Commenter	Source	Date Received	Comment No.	Page	Chapter/Section	Comment	Response
Jeff Gardner	Email	6/14/2021	1	22	Chapter 3 - Description of Plan Area - Section 3.6.1.4	Question? Figure 3-10 refers to CDFM. What is CDFM? Could not find reference in text.	CDFM is described in the text on page 19.
Matthew Scrudato	GSP Website	6/23/2021	2	vi	Chapter 3 - Description of Plan Area - List of Terms Used	I notice the abbreviation list, but shouldn't each abbreviation be spelled out at least the first time it is used in this document?	Previous chapters that have been released (ch. 1 - 2) and future chapters will use abbreviations in the abbreviations list. Some abbreviations were first time spelled out in the previous chapters and are not spelled out again in this chapter for that reason.
Matthew Scrudato	GSP Website	6/23/2021	3	vii	Chapter 3 - Description of Plan Area - List of Terms Used	Not sure if I like this referenced as AG Subbasin as opposed to the full name Arroyo Grande Subbasin. Seems lazy to me.	This is the agreed upon term that our team has decided to use for brevity.
Matthew Scrudato	GSP Website	6/23/2021	4	6	Chapter 3 - Description of Plan Area - Section 3.4	Discuss history and current ag in basin. What was area used for in relation to groundwater and SW use?	This will be discussed in future chapters in greater detail.
Matthew Scrudato	GSP Website	6/23/2021	5	17	Chapter 3 - Description of Plan Area - Section 3.6	We're following SGMA guidelines here and looking to manage possible issues. Want to mention no issues with seawater intrusion?	Seawater intrusion will be called out and addressed in future chapters in relation to SGMA guidelines.
Matthew Scrudato	GSP Website	6/23/2021	6	17	Chapter 3 - Description of Plan Area - Section 3.6	Want to provide a general discussion on history and trends in water levels? Maybe best for Chapter 5?	This will be discussed in chapter 5.
Matthew Scrudato	GSP Website	6/23/2021	7	7	Chapter 3 - Description of Plan Area - Section 3.4	Would be nice to provide a detailed map in 3.1 with features being described (faults, geology, creeks, etc.)	This will be provided in chapter 4.
Matthew Scrudato	GSP Website	6/23/2021	8	2	Chapter 3 - Description of Plan Area - Section 3.1	Don't agree with muted-rainshadow effect in this area. You see a rain-shadow in Cuyama for example (not Arroyo Grande). You always see more precipitation in mountains as a result of orographic uplift.	The text will be revised to reflect this change.
Matthew Scrudato	GSP Website	6/23/2021	9	19	Chapter 3 - Description of Plan Area - Section 3.6	Weather and precipitation information very general. Discuss patterns. Drought trends. Etc. Would be great to break out Wet, Normal, and Dry years in Figure 3-1 and 3-10 to better visualize patterns.	This will be discussed in chapter 6.
Matthew Scrudato	GSP Website	6/23/2021	10	2	Chapter 3 - Description of Plan Area - Section 3.1	Plan to expand on geology somewhere else?	This will be discussed in chapter 4.
Matthew Scrudato	GSP Website	6/23/2021	11	4	Chapter 3 - Description of Plan Area - Section 3.3.5	3.3.5, NCMA not in abbreviation list. Suppose this is Nipomo?	NCMA well be added to the abbreviation list and updated in 3.3.5.
Matthew Scrudato	GSP Website	6/23/2021	12	6	Chapter 3 - Description of Plan Area - Section 3.4	3.4 Need to fix sentencesummarized by group in .	The sentence will be updated.
Matthew Scrudato	GSP Website	6/23/2021	13	8	Chapter 3 - Description of Plan Area - Section 3.4.1	3.4.1 second paragraph. City should be City of Arroyo Grande. Ocean should be Oceano.	City is an abbreviated term for City of Arroyo Grande.
Matthew Scrudato	GSP Website	6/23/2021	14	8	Chapter 3 - Description of Plan Area - Section 3.4.1	3.4.1, IDRS not in abbreviation list	IDRS will be added to the abbreviation list.
Matthew Scrudato	GSP Website	6/23/2021	15	8	Chapter 3 - Description of Plan Area - Section 3.4	Maybe I don't understand 3-4. Water available to basin includes 4,530 AFY which is allocated and distributed to municipalities. How is this quantity also available to the basin?	The Zone III contract entitlements that totals 4,530 AFY comes from the Lopez Reservoir and is distributed to the Lopez Water Treatment Plant and then distributed to the agencies listed in Table 3-2. This water is a component of the dependable yield of 8,730 AFY from Lopez Reservoir. Text will be modified to clarify which water is available to the subbasin.
Matthew Scrudato	GSP Website	6/23/2021	16	12	Chapter 3 - Description of Plan Area - Section 3.4	Figure 3-4 legend mentions GDE (groundwater dependent ecosystem) yet there's no mention of this term anywhere else in document.	GDE is mentioned on pages 11 and 27.
Matthew Scrudato	GSP Website	6/23/2021	17	13	Chapter 3 - Description of Plan Area - Section 3.5	Table 3-5. Should LOPEZ RES say DWR instead?	This typo will be fixed.
Matthew Scrudato	GSP Website	6/23/2021	18	13	Chapter 3 - Description of Plan Area - Section 3.5	3-5 did you check for duplicates in these data sets?	Yes duplicates where checked.
Matthew Scrudato	GSP Website	6/23/2021	19	13	Chapter 3 - Description of Plan Area - Section 3.5	3-5. Section makes reader think these are all the wells located in the basin when in reality these are the wells you managed to locate. May want to mention that there may be additional wells that are unknown.	We call out that "these maps should be considered representative of well distributions, but are not definitive. It is also important to note that both the DWR and EHS well databases are not updated with information regarding well status and the well locations are not verified in the field. Therefore, it is uncertain whether the wells in these databases are currently active or have been abandoned or destroyed." to address the uncertainty of the data. Text will be reviewed and modified if necessary.
Matthew Scrudato	GSP Website	6/23/2021	20	17	Chapter 3 - Description of Plan Area - Section 3.6.1	3.6.1 Makes reader believe that the GAMA network is monitored by these other public entities. That is not the case. Some of the GAMA program (data collected by USGS) are public wells. Public entities have their own programs outside of GAMA.	We call out in 3.6 in several subsections that there are several programs and agencies that monitor wells throughout the area and the data is stored in various databases that may not necessarily be associated with the GAMA program. Text will be reviewed and modified if necessary.
Matthew Scrudato	GSP Website	6/23/2021	21	17	Chapter 3 - Description of Plan Area - Section 3.6.1.2	3.6.1.2 GAMA is not collected on a routine basis as stated here. USGS GAMA program collected data in 2008 for the Coastal Study that I'm aware of. Possibly there was another sample run? Not routine.	Some wells that are associated with GAMA are a part of the SLOFCWCD monitoring program and are collected on a routine basis. Text will be reviewed and modified if necessary.
Matthew Scrudato	GSP Website	6/23/2021	22	17	Chapter 3 - Description of Plan Area - Section 3.6.1.2	3.6.1.2 Are you referring to to NWIS when mentioning the California Water Data Library? There's absolutely no groundwater data available for the basin in NWIS. Please explain. There is a separate GAMA report available.	We are referring to the California Water Data Library, there are wells that have data available in the basin, and that some of this data can also be found in GAMA and other databases. Text will be reviewed and modified if necessary.
Matthew Scrudato	GSP Website	6/23/2021	23	19	Chapter 3 - Description of Plan Area - Section 3.6.1.3	3.6.1.3 Station 11141400 AG at AG (736) was operated by the USGS from 1939-1986. There are discharge data available in NWIS. Gage now operated by County. Station 11141400 Tar Springs was operated by the USGS from 1967-1979. Not mentioned in this section.	We will update the table to include the description of the data availability.
Matthew Scrudato	GSP Website	6/23/2021	24	19	Chapter 3 - Description of Plan Area - Section 3.6.1.4	3.6.1.4 paragraph 2 mentions Table 3-6. This is the wrong table for rainfall, temp, etc. Should this be Table 3-8?	The typo will be fixed.
Matthew Scrudato	GSP Website	6/23/2021	25	21	Chapter 3 - Description of Plan Area - Section 3.6	Maybe add GW basin boundary to Figure 3-9	The Arroyo Grande groundwater basin boundary is included in figure 3-9.

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Anthony Spina	Letter	8/11/2022	26		Chapter 8	The Groundwater Sustainability Plan's (GSP) draft Chapter 8 for the Arroyo Grande (AG) subbasin does not adequately address the following requirement for minimum thresholds as defined in the Sustainable Groundwater Management Act (SGMA) regulations: "The relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability indicators." (CCR 23 §354.28(b)(2) The GSP has not explained how the proposed minimum threshold for streamflow depletion (i.e., maintaining groundwater levels below historically observed ranges) avoids significant and unreasonable impacts to beneficial uses of surface water, including maintaining critical habitat for rearing juvenile steelhead (Oncorhynchus mykiss) in Arroyo Grande Creek (Figure 1). Surface water beneficial uses are not described or characterized in the GSP, nor is the ability of the proposed SSP's minimum thresholds essentially mimic those groundwater and surface water conditions experienced during California's recent drought conditions (one of the driest periods on record). Utilizing these minimum thresholds, will likely harm ESA-listed steelhead and its critical habitat within Arroyo Grande Creek. See Figure for the extent of designated critical habitat within Arroyo Grande Creek. The developing GSP utilizes the minimum thresholds and measurable objectives derived for undesirable results of Chronic Lowering of Groundwater Levels, and applies these thresholds to undesirable results of Chronic Lowering of Groundwater Levels, and applies these thresholds to undesirable result #66 (interconnected surface water depletion), without any reasonable ecological justification as to how the proposed thresholds would avoid streamflow-depletion impacts to instream beneficial uses. The justification presented appears to be limited to three unsupported conclusory statements in Section 8.9.2.4 (see further commen	i = Hydraulic gradient between groundwater elevation and surface water elevations (ft/ft) A = Cross Sectional Area of Groundwater Flow (ft2) Of the variables of Darcy's Law presented above, it is assumed that hydraulic conductivity and area of flow do not change with changing groundwater elevations; only the hydraulic gradient changes based on the groundwater elevation in the aquifer and the surface water elevation. A high groundwater elevation corresponds to a specific quantity of flux, while a lower groundwater elevation corresponds to a lesser flux quantity. So, although it is the quantity of flux that impacts GDEs, for the purposes of this GSP, this flux is defined and expressed in terms of the water level in the nearby alluvial sediments that results in the flux. If the groundwater elevation in the aquifer is greater than the elevation of the water surface in the stream, then the direction of flow is from the aquifer to the stream. If the water surface elevation of the stream is higher than the groundwater elevations, the direction of flow is from the stream to the surrounding aquifer. In order to accurately make this calculation, surveyed elevations of groundwater and surface water are necessary, as well as an estimate of hydraulic conductivity of the alluvial aquifer. If groundwater elevations in the vicinity of a stream are maintained such that the direction and magnitude of hydraulic gradient between the creek and the aquifer are not significantly changed, it follows that there will not be a significant or unreasonable depletion of Interconnected Surface Water flux between stream and aquifer. Therefore, groundwater levels in appropriate wells are judged to be a valid proxy for the quantification of depletion of interconnected surface water, and MTs defined. Currently, there is no reliable survey data defining the streambed channel elevation near the RMS wells. This data would help to better define this flux, and may be collected when the implementation start period has been defined. The confusing la
Anthony Spina	Letter	8/11/2022	27		Chapter 8	The minimum thresholds for the streamflow depletion undesirable result are inadequate to avoid significant impacts to ESA-listed salmonids and their habitat. As noted above, the minimum thresholds identified in the GSP would essentially promote instream habitat conditions similar to those experienced during recent extreme drought conditions, which do not support growth and survival of threatened steelhead in Arroyo Grande Creek. The GSP, therefore, does not adequately analyze or consider the ecological effects of managing groundwater levels associated with extreme drought conditions. SGMA regulations require that minimum thresholds must "represent a point in the basin that, if exceeded, may cause undesirable results." (emphasis added). The chosen minimum thresholds do not represent a point at which those effects may arise, but instead represent a likely impact level beyond that point (i.e., effects are already occurring). SGMA regulations also direct GSAs to describe in their plans "[h]ow state, federal or local standards relate to the sustainability indicator[s]" for each of the applicable undesirable results. For the reasons stated above, the GSP has not provided an adequate explanation for how the sustainability indicator for streamflow depletion is responsive to federal standards under the ESA, i.e., avoiding unlawful take of ESA-listed species.	It is not the objective of the MTs to define the level at which groundwater elevations will be maintained in the Subbasin. Rather, it is the intent that the MTs represent a point in the basin that, if exceeded, may cause undesirable results. It is the intent that the basin should be managed such that water levels do not go lower than the MTs, and if they do, they may cause undesirable results. As mentioned in the previous response, many factors other than groundwater pumping impact stream flow conditions, including rainfall and reservoir operations.
Anthony Spina	Letter	8/11/2022	28		Chapter 8	GSPs must describe and consider impacts to GDEs (Water Code § 10727.4(I); see also 23 CCR § 354.16(g)). The GSP fails this requirement with regard to GDEs where groundwater accretion supports steelhead migration, rearing and spawning within Arroyo Grande and Tar Spring creeks. The draft Chapter 8 only offers the following generalized statement on page 7-20 regarding GDE impacts: "Lopez Reservoir releases are regular and continue through the dry season within the Subbasin, which can affect groundwater recharge and support GDEs to a greater extent than would otherwise occur with naturally drained watershed." This statement does not address the question of whether groundwater pumping may be impacting instream GDEs, or the degree of any impacts. Thus, the GDE analysis within the GSP is inadequate.	Interaction between streamflow and the adjacent aquifers is recognized as a relationship that will require more data/information when the GSP implementation start period has been defined. Releases from Lopez Dam, and direct removal of water from the creek, will have a more significant impact to fisheries conditions in Arroyo Grande Creek. Various modeling scenarios may be considered during the development of the HCP.
Anthony Spina	Letter	8/11/2022	29		Chapter 8	The proposed trigger for the undesirable result from streamflow depletion occurs when the groundwater elevation in any Representative Monitoring Site falls below the minimum threshold in two or more consecutive years. ESA-listed steelhead require the persistent presence of water, and are unlikely to survive in Arroyo Grande Creek if the streamflow or water quality within Arroyo Grande Creek is significantly diminished and degraded. Allowing two consecutive years of minimum threshold violations will not adequately protect surface water beneficial uses and groundwater dependent ecosystems, including juvenile steelhead rearing habitat, from groundwater pumping impacts.	It is not established that the occurrence of an MT in an RMS will correlate to a lack of water within the stream for steelhead. The criterion of two consecutive years is commonly used in other regional GSPs to confirm that the undesirable effects are persistent, and not a temporary condition that may be caused by local operations.

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Anthony Spina	Letter	8/11/2022	30		Chapter 8	When developing sustainable management criteria, and related projects and management actions, the GSP appears to be devoid of adequate analysis and consideration of public trust resources, including, but not limited to, anadromous salmonids, as required by the Public Trust Doctrine. A recent California Court of Appeal decision held that the public trust doctrine must be considered—and public trust resources protected whenever feasible—in any decision governing groundwater withdrawals hydrologically connected to public trust surface waters. As noted above, South-Central California Coast Steelhead are listed as threatened under the U.S. Endangered Species Act, inhabit Arroyo Grande Creek, and should be considered a public trust resource. Moreover, Arroyo Grande Creek appears to meet the definition of public trust surface waters. Overall, streamflow conditions associated with the proposed sustainability criteria are expected to impair steelhead spawning and rearing habitat, and thus harm public trust resources. The GSP does not conduct a public trust analysis, nor does it discuss applicable public trust resources within the subbasin. Likewise, no weighing of public trust benefits or impacts occurs within the GSP. Finally, the GSP does not adequately consider and evaluate alternative measures that would likely protect ecological public trust resources, such as the feasibility of adopting more conservative sustainable management criteria that will avoid harming steelhead and its designated critical habitat in Arroyo Grande Creek.	The concerns are noted. However, the issues and the Court's holding in Environmental Law Foundation, et al. v. State Water Resources Control Board, et al. (2018) 26 Cal.App.5th 844, 851 (if this is the case that is being referenced) are extraordinarily limited by the Court's own admission: "But the supplemental briefing also illuminates the narrowness of the issue before us. We are asked to determine whether the [Siskiyou] County and the [State Water Resources Control] Board have common law fiduciary duties to consider the potential adverse impact of groundwater extraction on the Scott River, a public trust resources, when issuing well permits and if so, whether SGMA on its face obliterates that duty." In addition, in reaching its conclusion regarding SGMA, the Court notes that SGMA is a "more narrowly tailored piece of legislation" and that "the public trust is not expressly mentioned in SGMA (finding that SGMA does not replace or fulfill public trust duties). Id. at 866-867.
Anthony Spina	Letter	8/11/2022	31		Chapter 8	Section 7.1 (page 7-6): The draft Chapter 7 notes the proposed monitoring network "must accomplish the following monitoring objectives", which includes, "monitor impacts to the beneficial uses and users of groundwater." As stated earlier, the draft chapters do not describe ecological beneficial uses (i.e., migration, spawning/rearing, and cold-water habitat), do not analyze how the proposed sustainable management criteria will likely affect those uses, and does not propose a monitoring component addressing this data gap.	At present, the RMS wells established for the Depletion of Interconnected Surface Water sustainability criteria, and the associated SMCs, are the monitoring component of the GSP designed to address this issue. Future monitoring wells, stream gages, habitat studies, etc. may be considered as part of the implementation period, which has not yet been defined.
Anthony Spina	Letter	8/11/2022	32		Chapter 8	Section 7.2.3.1: Surface Flow Monitoring Data Gaps: Tar Spring Creek is an important tributary for Groundwater Dependent Ecosystems. No streamflow gage currently exists on the tributary, and there appears to be no plan to install one and evaluate interconnection between surface water and groundwater levels from existing wells (Figure 7-1) in Tar Spring Creek Valley. We recommend the GSA install a streamflow gage on Tar Spring Creek.	This recommendation may be considered when the implementation period has been defined.
Anthony Spina	Letter	8/11/2022	33		Chapter 8	Section 7.6, page 7-23: The draft chapters contain no ecological reasoning why the chosen sustainable management criteria are appropriate for avoiding impacts to surface water beneficial uses, including steelhead spawning, rearing, migration, and ultimately survival. As a result, the conclusion that no critical data gaps with respect to sustainable management of the subbasin currently exist is unsupported.	A Darcy's Law analysis has been added to the text in section 8.9 and provides the rationale for using water levels as a proxy for flux, and explains how the water levels selected intend to prevent significant or unreasonable depletion of flux from the stream to the surrounding aquifer. Future additional monitoring efforts may be considered as part of the implementation start period, when the start period has been determined.
Anthony Spina	Letter	8/11/2022	34		Chapter 8	Section 7.7, page 7-23: The following statement: "Because the Subbasin is a very low priority, however, it is not required to submit an Annual Report or five-year updates." should be supported with the appropriate rationale, and not simply cite SGMA regulations, or unofficial DWR staff statements.	This statement is an accurate description of the pertinent regulations / requirements for this basin (Water Code Section 10720.7 and Water Code Section 10727).
Anthony Spina	Letter	8/11/2022	35		Chapter 8	Section 8.9.1.3, page 8-38: The draft Chapter 8 states: "If depletions of interconnected surface water were to reach undesirable results, adverse effects could include the reduced ability of the stream flows to meet instream flow requirements for local fisheries and critical habitat, or reduced ability to deliver surface water supplies to direct users of surface water in the Basin." While the draft chapter acknowledges that streamflow depletion could reduce the ability of streamflows to meet the requirements for ESA-listed steelhead and its critical habitat, it does not propos specific monitoring or analysis within the Chapter 7 to address this issue. The GSP should address this significant omission.	At present, the RMS wells established for the Depletion of Interconnected Surface Water sustainability criteria, and the associated SMCs, are the monitoring component of the GSP designed to address this issue. Future monitoring efforts may be established when the implementation period is established.
Anthony Spina	Letter	8/11/2022	36		Chapter 8	Section 8.9.2.1, page 8-40: As noted earlier, the minimum thresholds proposed for interconnected surface water depletion are simply carried over from the "groundwater in storage" undesirable result thresholds. No justification or reasoning is provided as to why these criteria will likely be effective in protecting instream beneficial uses, including but not limited and ESA-listed steelhead in Arroyo Grande Creek. The justification provided on page 8-41 is not directly relevant to streamflow depletion or the resulting ecological impacts, but instead focuses on domestic wells going dry.	The text in Chapter 8 has been revised to provide further detail and explanation for the use of groundwater elevations as a proxy for the amount of flux between the stream and the adjacent aquifer including discussion of Darcy's law and flow direction between a stream and aquifer. If groundwater elevations in the vicinity of a stream are maintained such that the direction and magnitude of hydraulic gradient between the creek and the aquifer are not significantly changed, it follows that there will not be a significant or unreasonable depletion of Interconnected Surface Water flux between stream and aquifer. Therefore, groundwater levels in appropriate wells are judged to be a valid proxy for the quantification of depletion of interconnected surface water, and MTs defined. It is important to recognize that many factors contribute to instream flow conditions that are beyond the ability of a groundwater management plan to control (rainfall, temperature, reservoir operations, etc.). The objective with respect to interconnected surface water (ISW) SMCs is to avoid groundwater management leading to conditions that result in significant or unreasonable increase in ISW depletion.

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Anthony Spina	Letter	8/11/2022	37		Chapter 8	Section 8.9.2.4: The draft Chapter 8 provides: "The practical effect of this GSP for protecting against the Depletion of Interconnected Surface Water MTs is that it encourages minimal long-term net change in groundwater elevations in the vicinity of Arroyo Grande Creek. Seasonal and drought cycle variations are expected, but during average conditions and over the long-term, beneficial users will have access to adequate volumes of water from the aquifer to service the needs of all water use sectors. The beneficial users of groundwater are protected from undesirable results." As NMFS has noted in previous comment letters concerning the San Luis Obispo Valley subbasin GSP, SGMA's requirement (and overarching goal) is achieving groundwater sustainability by 2042, with sustainability defined as groundwater management that avoids undesirable results, including impacts to surface water beneficial uses caused by groundwater extraction (Undesirable Result #6). Proposing sustainable management criteria mimicking groundwater conditions below the lowest recorded measurements is inconsistent with the goals of SGMA, and is not consistent with the life history and habitat requirements of threatened steelhead. The second and third statements are unsupported by either outside reference or analysis within the chapters, and should therefore be substantiated or omitted.	The MTs define water levels which define conditions which should not be exceeded. Current conditions are reflective of the severe drought that we are currently in, and should be considered as part of the historical record to define MTs. The proposed MTs are intended to provide for the prevention of significant or unreasonable changes in flux from the stream to the aquifer, and are therefore consistent with the goals of minimizing the impact of pumping on conditions within the stream channel. The implementation start period has not yet been defined; however the GSAs may choose to revisit GSP implementation should a change in subbasin conditions arise or a reprioritization of the basin by DWR.
Anthony Spina	Letter	8/11/2022	39		Chapter 8	On page 8-42, the following statement is likewise unsupported, and should be substantiated or omitted "Groundwater dependent ecosystems would generally benefit from this MT (minimum threshold). Maintaining groundwater levels close to within (sic) historically observed ranges will continue to support groundwater dependent ecosystems."	: The MTs define water levels which define conditions which should not be exceeded. Current conditions are reflective of the severe drought that we are currently in, and should be considered as part of the historical record to define MTs. It is the GSAs' contention that the proposed MTs provide for the prevention of significant or unreasonable changes in flux from the stream to the aquifer, and are therefore consistent with the goals of minimizing the impact of pumping on conditions within the stream channel, including the continued support of groundwater dependent ecosystems.
Anthony Spina	Letter	8/11/2022	40		Chapter 8	Section 8.9.2.6: Measuring and evaluating groundwater elevations on a semi-annual schedule is likely insufficient for tracking, and effectively responding to rapidly changing ground and surface water conditions that may have significant and unreasonable impacts to surface water beneficial uses, including but not limited to ESA-listed steelhead within Arroyo Grande Creek.	The concerns are noted. Additional monitoring efforts that that may better characterize groundwater-streamflow interactions may be considered when the implementation start period has been defined.