p.26: "...the aim of the measurable objective is stabilize and reverse the declining trends in these (declining) areas</p> <p>-this paragraph, in terms of telling the GSP story, shows that GW restoration goes back to the year 2000; that's the declining area baseline; this means the GSP is not seeking to restore GW to any level before that, even though a major period of basin development happened in the post-WW2 era up to 2000, esp from the late 70s onward; part of the story then is that the GSP is not seeking to address GW losses and levels prior to 2000, and thus, with the GSP, the basin will be stabilized at a diminished level, esp for depletion areas</p> <p>-this is like if you smoked for 30 years, that had an effect, can't go back to square one</p> <p>p. 27: "...as described in Section 4.6.2.1), it is not considered an undesirable result unless the groundwater levels do not rebound to above the thresholds during future normal and wet years following long-term droughts."</p> <p>-maybe combine all the info on this post-drought rebound/ recovery topic and lay it out right at the beginning rather than trickle it in piece by piece over the GSP</p> <p>p. 28: "continuation of chronic groundwater level declines within the deep aquifer system in the southern portions of the Subbasin" ^[L]_{SEP}</p> <p>-suggest to specify <i>where</i> in the southern portions of the sub-basin; don't trickle in critical info, lay out what is what up front, i.e. that there are two deep aquifer depletion areas, then refer to a map showing them</p> <p>-build the GSP with critical points as they come up, so what if it takes a page or two more, the overall flow and retention of info will be better bc the reader will get the critical points as they are introduced</p> <p>"Avoiding undesirable results for the chronic lowering of groundwater levels will limit the potential for these conditions to occur in the future."</p> <p>-I hope the GSA sticks with URs, rather than possibly lower them to avoid more URs</p> <p>p. 30: "4.6.2.1 Information and Methodology Used to Establish Groundwater Storage Minimum Thresholds"</p> <p>-here maybe cite the USGS paper where they say that overall storage is not as critical as localized declines, since the basin is not like one big unified bathtub but has local characteristics based on geologic formations</p>	<p>Comment noted</p> <p>This is already described in the intro to the gwl section (4.5)</p> <p>This is already described in the intro to the gwl section (4.5) and also basin setting section</p> <p>Comment noted</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		<p>-the explanation in the text here gives no indication of storage nuances as related to the main basin deep aquifer issues</p> <p>-upshot, overall storage is important but there are serious nuances to it, maybe explain some of that or refer to chapter on basin characteristics here</p> <p>-take the reader by the hand, tie things together</p> <p>4.6.2.2 Relationship between Individual Minimum Thresholds and Relationship to Other Sustainability Indicators</p> <p>-my understanding is that the deep and surface aquifer systems are broken apart and will be monitored separately for URs; if this is the case, the text ought to be clear to say this unequivocally or explain how surface and deep aquifer systems both play into the GW levels SMC</p> <p>-is the deep being averaged out by counting in the surface? Or can the deep system have a UR all on its own?</p> <p>p. 32: "4.6.4.2 Potential Causes of Undesirable Results"</p> <p>-the text seems to have a substantial amount of repetition through here, I find myself thinking, didn't I just read the exact same thing?</p> <p>-if text is exactly the same as previous, maybe say that?</p> <p>-I see from reading through the whole chapter that the GSP has to run through the same items for each SMC, maybe give a short explanation at the start for how each SMC will be broken out by the same SGMA required headings</p> <p>p. 33: "However, seawater intrusion has the potential to occur within the Subbasin due to observed declining groundwater levels which have dropped below sea level in areas of the southern part of the Subbasin."</p> <p>-again, "areas of the southern part of the Subbasin" should be better defined; put a map to show these "areas"</p> <p>p.34: Maps and cross-sections of the chloride concentration isocontour that defines the minimum threshold and measurable objective for each principal aquifer. [L] [SEP]</p> <p>-if accurate maps of chloride concentration are a data gap item, what about (in GW levels) mentioning the 1983 GW Availability map as a major data gap in the GW levels and storage SMCs?</p> <p>p. 35: it is nice to have a map come in the text rather than to refer to an appendix later</p> <p>-suggestion, put a few maps that show depletion areas in the previous text for the GW levels and storage SMCs</p> <p>p. 38: 4.7.2.4 Effect on Beneficial Uses and Users</p> <p>-maybe note with a map here: Schellville Colony as the significant rural residential area adjacent to the Baylands, followed by the at-risk to brackish intrusion Burndale Rd area</p>	<p>Change in storage is a single, basin wide SMC. There is no need to break it up into upper and lower zones.</p> <p>This is explained in section 4.0; in order to meet DWR requirements and provide for efficient review the SMC section is repetitive</p> <p>Adding reference to basin setting section.</p> <p>Comment noted</p> <p>Added map reference and Schellville to map</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSE TO COMMENTS
		<p>-a map will show what areas are at risk p. 40: "In other words, the goal of the measurable objective is to protect beneficial users by maintaining this interface at its current location and avoiding any future inland incursion of seawater."</p> <p>-qualify this up front with a short <i>feasible management statement</i> ? Say that sea level rise appears inevitable and that the GSA is not responsible for that, so while the goal is "avoiding any future inland incursion of seawater" from anything the GSA has purview over, it is likely this goal will not be able to be achieved by anything that the GSA does vis-à-vis the larger unstoppable issue of human-caused global warming sea level rise -the text does allude to this later p. 42: 1) "Direct actions by Sonoma Valley GSP projects or management activities..."</p> <p>-should this say : "Direct actions and inactions by Sonoma Valley GSP projects or management activities..." -an inaction is an action by omission p.62: "Key themes and outcomes from work group members that assisted in developing the SMC for interconnected surface water are documented in Appendix 4-10-1. As described in Appendix 4-10-1, the SMC for depletion of interconnected surface water is unique in that information in the historical record linking surface water depletion directly to groundwater usage under the jurisdiction of the GSAs is very limited." -I seem to recall that the work group members had some recommendations, couldn't access Appendix 4-10-1 here. Did the GSA Board follow the suggestions of the work group? Would it be worth noting here if there was a diff between the work group's call and what the GSA adopted? (p.99) "Two primary suggestions were provided by Work Group members: ^[L]_[SEP] o Using water years from 2014-2016 to set MTs could be problematic as these occurred during a historic drought. MTs based on these water years may not be protective of beneficial uses, most notably the health of aquatic species. o For additional context on general streamflows,staff could consider providing the actual magnitude (in cfs) of flows <i>in addition</i> to the current relative percentages of depletion. Additionally, URs could be linked to the severity of MT exceedances to provide a sliding scale [for project/action implementation]</p> <p>-it is unfortunate that the AC environmental rep is on vacation now and will miss two AC meetings right at this critical juncture of review; her calls here could be valuable p. 63: footnote 3 ^[L]_[SEP]</p>	<p>This is already addressed in Section 4.7.1</p> <p>This is a board approved statement so not sure can easily change at this time.</p> <p>Where possible work group suggestions were incorporated, however, we were clear that we don't have adequate data on these conditions, resultling in anadaptive management plan with work group.</p>

SONOMA VALLEY GSP COMMENTS: SECTION 5 MONITORING PLAN

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
COMMENTS RECEIVED OCTOBER 1-31, 2021			
10/31/2021	Coalition	<p>The consideration of beneficial users when establishing monitoring networks is insufficient, due to lack of specific plans to increase the Representative Monitoring Points (RMPs) in the monitoring network that represent water quality conditions around DACs and domestic wells in the subbasin</p> <p>Figure 5-4a (Representative Monitoring Point Network for Chronic Lowering of Groundwater Levels – Shallow Aquifer System) and Figure 5-4b (Representative Monitoring Point Network for Chronic Lowering of Groundwater Levels – Deep Aquifer System) shows sufficient representation of DACs and drinking water users for both the shallow and deep aquifer groundwater elevation monitoring. Figure 5-5 (Representative Monitoring Point Network for Degraded Water Quality) shows insufficient representation of DACs and drinking water users for water quality monitoring. These beneficial users may remain unprotected by the GSP without adequate monitoring and identification of data gaps in the shallow aquifer. The Plan therefore fails to meet SGMA’s requirements for the monitoring network.</p> <p>RECOMMENDATIONS</p> <ol style="list-style-type: none"> 1. Provide maps that overlay current and proposed monitoring well locations (specifying whether they are shallow or deep wells) with the locations of DACs, domestic wells, GDEs, and ISWs to clearly identify monitored areas. 2. Increase the number of RMPs in the shallow aquifer across the subbasin as needed to adequately monitor all groundwater condition indicators across the subbasin and at appropriate depths for all beneficial users. Prioritize proximity to DACs, domestic wells, and GDEs when identifying new RMPs. 3. Ensure groundwater elevation and water quality RMPs are monitoring groundwater conditions spatially and at the correct depth for all beneficial users - especially DACs, domestic wells, and GDEs. 	<p>Comment noted. The locations of DACs and areas with high concentrations of domestic wells were considered for current efforts to expand monitoring networks and will be considered when monitoring networks are expanded further during GSP implementation.</p> <p>Comment noted. Monitoring networks were developed to monitor conditions throughout the Subbasin to the greatest extent possible. Data gap areas are acknowledged in the GSP. Monitoring networks will be expanded during GSP Implementation.</p> <p>Acknowledged. It would be difficult to combine all of this information into one figure. Domestic wells are included in Figure 2-6. Interconnected Surface Water is shown on Figure 3-23. GDE's are shown on Figure 3-24.</p> <p>Comment noted. Monitoring networks will be expanded during GSP implementation</p> <p>Comment noted. Monitoring networks will be expanded during GSP implementation</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
10/28/2021	California Dept of Fish & Wildlife	<p>Planned Monitoring to Address Data Gaps: Comment: The GSP acknowledges that more data are needed to better understand groundwater recharge and discharge mechanisms in the Subbasin, including surface water-groundwater interactions and the amount and location of groundwater extractions. While there is a better geographic distribution of Representative Monitoring Points (RMPs) for Depletion of Interconnected Surface Water in the Sonoma GSP compared to the Petaluma GSP, 10 of the 11 RMPs are located on Sonoma Creek.</p> <p>Recommendation: The Department recommends expanding the RMP to be better representative of the GSP area and establishing RMPs in some of the tributaries to Sonoma Creek. For example, additional sites in Arroyo Seco, Rogers, Felder, Carriger, Mill, and/or Dowdall Creeks will likely help with better understanding and characterizing interconnected surface waters throughout the GSP area.</p>	Thank you for the recommendation. The GSA recognizes the importance of ISW monitoring. As outlined in Section 5-2, Sonoma Water monitors 5 stream gages and 17 stream-adjacent monitoring wells adjacent to Sonoma Creek and its tributaries in Sonoma Valley Subbasin (including on Dowdall and Carriger Creeks). In addition, synoptic streamflow measurements (seepage runs), incorporating 15–70 streamflow measurements, have been conducted regularly in coordination with USGS and the Sonoma Ecology Center since 2014. Section 7.2.4.2 outlines future refinements for the ISW monitoring network. Specific locations for additional ISW monitoring locations will be identified following
COMMENTS RECEIVED ON AUGUST 2021 VERSION			
None			
COMMENTS RECEIVED ON JULY 2021 VERSION			
8/7/2021	Greg Carr	<p>Section 5.1 (Monitoring Network Objectives): suggested edit in first paragraph: "...developed to collect data..."</p> <p>same section: suggest adding a 5th objective: evaluate success of network in fulfilling data collection objectives"</p> <p>Section 5.2.1: the last two standards seem to suggest that we cannot rely on active wells for RMPs except on a temporary basis. is this true?...and is this consistent with "well type" criteria below?</p> <p>Section 5.2.3 (Surface Water Monitoring Network): should the third bullet include establishing a target for minimum streamflow in the basin's streams?</p> <p>Section 5.3.3 (Rep Monitoring Point Network...): suggest that a sentence be added in mid paragraph generally explaining why the 10 wells were not included...was it lack of interconnection?, poor construction? etc etc</p> <p>General comment on the sections addressing data gaps: much of this work is dependent upon funding but the language seems to avoid any firm commitment to doing it. doesn't "as funding becomes available" mean that we might not ever do that work?</p> <p>Section 5.4.1 under Data Quality Assessment, second bullet: drop the parenthesis</p>	<p>Text revised.</p> <p>Acknowledged. Change not made as text was quoting GSP regulations.</p> <p>Comment noted. Checked for consistency. Special requirements for active supply well monitoring are included in Appendix 5-A.</p> <p>Acknowledged. This work would need to be done in coordination with other agencies.</p> <p>Text revised.</p> <p>Comment noted. Several projects to address data gaps are already underway. The GSA will continue to pursue available funding options for future improvements to monitoring networks.</p> <p>Text revised.</p>
8/7/2021	Fred Allebach	5.0 "Representative Monitoring Points (RMPs), for which sustainable management criteria are set..." - change for which to "to which"?	Acknowledged but text left as-is.

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>One data gap is having enough fine monitoring to be able to draw lines around depletion areas so as to help Permit Sonoma make a new GW Availability map; if the GSA will ever enter into land use regulations via limiting well spacing, it will be critical that lines be drawn based on substantial evidence, and that depletion area boundaries won't be able to be challenged on all manner of arguments; if current depletion area monitoring is adequate for SGMA, very well</p>	<p>Comment noted.</p>
		<p>-the location of deep aquifer depletion areas boundaries may be covered in the Hydrograph Comparability section for GWL monitoring on p. 11; if data gaps end up as a reason to obfuscate regulation in deep aquifer depletion areas, the hydrograph comparability starts to show the reasoning used to demonstrate that larger deep aquifer areas can be understood by proxy measures and extensions of data</p> <p>-the question is: how much proxy extension of data can be used to define the deep depletion area boundaries? Can that be done now without more monitoring well data?</p> <p>p. 7 final paragraph before 5.2.2 Maybe it would be worth saying that higher frequency monitoring well trends will spur increased monitoring than semi-annually, if negative trends are seen</p> <p>-where are high frequency monitoring wells relative to depletion areas? Worth mapping to show the public?</p> <p>p. 8 "There are not currently any identified data gaps in the Groundwater Quality Monitoring Network."</p> <p>-this does not seem right; the map shows a small concentrated area on the southeast side that indicates alignment with the east side fault, but the fault is not traced along its full extension; there's no WQ wells on the map near 8th East and Napa Street East nor through the city along the east side fault, and only two in the Springs; from what I know about local thermal waters and arsenic, the map shown seems to only partially catch trouble areas</p> <p>p. 8 surface water -worth mentioning data gaps up front and where new sites may be necessary?</p> <p>p.11 "Description of RMP Network for Chronic Lowering of Groundwater Levels" -some indication of which wells are aimed at deep aquifer depletion areas should be given up front, name the wells; as seen on the deep aquifer GWL map, the El Verano area has seven, the east side has four and only one (189) that looks to be centered in the east side deep depletion area</p> <p>-will the GSP outline on a map, the deep depletion areas somewhere? If so, a footnote can be put here, and then the reader can see what RMPs/ data the outline is based on</p>	<p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted. Monitoring frequency data gaps discussed in Subsection 5.4.1.2.</p> <p>Comment noted.</p> <p>Comment noted, The GSA's responsibilities for GW quality monitoring are discussed in Section 4. In the context of those responsibilities, there are not currently any identified data gaps that the GSA needs to address.</p> <p>Acknowledged. Data gaps in the surface water monitoring network are discussed in Subsection 5.4.2.</p> <p>Comment noted. Monitoring networks will be expanded during GSP implementation to better define depletion areas.</p> <p>Comment noted. Monitoring networks will be expanded during GSP implementation to better define depletion areas.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>-I'll add this same comment again for deep GWL monitoring: maybe it would be worth saying that higher frequency monitoring well trends will spur increased monitoring than semi-annually, if negative trends are seen</p> <p>p.13 the headings start to repeat, is this a function of required GSP layout? This is confusing to the reader, why you just read about an RMP category, and here it is again with no appreciable difference in the title of the heading...</p> <p>-if there are differences, maybe make the headings more explicit; it's all "describing RPMs"</p> <p>-I see the diff is between monitoring networks and monitoring points,</p>	<p>Comment noted. Monitoring frequency data gaps discussed in Subsection 5.4.1.2.</p> <p>Text revised.</p> <p>Text revised.</p> <p>Comment noted.</p>
		<p>5.2 says "5.2 Description of Monitoring Networks" 5.3 says "5.3 Representative Monitoring Point Networks" these titles need to be differentiated, they appear essentially the same</p> <p>"In the deep aquifer system, monitoring sites are well distributed throughout the Subbasin." -as noted in my comment above, it seems to me the east side/ wide part of the basin has some large areas not covered. however, I do see on map 7-b that you have the deep aquifer data gap areas covered</p> <p>looking at the 7-b deep aquifer data gap map, I wonder why two Prop 68 monitoring wells were not put inside data gap areas?</p> <p>p.17 it might be good to highlight which wells are in depletion areas and/or have a column to ID which SMC is covered by which well, the point being, allow the reader to key in on monitoring wells from trouble areas</p> <p>General comment on salt water intrusion RPMs: if salt water pushes fresh water to the surface, then shallow monitoring wells will be less apt to catch emerging issues; for data gaps in the Baylands border area, more deep aquifer monitoring wells should be a priority</p>	<p>Text revised.</p> <p>Comment noted.</p> <p>Comment noted.</p> <p>Comment noted. Monitoring networks will be expanded during GSP implementation to better define depletion areas.</p> <p>Comment noted. Data gaps in Sea Water Intrusion monitoring network discussed in Subsection 5.4.3.</p>

SONOMA VALLEY GSP COMMENTS: SECTION 6 PROJECTS AND MANAGEMENT ACTIONS			
DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
COMMENTS RECEIVED OCTOBER 1-31, 2021			
10/30/2021	Steve Rogers	<p>Tremendous good work has been done in the document to lay out where and how water is used in the basin and future stresses on the basin from existing and new wells. Very specific work has been done and outlined in the document on how some projects will impact the future of the basin.</p> <p>Section 6: Simulation of Projects and Management Actions Groundwater Sustainability Plan for Sonoma Valley Groundwater Subbasin places too much emphasis on Projects at the expense of Voluntary and other means of reducing current draw from the aquifers. The document has a projects first bias for solving Below Minimum Thresholds rather than voluntary and specific plans to reduce current draw.</p>	Comment noted
10/31/2021	Community Alliance with Family Farmers	<p>Clear guidance for implementing sustainable groundwater management in land use policy, including prioritization of water for local food production. Land use is inextricably tied to groundwater use and its sustainable management. The Plan needs to address not just water use of current activities and sectors, but of the expansion of water use and water-intensive activities, such as housing development, winery development and expansion, land conversion to new vineyards, and cannabis projects. Land use should be tied to meaningful measurements and projections of long-term water availability and be considered cumulatively, for the protection of all beneficial uses. Specifically, the plan should include Accounting and permitting of water hauling guidelines for the allowance of water hauling for food production, in particular ranches, should be developed. Permitting should be streamlined and cost-effective for defined emergency drought use.</p> <p>Regarding policy options, all policy options listed in the Santa Rosa Plain GSP ES.6.1 should be prioritized and expedited. Collaboration between the GSA Boards, local land use agencies, GSA member agencies, other Sonoma County GSAs, land use authorities and stakeholders is critical to achieving desired goals so must begin promptly. Several of these policies should be strengthened:</p> <ul style="list-style-type: none"> · Mandatory water conservation plans for all sites which use groundwater as well as new development must be required. A good example is recent legislation in Nevada which prohibits decorative turf. Plans should include mandatory conservation within jurisdictions. Plans also must create water conservation requirements for new development, as well as education for existing well owners, which has historically resulted in significant water savings. · Every county Use Permit must require monitoring of wells associated with the project at least bi-annually (spring and fall) with annual reporting that is compiled to produce trend lines for groundwater levels. Permit Sonoma has data for projects that required monitoring so that data must be “mined” to determine impacts. There should also be required assessment of cumulative impacts of well uses when a new well is permitted. 	<p>Comment noted. Appendix 3-D describes the projections of future water demands associated with future growth and land use changes that have been incorporated into the GSP. These projections will be revisited during 5-year GSP updates. Consideration of permitting guidelines for water hauling is a policy options that has been included in the initial list of policy options that will be considered and prioritized by the GSA Board within the initial years of GSP implementation.</p> <p>Comment noted</p> <p>Comment noted. Specifics regarding conservation plans for new development will be developed as part of the management action for assessing potential policy options described in Section 6.</p> <p>Comment noted. Data provided to Permit Sonoma has been incorporated into the GSP and will continue to be included in monitoring conditions during GSP implementation.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<ul style="list-style-type: none"> Well permits must be required to show explicit proof of sustained availability and to demonstrate NO cumulative impacts 	<p>Specifics regarding well permitting recommendations will be developed as part of the management action for assessing potential policy options. As the GSA does not have authority over well permitting, any policy options related to well permitting would be recommendations to the County, which has authorities regarding well permitting.</p>
		<ul style="list-style-type: none"> Well construction and permitting must have requirements, not just recommendations, that comply with GSA goals. Accounting and permitting of water hauling guidelines for the allowance of water hauling for food production, in particular ranches, should be developed. Permitting should be streamlined and cost-effective for defined emergency drought use. <p>Sonoma County's Chapter of CAFF requests to be included in these upcoming GSP activities: stakeholder input on the fee schedule to be levied on agricultural users; Farm Plan assessments; and any additional agricultural stakeholder meetings. Although agricultural stakeholder meetings have previously been held in the planning process, CAFF-- which represents the many small farms and ranches which supply our farmers markets, grocery stores, CSA boxes and some restaurants-- was noted in the focused working group.</p>	<p>As the GSA does not have authority over well permitting, any policy options related to well permitting would be recommendations to the County, which has authorities regarding well permitting. Specifics regarding water hauling recommendations will be developed as part of the management action for assessing potential policy options.</p> <p>Comment noted. CAFF representatives will be contacted to participate in the listed GSP activities.</p>
10/28/2021	California Dept of Fish & Wildlife	<p>Comment: Management actions should include specifics on how and on what timeline adverse impacts will be reversed, if observed. The GSP should specify adaptive management strategies to account for 'lag' impacts wherein groundwater responses to changes in management regimes are delayed due to aquifer characteristics. Projects and management actions should seek to maximize multiple-benefit solutions, including habitat improvements.</p> <p>Recommendation: The Department encourages the GSA to consider implementing recharge projects that facilitate floodplain inundation. These projects offer multiple benefits including downstream flood attenuation, groundwater recharge, and ecosystem restoration. Managed floodplain inundation can recharge floodplain aquifers, which in turn slowly release stored water back to the stream during summer months. These projects also reconnect the stream channel with floodplain habitat, which can benefit juvenile salmonids by creating off-channel habitat characterized by slow water velocities, ample cover in the form of submerged vegetation, and high food availability. Additionally, these types of multi-benefit projects likely have more diverse grant funding opportunities that can lower their cost as compared to traditional off-channel recharge projects.</p>	<p>Comment noted. Adaptive management strategies are being developed through the assessment of potential policy options, including demand management measures, that could be utilized to address potential "lag" in projects and management action implementation and results.</p> <p>Stormwater capture and recharge projects will be assessed and site-specific investigations conducted. Managed floodplain inundation was added as a possible multibenefit project.</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
10-31-2021	Coalition	<p>The consideration of beneficial users when developing projects and management actions is insufficient, due to the failure to completely identify benefits or impacts of identified projects and management actions, including water quality impacts, to key beneficial users of groundwater such as GDEs, aquatic habitats, surface water users, DACs, and drinking water users. Therefore, potential project and management actions may not protect these beneficial users. Groundwater sustainability under SGMA is defined not just by sustainable yield, but by the avoidance of undesirable results for all beneficial users.</p> <p>The management actions described in Section 6.4.1 (Assessment of Potential Policy Options for GSA Consideration) and Section 6.4.3 (Coordination of Farm Plans with GSP Implementation) describe improvement to water quality through sediment runoff mitigation and water quality sampling. The GSP specifically describes projects with benefits to GDEs, including the Stormwater Capture and Recharge Project described in Section 6.2.1. However, the plan fails to identify or describe projects or management action with explicit benefits to DACs or drinking water users, including a domestic well mitigation program.</p> <p>RECOMMENDATIONS:</p>	<p>Comment noted. A major focus of the initial five years of implementation will be to gather information and data in many key areas to improve the understanding of potential impacts associated with groundwater conditions to sensitive beneficial users, primarily shallower domestic well users (including DACs) and GDEs. This information and data will inform consideration of future refinements to SMC and appropriate response actions (projects and management actions) protective of these sensitive beneficial users. Projects and management actions with explicit benefits to DACs and drinking water users include any of the projects that are anticipated to raise groundwater levels. These primarily include water-use efficiency and alternate water source projects and aquifer storage and recovery.</p>
		<ol style="list-style-type: none"> 1. For DACs and domestic well owners, include a drinking water well impact mitigation program to proactively monitor and protect drinking water wells through GSP implementation. Refer to Attachment B for specific recommendations on how to implement a drinking water well mitigation program. 2. For DACs and domestic well owners, include a discussion of whether potential impacts to water quality from projects and management actions could occur and how the GSA plans to mitigate such impacts. 3. Recharge ponds, reservoirs, and facilities for managed stormwater recharge can be designed as multiple-benefit projects to include elements that act functionally as wetlands and provide a benefit for wildlife and aquatic species. For guidance on how to integrate multi-benefit recharge projects into your GSP, refer to the "Multi-Benefit Recharge Project Methodology Guidance Document". 4. Develop management actions that incorporate climate and water delivery uncertainties to address future water demand and prevent future undesirable results. 	<p>While a drinking water well impact mitigation program is not considered to be needed in the near-term based on current conditions, consideration of a well impact mitigation program has been added to the list of potential policy options for the GSA to consider in Section 6.4.3 of the GSP.</p> <p>The following language was added to the description of projects that could potentially impact water quality: "Future GSP implementation projects or actions that require their own site-specific monitoring network would take into consideration any localized COCs and regulatory requirements to avoid potential impacts to beneficial users, including domestic well users and DACs."</p> <p>Comment noted.</p> <p>This was performed for GSP. See Section 6 and Appendix 6-A</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
COMMENTS RECEIVED ON AUGUST 2021 VERSION			
9/6/2021	Greg Carr	<p>6.1.2 1) at end of paragraph. what is meant by "after the end of the current period?" should it say "which have already begun?" add 3) Group 2C management actions should be listed and described and explain why they were not modeled in the scenarios second to last paragraph seems to say that the project and management actions in Groups 1, 2A, and 2B do not clearly achieve sustainability. In this case, the paragraph should add that Group 2C actions are likely to be necessary to achieve sustainability.</p> <p>6.2.1 Water use...first sentence: include commercial and industrial uses and wineries</p> <p>6.2.2.5: legal authority: wouldn't ROW acquisition and county or state permits be required for these projects?</p> <p>6.2.3.2: Expected Benefits: change first bullet</p> <p>6.3 -a statement needs to be added here (first para) that these options appear to be necessary to achieve sustainability, given the uncertainty of the success of Group 1, 2A, and 2b projects -add a recommendation that the Permit and Resource Management Dep</p>	<p>Group 3 projects have been added to address these overall concerns.</p> <p>Comment noted. Text has been modified to include commercial and industrial uses.</p> <p>Comment noted, this will depend on specifics of the projects.</p> <p>Comment noted.</p> <p>The section associated with the comment has been revised to section 6.4 and additional language regarding the need to develop and have policy options ready early in implementation has been added .</p>
	California Dept of Fish & Wildlife	<ul style="list-style-type: none"> We suspect that groundwater recharge projects are likely to be an important action implemented as part of the effort to achieve groundwater sustainability in Sonoma County. NMFS encourages the GSA to consider implementing recharge projects that facilitate floodplain inundation, offering multiple benefits including downstream flood attenuation, groundwater recharge, and ecosystem restoration. 	Comment Noted
		<ul style="list-style-type: none"> Managed floodplain inundation can recharge floodplain aquifers, which in turn slowly release stored water back to the stream during summer months. These projects also reconnect the stream channel with floodplain habitat, which can benefit juvenile salmon, steelhead, and sturgeon by creating off-channel habitat characterized by slow water velocities, ample cover in the form of submerged vegetation, and high food availability. As an added bonus, these types of multi-benefit projects likely have more diverse grant funding streams that can lower their cost as compared to traditional off-channel recharge projects. NMFS stands ready to work with any GSA interested in designing and implementing floodplain recharge projects. 	<p>Stormwater capture and recharge projects will be assessed and site-specific investigations conducted. Managed floodplain inundation was added as a possible multibenefit project.</p> <p>Comment noted.</p>

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8/31/2021	Fred Allebach	<p>p. 2 Referring to these criteria quoted p. 2: “(1) what measurable objective will benefit from a specific project or management action, (2) criteria and circumstances that would trigger implementation and future termination, and (3) the process by which the GSA will determine a project or management action is necessary to execute.”</p> <p>-Since conservation is the #1 option in the hierarchy of projects and management actions flow chart, there would logically have to be specific reasons based on the below-criteria to ask people to conserve. Does this mean the basin already has undesirable results and conditions? The GSP is anticipating them? What will be the data-based rationale to ask GW stakeholders to conserve at the start?</p> <p>- to provide a rationale and justification to conserve, maybe the GSP can refer to a prior statement, such as “we’re taking out more than is going in”</p> <p>-suggestion: state the GW problem at stake that needs voluntary conservation up front in this chapter, why the need for voluntary conservation as a management action?</p> <p>-do all basin stakeholders conserve or just those with wells in deep aquifer depletion areas?</p> <p>-at what level will all basin stakeholder be called in to conserve, where is the rationale that all must help out the whole GW system, even if some may draw a prisoner’s dilemma conclusion?</p> <p>p. 3 Mandatory conservation is mentioned here</p> <p>-suggestion: start out this chapter with a graphic, a figure, a flow chart, that has voluntary conservation as #1, maybe show also in the graphic the potential amount of AF that are projected to be saved for each PMA stage, like a mini water budget but linked to PMAs</p> <p>P. 4 “additional expansion of recycled water deliveries and managed aquifer recharge consisting of operation of two ASR wells by City of Sonoma and Valley of the Moon Water District to offset existing localized pumping.”</p>	<p>Assessment of MT's during 1st year of implementation will determine if conditions indicating undesirable results are occurring. SGMA provides the GSA 20 years to address groundwater conditions before undesirable results are determined to occur. Outreach and education, including groundwater conditions, will be used to promote conservation to groundwater users.</p> <p>Comment noted</p> <p>Comment noted. This will be addressed in outreach/education.</p> <p>The program will be available to all groundwater users within the Subbasin, including focused outreach to groundwater users within and in the vicinity of areas of groundwater depletion.</p> <p>This will be addressed in outreach/education.</p> <p>Comment noted. This can be incorporated into outreach during implementation.</p>
		<p>-if possible, the GSA can take credit here for addressing disadvantaged communities’ (DACs) GW water use needs; the VOMWD service area has many DACs on municipal water and this water is 20-30% GW depending on season and future VOMWD GW use; if there is an ASR project that can be grant funded and won’t result in VOMWD rates going up that would negatively affect DACs in the form of higher VOMWD bills, then the GSA and GSP will be serving DACs <i>in lieu</i> by ensuring a continued supply of GW and that DAC use of GW in the VOMWD municipal mix remains equitably priced</p>	<p>Comment noted.</p>

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		-if in lieu or actual DAC benefits of a VOMWD ASR project are indeed the case, the GSA should take credit where credit is due, the GSP should articulate this somewhere, at least state awareness of the issue and of the DAC stakeholders involved with 20-30% basin GW use	Comment noted.
		P. 4. -can I see the Recycled Water System Plan (West Yost, 2018)?	This has been added to the GSA's website: https://sonomavalleygroundwater.org/wp-content/uploads/Recycled-Water-System-Plan-SVCSD-FINAL-201808.pdf
		-model scenarios will count up AF savings from voluntary conservation, and break put the categories of voluntary conservation, or lump them all together?	Section 6 has been revised to include the AF benefits for each group.
		p. 4 what will trigger the end of voluntary measures and the beginning of others?	GSP will be implemented via adaptive management. The following text has been added to section 6.2.1.1: " Initial implementation of these projects will include an assessment of the exact types of water-use efficiency tools and alternate water source projects that are expected to be most effective and feasible for Subbasin stakeholders. The assessment will also identify specific metrics for evaluating the benefits of the projects and assess Subbasin conditions that may lead to mandatory implementation of management projects."
		-how may AF expect to be saved by the purely voluntary measures?	Simulated benefits in terms of AF have been added to Section 6 for each project group and are included in appendix 6A.
		p. 4 Group 2A ASR wells will help the El Verano deep depletion area but will do nothing for the east side depletion area, right? The city ASR well is in downtown Sonoma, not near the east side depletion area	ASR in the vicinity of City of Sonoma Well No. 6 may provide some benefit to the East Side depletion area, as it is hydraulically upgradient of this area and is located east of the Eastside Fault.
		-The RW expansion on 8th East will help offset deep pumping	Comment noted. It would also help offset shallow aquifer system pumping.
		-why not specify here what projects will help what depletion area instead of lumping the two ASR projects? Seems vague....	Comment noted.
		P. 5 "Groundwater in storage under a baseline scenario without projects is estimated to decline by an average of 290 AFY over the entire 50-year projection period"	
		-does this account for the 1600 AF per year being lost now?	No, the current and future simulations are different
		-how does this math work?	comment is unclear
		P. 5 "the exceedances during severe droughts are not representative of undesirable results unless groundwater levels do not recover during subsequent wetter time period"	
		-recover to what level? 2 inches recovery is "recovery" or back to where it was?	This text has been removed from Section 6.

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		P. 6 the acronym PMA is dropped here and there's no quick easy way to see what it is	This acronym has been removed from the text.
		-in case like this, why not spell it out for clarity, or use the acronym at the beginning of the chapter in the text	This acronym has been removed from the text.
		-BMPs are introduced below, just how PMAs should be introduced	Comment noted
		P. 6 "existing levels of conservation"	
		-what's being talked about in Group 1 here is replacement tech that props up current use, not actual conservation or consciously using less GW; this tech salvation (low flow devices etc) approach could result in a Jevon's Paradox, where everyone moves to the new tech, and then the overall use goes up bc people feel like they have a get out of jail free card and are conserving and doing good	Comment noted
		-an actual use-less-GW message might be good too: like get rid of high water use landscape irrigation, as landscape irrigation is a top rural residential use	Comment noted, this can be incorporated into outreach and education.
		-figure out how to actually conserve and cut back instead of messaging and tech that allows a sense of not really having to sacrifice	Comment noted
		P. 7 "assess Subbasin conditions that may lead to mandatory implementation of water-use efficiency projects"	
		-I think people need to get the message that flat out conserving and using less GW is called for too; if people think a program of low flow shower heads etc is a fix, then they won't get the message to just plain use less	Comment noted
		-there has to be a conservation will and awareness, not just a tech fix	Comment noted
		P. 8 "...recycled water to agricultural users in Sonoma Valley began in the early 1990s and has been used to offset groundwater pumping for vineyards, dairies..."	
		-do cows drink RW? Are we drinking milk that came from drinking tertiary treated water? What's the diff betw filtering it through cow and through GW storage?	Offsetting GW pumpage likely has greater benefit.
		- "Additionally, beginning in 2012 recycled water has been used for environmental uses which, in 2014, included providing approximately 500 acre-feet for wetlands enhancement to the Napa Sonoma Salt Marsh Restoration Project (Salt Marsh Restoration Project)."	
		-SVCSD staff said the salt marsh start date was 2018, and 10 years from then is when the project would be over and the GSA could get up to 600 AF more in RW, but the GSA would need storage to get the extra	
		-my question to SVCSD staff: "8-10 years to restore Cargill salt ponds starting from when? 2010, 2018?"	
		-SVCSD staff: "2018. I believe that is when USFW received their NPDES permit to discharge."	
		-the quote above in the GSP text should clarify what "beginning in 2012, and 2014" means and when for Cargill, and then maybe say when the GSA might expect to get extra RW, and if it is 600AF,	This information has been removed from Section 6, as background information on recycled water deliveries is covered in Section 2.

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		<p>-would that be 200 AF to East Napa Rd and 400 AF more to existing users?</p> <p>P. 11 "other water purveyors are pursuing initiation of ASR in the Subbasin"</p> <p>-who? Where?</p>	<p>Where any additional recycled water would be allocated to has not yet been determined.</p> <p>This language has been removed from the text. The City of Sonoma and VOMWD are the only known water purveyors currently pursuing ASR in the Subbasin.</p>
		<p>P. 12 I would expect ASR benefits to be mostly localized and to accrue mostly to one big user, in this case, that user is municipal: VOMWD and the city. If public GSA monies are paying for the initial ASR projects how is that justified? In the case of VOMWD the fact that they have 20-30% GW in their mix gives reason, but for the city, with @ 5% GW use, the GSA seems to be just doing it bc it's there are the test well got drilled; this does not address a depletion area or a great need, and the rationales seems to come from a more One Water place, and One Water is not in the GSA purview. The rationale to do a city ASR project seems weak, maybe better to do it somewhere closer to the east side depletion area, but then fairness issues and the underlying question of beneficiaries and who was paying to benefit who would come up.</p> <p>-unanswered questions for city ASR: Are the questions of efficient use of funds to address the biggest need being elided in the GSP here?</p> <p>-if the GSA is paying \$5 million for VOMWD and city ASR, why would the public want to pay \$2.5 million for the city when there is not a GW problem at that location, and the project is more One Water than GSA?</p> <p>-or is the rationale that the city will bank GW for future drought? And city taxpayers will pay for that ASR \$2.5 million and not the GSA? What if other well owners pump off that city ASR benefit, say a half mile away, and don't pay?</p> <p>P. 13 "The second stormwater capture activity involves recharge of unallocated storm flows."</p> <p>-how to get storm water through the aqueduct without treating first? Sonoma water will just increase pumping from the supply wells during storms?</p> <p>-the same question of who benefits comes up here: If water is put in Arroyo Seco, then anyone with wells connected to that natural supply line would benefit, but not anyone in Schellville. Why would Schellville stakeholders agree to pay for that? how does it benefit them? In lieu savings?</p> <p>P. 14 for expected benefits, rather than a general statement, how about more specifically identifying the areas of benefit? Then stakeholders who read the GSP can see more of what they are getting.</p> <p>P. 16 ID the acronym COCs</p>	<p>These points will be considered during the fee study.</p> <p>These points will be considered during the fee study.</p> <p>These points will be considered during the fee study.</p> <p>These points will be considered during the fee study.</p> <p>Stormwater would not go through aqueduct, but would be applied to the land surface directly for recharge.</p> <p>Groundwater flows downgradient. If nearby groundwater levels are raised, then Schellville stakeholders may benefit. These points will be considered during the fee study.</p> <p>Such details is outside the scope of the model, and exact locations of projects have not yet been established, so locations of benefits are not exactly known, either.</p>

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		<p>-if acronyms appear out of nowhere, better to write them out in the text at that place than force the reader to go look at a key</p> <p>P. 17 “. The GSA believes that the current level of Subbasin pumping can be continued with the effective implementation of the projects and management actions described above.</p> <p>-so, the GSA is planning to keep business as usual? No sacrifice from the user end? No demand reduction only supply enhancement?</p> <p>-or maybe this says that the current level is the ceiling and all new users or increasing uses will result in a situation where all straws just have to get less?</p>	<p>Comment noted</p> <p>Group 1 includes voluntary demand reduction and an assessment of conditions that may trigger mandatory demand reductions. No, current pumping is estimated to exceed the sustainable yield and reductions in groundwater use and/or supply enhancement projects will be needed to achieve sustainability.</p>
9/7/2021	Robert Pennington	Additional seasonal use of Russian River Water in place of groundwater use could be cost effective. I recommend a future assessment (similar to the proposed evaluation of recycled water) be specified	This is done in the Group 2b projects and updates of the groundwater banking feasibility study, including an updated assesment of Russian River water supplies.
9/13/2021	Vicki Hill	why limit conservation to well owners and ag? why not extend it to commercial and industrial users, including wineries? Please explain.	Text has been revised to include commercial and industrial users.
9/7/2021	Fred Allebach	<p>Appendix 6A</p> <p>I’m going to develop a narrative about conservation, supply, and demand here, and use this appendix as my straw man. The concepts here apply to the whole GSP and all GSPs. It’s possible some of the ideas here could be integrated into the GSP, esp. how to rely more on, and make Group 1 conservation PMAs more integral and effective. My thesis: demand reduction is what makes the most sense. The GSP should present a viable demand reduction track with scenarios to go along with the supply enhancement track.</p> <p>What if Group 1 conservation does not meet the 600- 650 AFY target? Does the GSA double down on more supply enhancements? When does the GSA move from carrot to stick? The GSP does say obliquely it has regulatory sticks, but IMO not in a way that inspires fear or provides compelling rationales to conserve.</p> <p>Page 5 - Fgiure 1 - -looks like Sangiacomo will be a prime beneficiary of Group 1 RW farms</p> <p>-just like in my analysis of the Arroyo Seco drainage area years ago, the main lower-basin rural residential GW use areas are Buena Vista/ Lovall Valley/ Castle Rd., Burndale Rd., Shellville Colony, and Vineberg/ Schellville.</p> <p>-the concentration of these RR GW pumping areas makes it easy to see why the east side depletion area exists, esp for recharge interception from northern, out-of-basin well clusters in the Buena Vista and Lovall Valley areas, in the Arroyo Seco headwaters</p>	<p>Comment noted</p> <p>This is addressed in Section 6. Appendix 6A addressess hydrologic impact of implementation</p> <p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p>

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		<p>-if Group 1 conservation is to be effective to head off expensive projects and fees associated with them, the rural residential or RR sector, that represents near 30% of basin GW use, this cohort will have to be targeted with energetic messaging</p> <p>-a specific reduction target number in AFY needs to be given for both RR and ag</p> <p>-part of the messaging can be: if you don't save, you will pay; and/or basin GW is one system, we're all in together, what one does affects all</p> <p>-yet without metering or any real way that people can know others are conserving too, a voluntary conservation regime will be highly vulnerable to prisoner's dilemma thinking and cheating, which will defeat mass conservation</p> <p>-without meters and the ability for people to all watch each other for fairness, lack of accountability will foster cheating and will act to make conservation less probable</p> <p>-GSA fear of exercising regulatory power will foster an initial regime of conservation cheating until sticks come out or the SMC bars are lowered</p> <p>-if conservation is really a serious plan, and that the GSP is not fundamentally relying on tech salvation and supply increases as the core GSP cure, then IMO, a conservation program needs to be fleshed out in a much more serious way</p> <p>-this is to say, the primary GSA message, starting at Group 1 PMAs, has to have a strong onus on overall demand reduction, no matter what the source of supply; if business as usual (BAU) levels of consumption, or an inadequate diet with too many calories is sanctioned, then it is foregone conclusion that supply increases from Groups 2A and 2B will be necessary</p> <p>-just what the conservation goals and math is, should be made very clear in the GSP Executive Summary, esp. in lieu of Water Budget, and what the GSP is looking to accomplish through Group 1 conservation</p>	<p>Comment noted</p> <p>Appendix 6A addresses hydrologic impact of implementation. Specific target numbers will be developed during GSP implementation</p> <p>Appendix 6A addresses hydrologic impact of implementation</p> <p>Noted</p> <p>Comment noted. Appendix 6A addresses hydrologic impact of implementation</p> <p>Comment noted. Appendix 6A addresses hydrologic impact of implementation</p> <p>Comment noted. Appendix 6A addresses hydrologic impact of implementation</p> <p>Comment noted. Appendix 6A addresses hydrologic impact of implementation</p> <p>Comment noted. Appendix 6A addresses hydrologic impact of implementation</p>
		<p>p 6</p> <p>"The Group 1 scenario simulates the impacts of a 20% reduction in all rural domestic use and a 10% reduction in consumptive use for all vineyards, both beginning in 2025."</p> <p>-does this mean the conservation begins in 2025 or the measurement of it begins in 2025? If this is not clear, it makes a big diff! Presumably conservation messaging and efforts will start ASAP after 1/22 and the completion of the GSP</p> <p>-here we see the GSP goal, 20% reduction for RR and 5% reduction for ag; how many AFY is this? why not more for ag?</p> <p>p. 7</p>	<p>It means reduced pumping will start in 2025.</p> <p>Appendix 6A addresses hydrologic impact of implementation. 10% reduction in AG, not 5%.</p>

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		<p>Figure 2</p> <p>-Figure 2 seems overly optimistic by a lot</p> <p>-using more RW is a sensible plan no matter what, but... if RW is seen as a replacement for BAU levels of use, then the overall conservation message gets thrown out after the GSP gets past Group 1 PMAs, and the GSP moves to a regime of whole hog supply enhancement</p> <p>-Group 2 (2A) RW farms on Figure 2: most of these farm lots are very far away from the pipe, how is RW piping going to cross all the private property to get to land far removed from the pipe?</p> <p>-where is the storage located on the maps, that the SVCSD says is necessary to even get the RW? SVCSD has expressed a preference to have one big client rather than a lot of smaller ones; it seems like this simulation is assuming some things that are not realistic</p> <p>-how will RW get all the way down Burndale to all those lots?</p> <p>-what seems more likely is that a couple of big users will get all the RW, and the mitigation effects will be much less widespread than this map shows, effects will be more localized and not have as much widespread benefit as shown here, IMO</p> <p>p. 8</p> <p>Projects 2B seem to show that the GSP is planning for conservation to fail, and that there is in place a fundamental bias to supply enhancement as the GSP end game</p> <p>-stakeholders will not seriously be asked to sacrifice; this may be an honest realpolitik calculation by staff, people don't want to be inconvenienced from BAU; they won't change, addiction to easy living is what makes Americans have all the resource and disease troubles we do; the realpolitik future for GW is to set modest conservation targets, and when these fail, to ramp up supply, have moderate penalties, and hit stakeholders up for the money then</p> <p>-this is to say, it would be too unpopular to be too strict on conservation, so public GW regulatory agencies like the GSA then have to address consumption issues on the back end</p> <p>-for this same reason, no one in our society is being asked to drive less, or consume less, the whole onus is on BAU, growth assumptions, and on green replacement tech, keep up the exact same behaviors but save ourselves with tech fixes</p>	<p>Comment noted. Appendix 6A addressess hydrologic impact of implementation.</p> <p>Comment noted. Appendix 6A addressess hydrologic impact of implementation</p> <p>That will be assessed during GSP implementation in coordination with SVCSD and property owners.</p> <p>Locations for storage is not addressed in this GSP and will need to be determined during GSP implementation in coordination with SVCSD.</p> <p>That will be assessed during GSP implementation in coordination with SVCSD</p> <p>Comment noted</p> <p>No, you're misreading the purpose of this document. Nowhere in this report does it assess or imply conservation's likely failure. These are contingencies.</p> <p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p>
		<p>-I think we are fooling ourselves, reliance on tech salvation makes us vulnerable to a Jevon's Paradox, we'll end up using more GW anyway; we want it all, and to not have to sacrifice, so, it's understandable that GSP planners see the actual for human behavior, people's inability to sacrifice has to be catered to with tech salvation supply enhancements</p>	<p>Comment noted</p>

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		-what when we run out of tech rabbits in our hat?	
		p. 8	
		“There are five proposed MAR locations along Sonoma Creek, Arroyo Seco, Carriger Creek, Felder Creek and Rodgers Creek. MAR locations were selected based on identifying simulated vineyards near the diversion locations selected. Conceptually, the diverted water would be recharged via flooding of the vineyards.”	
		-why not a map showing the exact diversion point for the five locations? Inquiring minds want to know	Because these are not yet known.
		-for Arroyo Seco the diversion point looks to be right near the Old Winery Rd entrance to Bartholomew Park; note the two headwaters forks of Arroyo Seco join right in this area; a diversion location should be located where the two forks join to get greater volume	Comment noted
		-this location has some small to moderate sized hobby vineyards to the east (not on level ground) but then the area shown on Figure 4 as the Arroyo Seco MAR area is mostly upscale rural residential, as shown on Figure 1; the only big vineyard tracts on flat land along Arroyo Seco appropriate IMO for MAR, are south of MacArthur and along Denmark	Comment noted
		-For a better MAR payday, I'd suggest moving the Arroyo Seco diversion point farther south to Arroyo Seco and MacArthur, not by Bartholomew Park	Comment noted
		-MAR where the flood areas are shown on the simulation map would cross too many property lines and roads, and run off too fast bc of slope; the map is not the territory	Comment noted
		-if Arroyo Seco MAR assumptions don't seem to be calibrated to facts on the ground to optimize spreading and sinking, what about the other MAR locations' assumptions?	More information will be gathered during implementation period.
		p. 11	
		“From WY 2025 until the end of the simulation, the rural domestic pumping rates are reduced by 20%.”	
		-so conservation is not expected to start until 2025? Or 2025 is when the effects of initial conservation are expected to start showing?	WY 2025 is when conservation is assumed to start for modeling purposes.
		-“FMP farm units do not necessarily reflect actual ownership of adjacent fields or crops. FMP calculates the average monthly consumptive use for each farm. FMP then applies a specified NRD to satisfy as much of the demand as possible. Any remaining demand is met with groundwater pumping.”	
		- for Figure 4, in reality RW delivery will be highly local right by the pipeline, and any savings of in lieu GW pumping to delivery sites will apply only to those sites, and will be offset by continued GW pumping by outlying farms not able to get RW, thus, the SVCSD pipeline and the GSA have incentive to find the biggest GW pumpers in the area, do combined storage with them, and deliver to them as a priority, thus making money and efficiency more important than widespread RW delivery to offset GW pumping	Lots of assumptions in comment. Comment noted
		p. 12	

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		-some explanation of “layers”, layer depth, and layer characteristics, that ASR water will be injected to is called for here, or at least a footnote to an explanation in Basin Conditions	See model documentation for description of model layers
		-layers are just dropped in here, the GSP can’t assume the reader knows anything, I get the general idea, but the current text here is light for general reader transparency	See model documentation for description of model layers
		-More “layer” detail would be good p. 14	See model documentation for description of model layers
		-OK, here are the conservation number targets for RR and ag? 377 AFY less for ag and 233 AFY less for RR	
		-this means the GSP is planning to have conservation pencil out at 600 AFY less (plus the 51 AFY from Group 1 RW); can this go in the WB and some simplified WB diagrams in the Executive Summary, so people can see up front how the plans shape up; people will want to see the totals and baseline goals and plans in a clear way, not hidden in complex charts	This info is in Exec Summary
		-put the money numbers in one easy to read chart	Appendix 6A addressess hydrologic impact of implementation. Costs are not addressed here.
		-is this conservation goal adequate to, if met, make it so Projects 2A a 2B won’t be necessary?	Group 1 does not prohibit MT exceedances, so is not enough to make 2a/2b unnecessary.
		-how much would stakeholders need to conserve to avoid having to pay for big projects?	This will be futher assessed during GSP implementation.
		-note, the Table 2 RR domestic pumping Group 1 box refers to RR pumping as ag pumping	Comment noted
		-in Table 2, does groups 2A and 2B count Group 1 savings as a constant? Or is the 651 AFY total added to 2A and 2B to inflate the number?	Impacts are cumulative and not separated by project.
		-in Table 2, if Group 1 conservation is figured in as a constant to Groups 2A and 2B, couldn’t the conservation ask conceivably get greater over time? If growth of RR and ag use is projected by the ag and RR work groups, wouldn’t this mean that all future straws will have to get less each? and that constants as far as current ag and RR projected conservation savings won’t hold?	All existing and new users assumed to make 10%/20% conservation, while adding new users still occurs. So growth is still occurring -- same as baseline, but values is 10%/20% less
		-Group 2A is expected to add 340 to 482 AFY of supply; is this to account for ag, RR and municipal growth? A conservation-oriented approach would also have a provision for a less per straw or reduced demand per straw future, rather than an implicit increase in supply to meet per-user BAU demands	new supply doesn't 'account' for new growth. unclear what that means.
		-alternately in Table 2, growth in RR, ag, and municipal would not hold Group 1 constant, but would factor in at least the same percent GW conservation savings for new growth GW users; Group 2A and 2B ag and RR then would <i>not be the same as Group 1</i> but would add additional AFY conservation savings from the new growth users who would be expected to save at 20% and 5% respectively for RR and ag users	All existing and new users assumed to make 10%/20% conservation, while adding new users still occurs.
		-Group 2B adds @ 340 more AFY supply p. 14	

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		<p>“Over the entire simulation period, the Group 1 simulation has an average annual change in storage of -180 AFY, Group 2A and Group 2B have approximately a -120 AFY and -70 AFY annual change in storage, respectively.”</p> <p>-so, conservation and RW from Group 1 saves 180 AFY, and if up to 2040 another 190 AFY were saved, there would be no need for any 2A and 2B PMAs, right?</p> <p>-if the simulated trouble starts from 2041-70, that’s when the putative 190 AFY extra from 2A and 2B would be needed, but this could just as well be saved by using the 190 AFY less, right?</p>	<p>Saving' water is not the same as increase in groundwater storage. But this may be close to accurate.</p> <p>Saving' water is not the same as increase in groundwater storage. But this may be close to accurate.</p>
		<p>-why is additional belt tightening not listed as an option?</p> <p>P 14</p> <p>Table 3</p> <p>-the minus AFY per year could just as well be coupled with a prescription for all GW users to dial back use by a percent that would offset the projected losses, i.e. living within our means and not needing more tech fixes to save us from our failure to sacrifice</p> <p>-climate scenarios show that basin GW users will have to have a strategy to pay the GW piper from 2041-70; when most people have a budget shortfall but no money tree, they figure out where to cut, what to do without</p> <p>-in dry CA, where will all the increased supply come from 2041-70 if the whole system is stressed and there is not extra ASR water, not extra MAR water bc of endangered fish extinctions?</p> <p>-we are already having to pay the piper for mismanagement of fisheries, and for water pollution, and general hubris that we can keep growing forever in a finite system</p> <p>-IMO demand reduction is what makes the most sense. I think the GSP should present a viable demand reduction track to go along with the supply enhancement track</p> <p>p. 24</p> <p>Figure 12</p> <p>-Scenarios could avoid URs in the severe drought years by having an amped up conservation track to mitigate, rather than assuming more or less BAU GW consumption levels and supply enhancement as the go-to plan</p> <p>-what if Group 1 conservation does not meet the 600- 650 AFY target? Does the GSA double down on more supply enhancements? When do the regulatory sticks come out? At the five year milestone?</p> <p>p. 26</p> <p>Figure 13</p>	<p>Group 1 includes voluntary demand reduction and an assessment of conditions that may trigger mandatory demand reductions.</p> <p>Comment noted</p> <p>Comment noted</p> <p>See appendix 3-G, section 3.5. Additionally there will likely always be available excess winter water.</p> <p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p> <p>Group 1 includes voluntary demand reduction and an assessment of conditions that may trigger mandatory demand reductions.</p>

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		<p>-the deep aquifer benefit in the Buena Vista/ Lovall Valley area of Arroyo Seco, presumably from in lieu pumping offsets from MAR, rely on spread it and sink it flooding assumptions that may not come to pass given the slope, small parcels, property lines, and roads involved.</p> <p>-what if assumptions about Group 1 conservation do not meet the 600- 650 AFY target? What would a GW contour map of the east side depletion area look like then?</p> <p>Figure 14</p> <p>-here it's easy to see that increases in deep aquifer contours have the benefits of keeping Baylands saltwater intrusion at bay; does this map account for the projected 3.5' sea level rise?</p> <p>p. 32</p> <p>Figure 16</p>	<p>Comment noted</p> <p>A groundwater contour map was not prepared for the projected baseline, however simulated groundwater levels at RMPs are included in Appendix 6-B.</p> <p>yes, this simulation accounts for sea level rise</p>
		<p>I find myself skeptical that GW levels will be up by 90' by 2040 from all PMAs and the 2B projects. People everywhere, including Sonoma County and Sonoma Valley have shown a fantastic ability to fight, not cooperate, and not get along. This GSP simulation looks like a have your cake and eat too scenario, overly rosy.</p> <p>-I guess the point of the GSP is to create a scenario to show DWR that it's possible the SVGSA can solve the GW issues here, given that all stakeholders and beneficial users will follow the prescriptions laid out in the GSP. Such prescriptions never really erred to the side of more conservation and demand reduction, the politics had to split the diff with stakeholders not willing to sacrifice much. At the end of the day, GSA staff may have made the most realistic call, given human nature.</p> <p>One weakness I see is in not accounting for possible failure of Group 1 conservation goals and insufficiently emphasizing the level of stick needed after that to avoid URs. Unless a covert back-up plan is to simply lower the URs and call that the new local definition of sustainable; again, this may show staff as the most astute observers of human nature after all. You can only go as far as the horses you got will pull. Eventually, if people can't self-limit, GW lack of supply will limit them. Then they will have made their bed and have to lay in it. This observation may play out for GSPs statewide.</p> <p>IMO, better to read the wiring on the wall and go on a GW diet up front.</p>	<p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p>

SONOMA VALLEY GSP COMMENTS: SECTION 7 IMPLEMENTATION PLAN			
DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
COMMENTS RECEIVED OCTOBER 1-31, 2021			
10/30/2021	Steve Rogers	No apparent cost benefit analysis is presented in the document to guide leadership in approving budgets of projects for various plans. Although the document plans on Grants to defer the costs of some projects, the ongoing costs, such as the cost of water for ASR are not mentioned and these costs could be significant. The budgeted amount for plans to promote voluntary reductions in acquire draw of \$80,00 is insufficient to mount any kind of campaign that has significant impact. In addition, no mention is made on how this campaign will be managed and how results will be measured. Other measures such as metering, well permit restrictions do not seem to have measurable impacts so the Board could make decision about trade offs between projects that have significant funding requirements vs well permit restrictions or mandatory best practices.	Many of the potential projects require additional investigation and feasibility studies. As information is obtained through these studies, cost benefit analyses will be developed and shared with the GSA Board prior to initiating specific higher-cost capital projects.
10/28/2021	California Dept of Fish & Wildlife	<p>Comment: Management actions should include specifics on how and on what timeline adverse impacts will be reversed, if observed. The GSP should specify adaptive management strategies to account for 'lag' impacts wherein groundwater responses to changes in management regimes are delayed due to aquifer characteristics. Projects and management actions should seek to maximize multiple-benefit solutions, including habitat improvements.</p> <p>Recommendation: The Department encourages the GSA to consider implementing recharge projects that facilitate floodplain inundation. These projects offer multiple benefits including downstream flood attenuation, groundwater recharge, and ecosystem restoration. Managed floodplain inundation can recharge floodplain aquifers, which in turn slowly release stored water back to the stream during summer months. These projects also reconnect the stream channel with floodplain habitat, which can benefit juvenile salmonids by creating off-channel habitat characterized by slow water velocities, ample cover in the form of submerged vegetation, and high food availability. Additionally, these types of multi-benefit projects likely have more diverse grant funding opportunities that can lower their cost as compared to traditional off-channel recharge projects.</p>	Thank you for the recommendation. The GSA recognizes the importance of implementing recharge projects, and has outlined Projects and Management Actions to facilitate stormwater capture and recharge (Section 6.2.4).
10/31/2021	Community Alliance with Family Farmers	We believe the following components should be included in every Groundwater Sustainability Plan (GSP):	

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
		<p>Clear guidance for implementing sustainable groundwater management in land use policy, including prioritization of water for local food production. Land use is inextricably tied to groundwater use and its sustainable management. The Plan needs to address not just water use of current activities and sectors, but of the expansion of water use and water-intensive activities, such as housing development, winery development and expansion, land conversion to new vineyards, and cannabis projects. Land use should be tied to meaningful measurements and projections of long-term water availability and be considered cumulatively, for the protection of all beneficial uses. Specifically, the Plan should include:</p> <p>1. Coordination of water management and land use planning. In line with the objective of “close coordination and collaboration with other entities and regulatory agencies that have a stake or role in groundwater management in the Subbasin,” the GSP should provide clear mandates and guidelines to be incorporated by Permit Sonoma into Use Permits, and by other jurisdictions into their land use policies and permits. Permitting must not be in conflict with the GSP and should support achieving sustainability goals.</p>	<p>Additional text had been added to Section 7.2.2 regarding coordination with land use agencies. Recommendations on policy options will addressed through the policy options management action.</p>
		<p>2. Prioritization of water for food farming (fruit, vegetables, herbs, and livestock). As supply chain disruptions continue due to climate change and other impacts, we will increasingly rely on local food production, especially during emergencies. Given that local food security is likely to become an even more significant issue over the 50-year planning horizon, the Plan must distinguish agricultural water use by food vs. non-food crops. It may be argued that wine grapes are essential to our economy, but they can be dry farmed—whereas most fruits and vegetables, and all livestock, require water. According to annual Crop Reports there has been a glut of wine grapes on the market since 2018, yet more vineyards continue to be developed across the county. CAFF has been involved with providing resources and training on irrigation efficiency and assisting with vineyard transition to dry farming.</p> <p>3. Preparation for large-scale, emergency groundwater reliance/ usage. Staff have explained that “long-term sustainability” and “adaptive management” are central to groundwater sustainability planning, and that short-term shortages and drought are not intended to be included in this phase. Assuming that groundwater levels begin to significantly decline, it will be possible to create and implement necessary management actions in the future. We find this approach to be highly irresponsible and inadequate. Plans should contain proactive preparation for worst-case scenario groundwater extraction, such as if sudden or drastic shortages and/or disruptions to surface water supplies were to occur. Local agencies and municipalities should use this information to create or update contingency plans, which should also include equitable prioritization of uses. “Worst case scenario” planning provides necessary time to change course in advance of irreversible decline or degradation. We are concerned that the climate model showing “normal” and wetter than normal conditions for 2025-2050 could lead to severe water shortages - the opposite of sustainability.</p>	<p>Comment noted.</p> <p>Comment noted. Many of the implementation activities and planned projects and actions will build resiliency for groundwater users within the Subbasin.</p>

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		Sonoma County's Chapter of CAFF requests to be included in these upcoming GSP activities: stakeholder input on the fee schedule to be levied on agricultural users; Farm Plan assessments; and any additional agricultural stakeholder meetings. Although agricultural stakeholder meetings have previously been held in the planning process, CAFF-- which represents the many small farms and ranches which supply our farmers markets, grocery stores, CSA boxes and some restaurants-- was not included in the focused working group.	Comment noted. CAFF representatives will be contacted to participate in the listed GSP activities.
COMMENTS RECEIVED ON AUGUST 2021 VERSION			
9/6/2021	Greg Carr	<p>7.2.4 -shouldn't the bulleted list of data gaps include the lack of minimum streamflow standards for the surface waters in the valley?</p> <p>-7.2.4.1 Studies...: projected groundwater extraction from commercial and industrial land uses as well as wineries are mis</p> <p>7.2.6 under management actions: This section needs particular focus on the two areas of deep aquifer depletion and should also include possible limitations on new or expanded wells in these areas</p>	<p>The lack of instream flow standards is identified as a data limitation in Section 4.10.2.1, which will need to be addressed by other agencies. Section 7 is focused on addressing data gaps that the GSA will address during GSP implementation.</p> <p>This has been added to the description for the study to "Improve information on existing water wells and groundwater extraction"</p> <p>Added language to second bullet under Management Actions to address this.</p>
		7.4 - second to last paragraph: include assessment of management actions (policy options) in this schedule and in the chart that follows	This language has been added.
9/1/2021	Fred Allebach	<p>-7.0 "the implementation plan will adapt over time based on new information and data, model development, and input from Subbasin stakeholders."</p> <p>-would it help to define adaptive as both proactive and reactive?</p> <p>7.1 would it be worth it to indicate if Board and AC will be meeting on a reduced schedule? Or on an as-needed basis? Or no need to specify?</p> <p>"Currently, the GSA contracts with Sonoma Water for technical outreach, grant administration and GSA management services and contracts with other consultants for legal, facilitation and some monitoring services. As the GSA transitions from GSP development to implementation starting in 2022, staffing needs will be evaluated to determine how to most efficiently and effectively move forward. To reduce costs and for consistency for groundwater users within Sonoma County, it is possible that the GSA will coordinate management and other services with the Petaluma Valley and Santa Rosa Plain GSAs."</p> <p>-for clarity, I suggest saying the SVGSA at the start, esp when other GSAs are mentioned</p> <p>p.3</p>	<p>Reworded slightly to make it more active</p> <p>No need to specify in this in this document, but definitely will work on it with AC and Board</p> <p>Style is GSA throughout document after first reference</p>

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		<p>7.2.2 "In addition, the GSA will continue to engage and coordinate with local, state and regional agencies (including city of Sonoma, Valley of the Moon Water District, Permit Sonoma, other GSAs, Agricultural Commissioner, Sonoma County Ag + Open Space District, DWR, SWRCB's Drinking Water and Water Rights Division, NCRWQCB and SFBRWQCB) on filling data gaps and implementation of projects and actions. This coordination will include discussions of partnering opportunities for funding implementation components that are mutually beneficial."</p> <p>-in the above paragraph, I suggest mentioning that once the GSP is done, that Permit Sonoma then has a solid document to work with, and this then gives them a basis to manage unincorporated county land use and well permitting in accordance with set GSP parameters and goals. Once the GSP is done, development projects in the Baylands and depletion areas will come under closer public and county scrutiny to conform with GSP parameters and goals</p> <p>-Permit Sonoma planners said once they had rules, then they had something solid; I would expect the SV GW Availability map to be updated ASAP</p> <p>P. 4 "constituent of concern"</p> <p>-here the text spells it out without an acronym but in chapt. 6 the acronym is dropped in with no spelling out</p> <p>-acronym use and spelling out for clarity should be consistent throughout the GSP; acronyms are like a secret language that GSA insiders know and assume others in the secret society know; the public doesn't know these, and the public and DWR readers should always be kept in mind: lead them by the hand....</p>	<p>This seems to be a comment more appropriate for Section 6, when discussing management actions. The Sect 7 paragraph is more about coordination and engagement, versus specific actions</p> <p>Style is to define it once at beginning of GSP and use COCs throughout. Corrected</p>
		<p>P. 5 I don't know where the best place to put in a statement about GSP proactive action on warning SMC signs that are not URs. Staff said throughout that a proactive stance would be taken, this when the AC was leaning toward stricter SMC criteria. This is to say, mention that the GSA will take warning signs seriously and take proactive measures to address potential issues, not wait until there is a heart attack to take a corrective posture</p> <p>Table 7.1, the (dark) blue bar with black text is hard to read, maybe change the background color to provide more contrast</p> <p>P. 7 Subbasin Conditions, should these have a sense of saying a water budget is being accounted for?</p> <p>Same for GSP Implementation Progress, inquiring minds in the public will want to know, are we moving the needle or not? are we losing ground? Reporting should have a clear, forest-from-the-trees statement; don't hide the ball from the public in the technical weeds, let the public see progress or not, in layman's terms; that is to say, report for DWR <i>and</i> the public</p> <p>7.2.4 data gaps</p> <p>-is the boundary of the deep aquifer depletion areas a data gap?</p>	<p>Added language</p> <p>Comment incorporated</p> <p>This is something for the 5-year reports, which will take a broader look at sustainability and whether goals are being achieved.</p> <p>Yes</p>

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		<p>- if not, then earlier in the GSP the boundaries should be shown so that the public, Permit Sonoma, consultants, and developers etc can see what is going on</p> <p>-is the actual rate of depletion, and total AF volume loss in these depletion areas a data gap?</p> <p>-given that the depletion AF loss numbers have changed from larger to much smaller, it stands to reason that the numbers could go back up given more data; it would be hard to believe that if other parts of the hydrogeologic system are unknown and are data gaps, that the GSA would know for sure about depletion area total volume losses and rates of loss; knowledge could change....</p> <p>-I see this above comment probably comes under aquifer characteristics, still, maybe explicitly state something about the main problem areas as data gaps, if they are not data gaps then show them with certainty in a map</p> <p>P. 8 GDE studies</p> <p>“Compile and evaluate existing and relevant habitat field surveys that aid in understanding potential impacts of groundwater pumping on habitat associated with interconnected surface water.” ^[1]_{SEP}</p> <p>-maybe in addition to the above, study habitat loss and extirpation of species as red flags to look to find any association with GW pumping; if we see a regime of drought, more pumping and more extirpation, look for GW pumping links</p> <p>-General Comment: in some respects, the whole GSP seems biased and bending over backwards to not offend ag interests; this includes minimizing conservation and demand reduction, and to not appear to be too strict for other beneficial uses like the environment; I can understand that posture is important, to not alienate the Alpha beneficial user, at the same time, the GSA and GSP should not give the impression that through tech fixes, business as usual is OK; as Jim Bundschu said once, some limits are expected just give ag a clear number they will have to adjust to; or is the GSA prepared to say that “things are really not that bad here, everybody relax”</p>	<p>Comment noted</p> <p>The model provides a reasonable estimate of both with some uncertainty; additional data can reduce the uncertainty</p> <p>Comment acknowledged</p> <p>Comment acknowledged</p> <p>Natural resource agencies/NGOs could certainly conduct these studies, and through coordination efforts share this information with the GSA.</p> <p>Acknowledged</p>
		<p>7.2.5</p> <p>P. 10: 7.2.5: -is it worth it to say the model will be recalibrated to facts on the ground as those facts come in?</p>	<p>Added language</p>

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		<p>-to what extent does or can human understanding supplant the model? Is the GSA getting on its knees to a new god here like HAL in 2001?, and foregoing being able to put two and two together in the good old fashioned way of human analysis? It's very possible people will see things the model never will; I'd suggest not relinquishing total volition to the model, maintain a healthy skepticism bc if the assumptions are wrong, the results are wrong, and with a lot of fields of inquiry, people only find what they are looking for; staff needs to keep on their science hats and remain open-minded, let the GSA Board and AC worry about politics</p>	<p>Comment noted</p>
		<p>7.2.6: PMAs.... Suggest to spell out, don't drop acronyms out of nowhere</p>	<p>Text corrected</p>
		<p>7.2.6 Implementation of Group 1 Projects</p>	
		<p>-don't forget conservation also means conscious demand reduction, not just keeping our same behavior but switching the water-use tech; in sustainability studies, that you can get a PhD in, <u>one possible future</u> hinges on keeping the growth paradigm but with green tech replacements, this is the tech optimist future, we can invent our way out, adapt through more tech without really changing our appetites</p>	<p>Comment noted</p>
		<p>-<u>another possible future</u> is based on de-growth, getting to an S-curve carrying capacity, a steady-state economy, CONSERVATION, and all at a much more local level.</p>	<p>Comment noted</p>
		<p>-<u>Then we have a BAU future</u>, business as usual and collapse as another option</p>	<p>Comment noted</p>
		<p>-with water in CA, scarcity and demand reduction seems to be the writing on the wall, but the GSP seems locked onto a tech salvation strategy for the future; this seems to me to be one, misguided, and two overly optimistic, esp given global fresh water forecasts</p>	<p>Comment noted. Additional language has been added to prioritize development of policy options and develop triggers that could lead to mandatory demand reduction.</p>
		<p>-past GRA conferences revealed GSAs all looking for supply enhancements when demand reduction was clearly called for, and here is the SVGSA recapping the same thing</p>	<p>Comment noted</p>
		<p>-at least the GSP could be leavened by a bit more emphasis on demand reduction</p>	<p>Comment noted. Additional language has been added to prioritize development of policy options and develop triggers that could lead to mandatory demand reduction.</p>
		<p>-maybe Sonoma water needs to lead the way to a regional One Water place, and the GSAs, contractors, etc can follow in the wake, to a more regional conservation stance</p>	<p>Comment noted</p>
		<p>-at some point, someone will have to challenge the endless growth model and BAU, or else we will be committed to a tech salvation Star Trek future, but people now seem way too dumb, selfish, and self-centered to even do it expanding in the above comments Group 2A Projects could be framed as ways to help us live within our means, and not as tools to enable further growth</p>	<p>Comment noted</p>

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		<p>-if in realty, further growth is inevitable, i.e 900-some more unincorporated homes in the GSP planning horizon, then IMO, the onus and GSA message should not be on BAU but rather on all straws will get less per straw</p> <p>-supply enhancements can be framed as seeking to keep the basin in an S-curve frame</p> <p>-at the end of the day though, it seems the GSA is taking sustainability, and putting a tech salvation twist in it when IMO, the sustainability goal should be more explicitly centered on demand reduction</p> <p>-the ASR, GW banking, drought mitigation projects are very good for sustainability, this is a strong point to crow about to the public, and it benefits municipal users, the bulk of the basin population</p> <p>P. 11 "Discretionary review of well permits for any special areas identified in GSP"</p> <p>-does this mean that the GSP can define deep depletion areas as areas of concern and then Permit Sonoma will have to abide that?</p> <p>Table 7.3, the \$ for the Napa Rd pipeline, \$3.6 million, will this be paid by the beneficiaries? the public at large? SVCSD grants? Is there a cost-recovery plan for selling the RW? RW has turned into a valuable, commodity, it should be sold at fair value</p> <p>-if storage will have to be built to justify getting the 200AF of RW, who will build it and where? Is there a hidden ball here?</p> <p>P. 14 "it is assumed that the development costs of common projects and actions will be shared between the three GSAs" [SEP]</p> <p>-what are some examples of shared development costs?</p> <p>P. 16. "permitting for Group 2B projects will begin in 2028"</p> <p>-I'll be in my 70s then, at some point mortality will get us all and the GSP will go on!</p>	<p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p> <p>Comment noted</p> <p>No. The GSA will work with Permit Sonoma on strengthening permitting requirements in areas of concern.</p> <p>Yet to be determined. Generally, these projects are funded through a combination of grants (SVCSD), beneficiaries and ratepayers. People who use RW pay for RW.</p> <p>Generally, RW storage is built by recipients of the RW on their property. If the SVCSD builds the storage on its property, it would likely be funded by grants.</p> <p>Feasibility studies; permitting discussions and work with regulatory agencies</p> <p>Acknowledged</p>
9/7/2021	Robert Penning	<p>Review and response to GP amendments is required per 65352.5(d). The report on anticipated effect could take a fair bit of GSA staff time, and it may be worth noting as a future task or administrative task.</p> <p>If the GSA wants to take an active role in reviewing private projects and requesting specific conditions of approval or mitigation measures, this would also take staff time and resources. Per the current CEQA checklist includes the following "Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?" Lead agencies will look to the GSA staff to help answer this question, and determine suitable mitigation measures. Mitigation fees could also be a source of funding for GSA supported projects.</p>	<p>Added language under stakeholder engagement and communication section</p> <p>Comment noted</p>

DATE RECEIVED	NAME	COMMENTS	RESPONSES TO COMMENTS
9/14/2021	Vicki Hill	7.2.3.2. GSP implemnetation progress: Suggest adding detail on how GSP implementation will be measured	Added language
		7.2.6: Explain why PMAs are required immediatly. This implies that conditions are bad and projects needed right away.	Added language
		7.2.6: For Implemetentation of group 1 projects: Mention development of incentive stragies for these measures. Also, don't remember Section 6 mentioning rainwater harvesting.	Added language. Revised Section 6 includes rainwater harvesting.
		7.2.6 Management actions: Do we identify any special areas for discrtonary review of well permit identified in GSP?	Added language.
		7.3 Funding: Move the fee study language to 7.3.2 and clarify for the lay reader what is meant by implementation costs	Made change
		7.3.2 fee study: Explain clearly wha the fees would cover -- everything in table 7-4? People are most concerned about fees, so spelling it out would be helpful. Simiarly, clarify whether costs of specific projects that aren't covered by beneficiaries will be factored into fees imposed on well owners.	A more detailed budget will be prepared as part of the fee study.