

Santa Ynez EMA Groundwater Sustainability Plan Public Draft Comments and Responses

Commenter	Section	Theme	Comment	Commenter's Recommendation	Response
Steve Slack (CDFW)	General	Public trust	The Public Trust Doctrine imposes a related but distinct obligation to consider how groundwater management affects public trust resources, including navigable surface waters and fisheries. Groundwater hydrologically connected to surface waters is also subject to the Public Trust Doctrine to the extent that groundwater extractions or diversions affect or may affect public trust uses. The GSA has “an affirmative duty to take the public trust into account in the planning and allocation of water resources, and to protect public trust uses whenever feasible.”	Groundwater plans should consider potential impacts to and appropriate protections for ISWs and their tributaries, and ISWs that support fisheries, including the level of groundwater contribution to those waters.	In accordance with the provisions and requirements of SGMA, the Plan addresses the interests of all beneficial uses and users of groundwater, including public trust resources. Generally, these beneficial uses include agricultural, domestic, industrial and environmental uses. The environmental uses were addressed by identifying GDEs, impacts to GDEs, and interconnected surface water, along with the effects of implementation of this Plan on these uses and users. Please refer to additional Responses to Comments herein. More discussion has been added throughout the appropriate sections to address these concerns.
Steve Slack (CDFW)	3.1.4.1	Interconnected surface waters	<p>Comment #1: Section 3.1.4.1 Principal Aquifers (Santa Ynez River Alluvium) The Draft GSP does not provide enough information to conclude that surface waters do not affect groundwater levels. Page 3-29 of the Draft GSP states, "Water present within the Santa Ynez River Alluvium is considered surface water by the SWRCB, and not managed by the GSAs. Therefore, the Santa Ynez River Alluvium is not classified in this GSP as a principal aquifer. The main criterion for defining the water-bearing geologic formations in the EMA as principal aquifers is based on the SGMA definition of a principal aquifer: 'aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to wells, springs, or surface water systems. 'Principal aquifers must exhibit both sufficient permeability and storage potential for the movement and storage of groundwater such that wells can reliably produce groundwater in sufficient quantities on a long-term basis."</p> <p>The EMA-Hydrologic Conceptual Model (HCM) states during downstream water right releases, water infiltrates and recharges the alluvium as “Recharge to the Santa Ynez River Alluvium occurs through percolation of precipitation as well as from upstream Lake Cachuma releases and discharge from the Santa Ynez Uplands Tributaries” (EMA-HCM Memo, Pg. 65). The HCM Memo acknowledges that the younger alluvium in the upper aquifer is being recharged from water right releases. However, the EMA GSA has not provided enough information to properly identify and analyze the interconnectivity between the three zones of the upper aquifer and the relationship with the lower aquifer. The alluvium at the mouth of the Santa Ynez Upland Tributaries is an example in the Basin that has groundwater-surface water interactions based on groundwater recharge during downstream water right releases. CDFW believes this interaction also occurs during the natural flows of various seasons throughout the year. CDFW agrees that the Upper Aquifer is recharged from the surface water, but it is unclear how Upper Aquifer groundwater pumping should be regulated without direct input from the State Water Resources Control Board (SWRCB).</p> <p>The EMA-HCM Memo also states that “The extent and quantity of any groundwater discharge from the groundwater basin into the Tributary Alluvium has not been confirmed or quantified. Conceptually, it is believed that this discharge occurs primarily as surface water flow leaving the tributaries” (EMA-HCM Memo, Pg. 67). The EMA-HCM Memo further states that “Water discharges from the EMA as underflow from the Santa Ynez River Alluvium every year” (Stetson, 2004 among others) (EMA-HCM Memo, Pg. 67). This is another example of an interconnected surface water that WMA-GSA describes in their</p>	<p>Recommendation #1(a): CDFW recommends the EMA-GSA provide justification, based on specific provisions of SGMA, for the conclusion that the Upper Aquifer should not be classified as a principal aquifer or managed by a GSP under SGMA. Alternatively, the WMA-GSA can provide direct input from SWRCB on the classification of the Upper Aquifer. CDFW believes the EMA-GSA must sustainably manage groundwater resources in the Upper Aquifer, in part because it supports GDEs. Furthermore, portions of the Upper Aquifer are interconnected with surface water and is currently identified as a principal aquifer under Department of Water Resources Bulletin 118 (DWR 2020). The communities within the EMA heavily rely on surface and subsurface diversions from the Upper Aquifer. Use of this Lower Aquifer water may become more appealing and economically viable in future years as Upper Aquifer pumping restrictions are placed to meet SGMA sustainable yield and criteria, and to meet SYR instream flow needs. Thus, analyzing the Upper Aquifer as interconnected with surface water is consistent with the sustainability goals of SGMA.</p> <p>Furthermore, identifying and appropriately considering GDEs in the EMA that rely on the Upper Aquifer should be completed irrespective of the amount of pumping in both aquifers so that future impacts on GDEs due to new production can be avoided. CDFW urges the EMA-GSA to identify and consider all GDEs within the WMA per Code of Regulations, Title 23 § 354.16(g).</p> <p>Recommendation #1(b): CDFW strongly recommends the EMA-GSA to map, identify, and analyze depletions of interconnected surface waters and areas with the potential for depletion of interconnected surface waters per Code of Regulations, Title 23 § 354.16(f).</p>	<p>The comment focuses on the classification of the principal aquifers presented in an earlier draft section that precedes submission of the draft Plan, which has been considerably revised in the public draft version of the Plan. Furthermore, this comment focuses on an "Upper Aquifer," which is described within the WMA and not the EMA. There is no reference in the EMA GSP to upper and lower aquifers. There are two Principal Aquifers in the EMA, which include the Paso Robles Formation and Careaga Sand.</p> <p>Shallower materials including the tributary alluvium and Santa Ynez River alluvium are not considered principal aquifers based on criteria presented in Section 3.1.4.1 , which presents the definition of a Principal Aquifer per the SGMA Regulations ("aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to wells, springs, or surface water systems").</p> <p>In response to the recommendation to further assess interconnection of surface water, additional discussion has been added to Section 3.2.5.1. The tributary alluvium is classified as a losing stream along the majority of the length of these areas based on contoured groundwater levels within the underlying Paso Robles Formation, which are much lower in elevation than the tributary alluvium materials (discussed in Section 3.2.1.1 and 3.2.5.1). The lower reaches of Alamo Pintado and Zanja de Cota Creek represent the only locations within the EMA where surface water within the tributary alluvium is interconnected with a continuous saturated zone. These areas are interconnected with the underlying principal aquifers and appear to support GDEs. An evaluation of potential depletion of surface water in these areas is presented in Section 5.10.2. A GDE monitoring program has been included in the Plan for these areas.</p>

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Steve Slack (CDFW)	3.2.5	GDEs	<p>WMA-HCM Memo but did not identify and analyze in the WMA-GC Memo.</p> <p>The Draft GSP still does not provide enough information to conclude how much recharge is occurring within SYR tributaries. As indicated on page 3-84, "A significant source of recharge to the Paso Robles Formation occurs within the shallow alluvial sand and gravel beds of tributaries where they are in direct contact with the Paso Robles Formation. Percolating groundwater moves readily through the tributary alluvium in the Santa Ynez Uplands (LaFreniere and French,1968). In these areas, the tributaries are losing streams, contributing to the groundwater in the underlying Paso Robles Formation (and Older Alluvium)". The Draft GSP identifies two locations in the EMA where groundwater from a principal aquifer is interconnected with surface water. Table ES-1 Summary of Sustainable Management Criteria on page ES-16 indicates the confluence of Alamo Pintado Creek and Zanja de Cota Creek as the two areas connecting surface water and the SYR.</p> <p>Under SGMA, a GSP is required to avoid unreasonable adverse impacts on beneficial uses of interconnected surface waters, defined 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." (Water Code §§ 10721(x)(6) and 10727.2(b); 23 CCR § 351(o).)</p> <p>To the extent that the tributaries are hydraulically connected and not completely depleted at any time of the year, they qualify as interconnected surface waters and warrant appropriate consideration in the GSP, including the goal to avoid depletions causing significant and unreasonable adverse impacts on beneficial uses. The interconnected surface water narrative also lacks specific estimations of the quantity and timing of streamflow depletions as required by California Code of Regulations, Title 23 §354.16(f).</p> <p>CDFW is very concerned about the health of the steelhead population. Managing the groundwater within the Santa Ynez River Valley is particularly critical to the survival and recovery of the threatened South-Central California Steelhead Designation Population Segment (DPS), a federal Endangered Species Act (FESA) listed species (NMFS 2013). Drought conditions and low flow rates have led CDFW to participate in rescue operations as recently as 2020. The SYR contains important steelhead spawning and rearing tributaries. Threats to steelhead, such as excessively high-water temperatures due to reduced surface flows or groundwater pumping in the spring, summer, and early fall, reduce available juvenile rearing habitat. Low flows in the fall and winter can delay adult passage to critical spawning areas.</p> <p>Groundwater-dependent habitats, including interconnected surface waters, are particularly susceptible to changes in the depth of the groundwater. Lowered water tables that drop beneath the root zones can cut off phreatophyte vegetation from water resources, stressing or ultimately converting vegetated terrestrial habitat. Induced infiltration attributable to groundwater pumping can reverse hydraulic gradients and may cause streams to stop flowing. The frequency and duration of exposure to lowered groundwater tables and low-</p>	<p>Recommendation #2(a): CDFW recommends a more careful review of existing information on surface water-groundwater interconnectivity and recommends the EMA-GSA clarify what a significant source of recharge means in terms of quantity of water.</p> <p>Recommendation #2(b): CDFW recommends the WMA-GSA identify the estimated quantity and timing of streamflow depletions in the subbasin. If this information is not available, identify a proposed plan to estimate these values.</p>	<p>The comment focuses on the interconnection of groundwater and surface water within the tributary alluvium as presented in an earlier draft section that precedes submission of the public draft Plan, which has been considerably revised in the public draft version of the Plan.</p> <p>The amount of recharge that occurs through the tributary alluvium is discussed qualitatively in the section referred to in this comment (3.2.4 - Interconnected Surface Water), but also quantified and described in detail in the water budget Section 3.3.2.2.2 - Tributary Percolation. Stream flow percolation was computed using the USGS BCM model, which was used throughout the Basin, and quantified based on methods described in the historical and current water budgets (3.3.3.4 and 3.3.4.3.1, respectively). As presented, during the historical period an average of 700 AFY percolated through the tributary alluvium to the underlying principal aquifers within the EMA.</p> <p>The comment about the recommendation for actions related to the WMA do not apply to the EMA and therefore no responses or change to the EMA's Plan are warranted.</p> <p>The locations and description of the interconnected surface waters are included in the analysis of GDEs presented in Sections 3.2.6.1 and 3.2.6.2 in the public draft Plan. To the extent some of the comments are focused on potential public trust resources and other beneficial uses of the waters of the mainstem Santa Ynez River, it is important to understand the parameters of SGMA. SGMA is focused primarily on "groundwater", as defined by the SGMA statute. Under Water Code, section 10721(g), "'Groundwater' means water beneath the surface of the earth within the zone below the water table in which the soil is completely saturated with water, but does not include water that flows in known and definite channels." Under California law, "water beneath the surface ... that flows in known and definite channels" is a subset of "surface water" that is subject to surface water rights and regulation, and is therefore distinct from groundwater under SGMA.</p> <p>The commenter's concerns about the health of the steelhead population in the lower Santa Ynez River are fully acknowledged and the Plan recognizes that steelhead and other species are in fact beneficial uses and users of the River. However, SGMA does not provide for the regulation of surface flows or subsurface underflow of the Santa Ynez River and instead the Plan examines whether and the extent to which groundwater in the principal aquifers of the basin is interconnected with surface water.</p> <p>As set forth by the Plan, the hydrogeology of the basin demonstrates that there is not a continuous saturated zone between the tributaries and the underlying principal aquifer, except where groundwater discharges to surface water on the distal end of two tributaries. Groundwater modeling of potential stream depletion in these areas as a result of groundwater conditions occurring throughout the Basin is discussed in Section 5.10 and has been determined to be not significant.</p> <p>In further regard to the commenter's concerns regarding listed steelhead in the lower Santa Ynez River, the EMA GSA is fully supportive of the comprehensive and ongoing efforts dating back to the 1990s to develop and implement surface flow and non-flow measures in the mainstem lower Santa Ynez River and certain tributaries for the protection of public trust resources, including but not limited to steelhead and its critical habitat. (See, e.g., National Marine Fisheries Service September 2000 Biological Opinion for U.S. Bureau of Reclamation Operation and Maintenance of the Cachuma Project on the Santa Ynez River in Santa Barbara County, California; State Water Resources Control Board Water Order WR 2019-0148 for the Cachuma Project on the Santa Ynez River.) In fact, the member</p>

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			<p>flow or no-flow conditions caused by groundwater pumping, as well as habitat and species resilience, will dictate vulnerability to changes in groundwater elevation. For example, some species rely on perennial instream flow, and any interruption to flow can risk species survival.</p>		<p>agencies of the EMA GSA remain actively involved with numerous federal, state, and local entities in proceedings before the State Water Resources Control Board and in the current re-consultation process under the federal Endangered Species Act to protect steelhead and its critical habitat in the lower Santa Ynez River. (See, e.g., August 2020 Term 18 Plan submitted by United States Bureau of Reclamation to State Water Board pursuant to Order WR 2019-0148.)</p>
<p>Steve Slack (CDFW)</p>	<p>3.3.5.1.2</p>	<p>Cannabis cultivation</p>	<p>CDFW is concerned that cannabis groundwater use is not being fully accounted for when evaluating this SGMA area. Ignoring the growth potential of this industry, could result in a lack of groundwater management accountability. Page 3-158 of the Draft GSP states that "While not included as a crop category in the recent crop surveys, cannabis production is projected to enter the Santa Ynez Valley and the EMA in the coming years. The County of Santa Barbara has placed an upper limit on the maximum number of acres county-wide allowed to be planted with cannabis. The assumption for the EMA is that cannabis production will reach a limit for the Santa Ynez Valley over the next several years and will increase beyond the current limit". CDFW has identified, in region, the Santa Ynez River Valley as a high priority watershed. Most projects distributed throughout this SGMA area are clustered within the San Miguelito Creek- Santa Ynez River, Nojoqui Creek, Santa Rosa Creek-Santa Ynez River, Salsipuedes Creek, Santa Rita Valley and Canada De La Vina-Santa Ynez River HUC 12 watersheds. This includes San Miguelito Creek, Salsipuedes Creek, and Santa Ynez River (critical steelhead streams) as well as Nojoqui Creek and Santa Rosa River, and the SYR tributaries (Dagit et. al 2020). The projects range from cultivation of 1-50 acres within the approximate 52 notifications the Department has received with the main source of water coming from groundwater wells. CDFW expects this type of trend to continue in the future.</p> <p>Groundwater and interconnected surface water are critical resources that do not recognize artificial boundaries. Since the implementation of legal cannabis cultivation, CDFW has received multiple applications within the Santa Ynez River Valley, especially in the HUC 12 watersheds listed above. Some of the cannabis grows can range from 1-50 acres, with multiple licenses on a property (resulting in several acres of cultivation) that are dependent on depths within the alluvium. Surface flows (and surface diversions) are regulated in large degree from dam releases, which emphasizes the large roll groundwater wells have in cannabis cultivation.</p> <p>Santa Ynez has sensitive, natural communities consisting of Oak woodlands, grasslands, sage scrub, chaparral, and riparian woodland habitats along the Santa Ynez River and SYR tributaries. According to the California Natural Diversity Database (CNDDB), the Santa Ynez River Valley provides habitat that supports several sensitive species (some listed as endangered or threatened) throughout their life cycles, including southwestern willow flycatcher (<i>Empidonax traillii extimus</i>), least Bell's vireo (<i>Vireo bellii pusillus</i>), red-legged frog (<i>Rana draytonii</i>), and seaside bird's beak (<i>Cordylanthus rigidus ssp. littoralis</i>) (CDFW. 2019). Habitats that support these species also consist of phreatophytes and other vegetation communities that are dependent on shallow aquifers that support surface water in each of these systems.</p>	<p>Recommendation #3: CDFW recommends the WMA-GSP monitor the Santa Ynez River Valley as a Cannabis High Priority Watershed. This High priority captures the documented impacts within the groundwater basin and the shifting groundwater consumption rates, as influenced by legalization of cannabis [Water Code §§ 10933. (b)(7,8)]. Based on the number of Departmental applications for legal cultivation, there is documented significant demand and potential adverse impacts to beneficial users of groundwater. The cannabis market growth is expected to increase almost ten times during an eight-year span (Fortune Business Insights 2021). North America is expected to lead the world cannabis market. Santa Barbara County recently approved a zoning permit for 87 acres of outdoor cannabis cultivation.</p>	<p>This comment was directed at the WMA.</p> <p>Nonetheless, the cultivation of cannabis is subject to permits by the County of Santa Barbara, which are both well-documented because of the permitting process and are considered within the water budget section of the Plan (Section 3.3). As discussed in the Plan, the 350 acres of cannabis production being considered (or approved in the case of a single permit application at this time) in the EMA are discussed in Section 3.3.5.1.2 - Projected Water Budget. The section also includes considerations of conversion of other crops to cannabis based on review of the specific locations of each of the four current individual permit applications both pending and approved and includes the associated changes in water use associated with these land use changes.</p> <p>Likewise, a complete discussion of the listed species within the area managed by the GSA (shown on Figure 2-1 Area Covered by GSP) is included in Section 3.2.6.1.3 and onward. Table 3-13 (Categorized Potential GDEs in the EMA (Excluding Santa Ynez River Area) present the categorized potential GDEs within the area managed by the GSA, and Table 3-14 presents the Special-Status Species including the Santa Ynez River area. Section 3.2.6 Groundwater Dependent Ecosystems presents the relationships between those potential and groundwater conditions within the area managed by the GSA.</p>

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			<p>Phreatophytic vegetation is a critical contributor to nesting and foraging habitat, forage for a wide range of species and can be affected by sensitive depth to groundwater threshold impacts (Naumburg et.al. 2005) and (Froend et. al. 2010). This sensitivity to groundwater level thresholds means that localized pumping and recharge actions altering groundwater levels can impact the health and extent of phreatophyte vegetation health. Both decreasing (drying out) or increasing (drowning) groundwater elevation has the potential to stress phreatophytes depending on the plant species, groundwater elevation and duration (e.g., short term wetness/dryness versus prolonged wetness/dryness).</p> <p>Groundwater and interconnected surface water depletion is a major concern for fish and wildlife beneficial users in the Santa Ynez River Valley. Designating this area as a High Priority Cannabis Watershed requires groundwater to be monitored and sustainably managed for the benefit of all beneficial users, including groundwater dependent vegetated communities and interconnected surface waters that are necessary to support riparian and aquatic habitat, and the sensitive species therein such as steelhead. Decreased stream flow may contribute to direct mortality if fish eggs are exposed, covered with silt, or left without sufficient oxygenated water. Water degraded in temperature or chemical composition can displace or limit fish populations.</p>		
Steve Slack (CDFW)	3.3.5.1.2	Cannabis cultivation	<p>Without the designation of the Santa Ynez River Valley as a Cannabis High Priority Watershed, evaluation of cannabis crop water usage may be overlooked throughout the Santa Ynez River Valley Groundwater Basin, especially within the Santa Ynez Alluvium, an area that, as stated on page 3-29, will not be managed under SGMA by the EMA-GSA. Page 3-158 of the Draft GSP states "The projected agricultural acreages and water use are projected to increase only modestly over the next 20 and 50 years. This increase, based principally on conversion to field crops and a more modest increase in vineyard acreage, are together similar in scale to the estimated projected increase in cannabis acreage. The projected rate of expansion of acreage is equal to 36 acres added per year". Cannabis cultivation is a water intensive crop that can have a significant impact to environmental beneficial users of groundwater.</p> <p>Cannabis groundwater wells provide water for the irrigation of water-intensive cannabis cultivation (assuming six gallons of water per day per plant) (Bauer S. 2015). Just within the Santa Ynez Alluvium, CDFW has received approximately 26 cannabis projects. These projects range from cultivation of 3.5 - 50.0 acres with water supplied from groundwater wells. Many of the wells for the cannabis notifications within Santa Ynez Valley are shallow wells located within or immediately adjacent to tributary streams and the SYR. CDFW is concerned that without management of the Santa Ynez Alluvium under SGMA by the EMA-GSA, significant and unreasonable surface water depletions may occur, compromising groundwater dependent ecosystems within and along the streams.</p>	<p>Recommendation #4.1(a): CDFW recommends a more careful review of the existing information on cannabis cultivation within the Santa Ynez alluvium and recommends the information be considered when evaluating groundwater management. As indicated on page 3-84, "A significant source of recharge to the Paso Robles Formation occurs within the shallow alluvial sand and gravel beds of tributaries where they are in direct contact with the Paso Robles Formation. Percolating groundwater moves readily through the tributary alluvium in the Santa Ynez Uplands (LaFreniere and French,1968). In these areas, the tributaries are losing streams, contributing to the groundwater in the underlying Paso Robles Formation (and Older Alluvium)". The majority of cannabis cultivation rely on groundwater for cannabis crops irrigation, and the likely interconnected nature of the Santa Ynez River suggests that such uses (individually or cumulatively) should be considered when evaluating cannabis impacts in the Santa Ynez alluvium.</p> <p>Recommendation #4.1(b): CDFW recommends the Santa Ynez River Valley be classified as a Cannabis High Priority Watershed.</p>	<p>(a) Cannabis is one of several crop types specifically considered within the water budget of this Plan. The water sources for this crop are treated in a similar fashion as the water sources for the other crop types included in the Plan.</p> <p>However, cannabis is different than the other crops included in the group of agricultural crops in that it is subject to permitting by the Planning and Development department of the County of Santa Barbara and therefore the locations of these crops will be well understood into the future.</p> <p>The 350 acres of cannabis production being considered in the EMA are discussed in Section 3.3.5.1, including discussion of the one active and three pending permit applications within the EMA.</p> <p>Please refer to Responses to Comments herein regarding SGMA's distinction between groundwater and surface water systems. Cannabis cultivation that utilizes groundwater as its source of irrigation supply is included and accounted for as part of the Water Budget and in all other related aspects of sustainable groundwater management under the Plan. Cannabis cultivation that utilizes surface water, including subsurface underflow of the lower Santa Ynez River, as its source of irrigation supply is regulated by the State Water Resources Control Board.</p>
Steve Slack (CDFW)	3.3.5.1.2	Cannabis cultivation	<p>The majority reliance on groundwater for cannabis crops irrigation, and the likely interconnected nature of the Santa Ynez River suggests that such uses (individually or cumulatively) should be considered when evaluating cannabis impacts in the Santa Ynez alluvium. As indicated on page 3-</p>	<p>Recommendation #4.2: CDFW recommends a more careful review of the existing information on cannabis cultivation within the Santa Ynez alluvium and recommends the information be considered when evaluating groundwater management.</p>	<p>Cannabis cultivation is subject to permitting by the Planning and Development department of the County of Santa Barbara and therefore the locations of these crops will be well understood into the future. These developments in cannabis cultivation with regard to future groundwater management may be considered following submission of the Plan during the implementation period.</p>

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			84, "A significant source of recharge to the Paso Robles Formation occurs within the shallow alluvial sand and gravel beds of tributaries where they are in direct contact with the Paso Robles Formation. Percolating groundwater moves readily through the tributary alluvium in the Santa Ynez Uplands (LaFreniere and French,1968). In these areas, the tributaries are losing streams, contributing to the groundwater in the underlying Paso Robles Formation (and Older Alluvium)".		(b) The 350 acres of cannabis production being considered in the EMA are discussed in Section 3.3.5.1, including discussion of the one active and three pending permit applications within the EMA.
Steve Slack (CDFW)	3.2.6.1.3	GDEs	The Draft GSP still does not provide enough information to conclude that potential GDEs should be excluded from the GSP. The potential GDEs were assessed into two categories based on their relationship to the aquifer, but it is unclear if they were categorized any further. It is also unclear and unknown if there are any GDEs in the Draft GSP that will be protected and monitored into the future.	<p>Recommendation #5(a): CDFW recommends the WMA-GSA evaluate potential effects on each GDE unit based on at least four criteria, such as: 1) groundwater dependence; 2) ecological value (high, moderate, low); 3) ecological condition (good, fair, poor) using Normalized Difference Vegetation Index/ Normalized Difference Moisture Index data; and, 4) susceptibility to changing groundwater conditions (high, moderate, low) based on available hydrologic data, climate change projections and GDE susceptibility classifications using a baseline range to consider future changes in groundwater conditions.</p> <p>Recommendation #5(b): To ensure meaningful consideration of GDEs as required under SGMA, CDFW recommends the EMA-GSA provide a biological assessment identifying species known to occur within the GDEs presented in Table 3-13, including steelhead, least Bell's vireo, and southwestern willow flycatcher. Given the uncertain status of the species and their dependency on GDEs, the EMA-GC Memo must accurately assess drought conditions when water availability will be lower and groundwater extraction might be high.</p> <p>Recommendation #5(c): CDFW recommends the EMA-GSA include, at a minimum, the GDEs identified within the Basin in the final GSP. The EMA-GSA has not provided enough data to conclude that the Lower Aquifer groundwater pumping definitively does not affect GDEs within the Basin. If the EMA-GSA reaches that conclusion in the future, then the Sustainable Management Criteria for GDEs would no longer be needed. CDFW strongly disagrees with entirely excluding GDEs present in the Basin without enough data to conclude GDEs are not impacted by groundwater pumping.</p>	<p>#5(a) Comments within this letter directed to the WMA GSA are not addressed in this document and instead should be directed to the WMA. Nonetheless, the GDE analysis presented in the GSP, which has been updated in Section 3.2.5 in response to this and other closely-related comments. Refer to the updated Section 3.2.5</p> <p>#5(b) This comment refers to an earlier document that precedes the public draft Plan. With regard to identifying species within GDEs, Section 3.2.6.2 in the public draft Plan describes the following: "A literature review was completed to determine the terrestrial and aquatic special-status species that may use potential GDE units within the EMA." Identification of species within Table 3-13 was addressed as follows: "An on-site biological survey is recommended by TNC (2019) as a final GDE verification step. Biological surveys have not been completed in preparation of this Plan. However, the presence of these potential GDEs will be verified during Plan implementation."</p> <p>#5(c) This comment refers, in part, to aquifers that are not present within the EMA ("Lower Aquifer"). However, as recommended, the GDEs present within the EMA are presented in the public draft Plan.</p> <p>Within the EMA, the areas of the tributary alluvium that ultimately contribute to recharge of the underlying Principal Aquifers (Paso Robles Formation and Careaga Sand) occur throughout the lengths of the tributaries, but are disconnected from the underlying groundwater at all times, with the exception of the areas near the distal ends of two of these tributaries, as identified in the GDE discussion. Outside of these two areas (see Figure 3-39 Category A areas), the tributary alluvium cannot be classified as interconnected surface water, because these areas do not meet both elements of the SGMA definition that: "the 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." Clarification to this point is provided in Section 3.2.5 and the modeling used to support the quantification of this in Section 5.10.2</p>
Steve Slack (CDFW)	Sensitive species and habitats	GDEs	Many sensitive species and habitats in the Santa Ynez EMA comprise of GDEs, the natural communities that rely on groundwater to sustain all or a portion of their water needs. Southwestern pond turtle was designated as a California SSC in 1994. Western pond turtle's preferred habitat is permanent ponds, lakes, streams, or permanent pools along intermittent streams associated with standing and slow-moving water. A potentially important limiting factor for western pond turtle is the relationship between water level and flow in off-channel water bodies, which can both be affected by groundwater pumping. California red-legged frog is rarely encountered far from perennial water. Tadpoles require water for at least three or four months while completing their aquatic development. Adults eat both aquatic and terrestrial invertebrates, and the tadpoles graze along rocky stream bottoms. Groundwater pumping that impairs streamflow could have negative impacts on California redlegged frog populations. Western spadefoot toad migrates to seasonal vernal pools to reproduce. They will use small puddles of water, such as small pools to breed. California tiger salamander is also restricted to vernal pools	Recommendation #6: CDFW highly recommends the EMA-GSA map out locations where there are interconnected surface waters and document aquatic habitats and other GDEs as required under SGMA. The EMA-GSA should then provide appropriate consideration to those habitats and the sensitive species that rely on them. Fish and wildlife resources should be considered in the water budget. Additionally, shallow groundwater levels near interconnected surface water should be monitored to ensure that groundwater use is not depleting surface water and affecting fish and wildlife resources in the EMA.	The locations of the interconnected surface waters are included in the analysis of GDEs presented in Sections 3.2.6.1 and 3.2.6.2 in the public draft Plan: "A literature review was completed to determine the terrestrial and aquatic special-status species that may use potential GDE units within the EMA." Identification of species within Table 3-13 was addressed as follows: "An on-site biological survey is recommended by TNC (2019) as a final GDE verification step. Biological surveys have not been completed in preparation of this Plan. However, the presence of these potential GDEs will be verified during Plan implementation." Monitoring of shallow groundwater is planned on the lower ends of the two tributaries (Alamo Pintado, and Zanja de Cota Creeks) where there is interconnection with surface water.

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			<p>and seasonal ponds for reproduction. If groundwater depletion results in reduced streamflow due to interconnected surface waters, the nesting and foraging success of flycatcher, least Bell's vireo, and other bird species may be diminished due to the reduced nesting habitat and food availability.</p> <p>The unsustainable use of groundwater can impact the shallow aquifers and interconnected surface waters on which these species and GDEs depend. This may lead to adverse impacts on fish and wildlife and the habitat they need to survive. Determining the effects that groundwater levels have on surface water flows in the EMA would provide an understanding of how the groundwater levels may be associated with the health and abundance of riparian vegetation. Poorly managed groundwater pumping, and surface water flows have the potential to reduce the abundance and quality of riparian vegetation, reducing the amount of shade provided by the vegetation, and ultimately leading to increased water temperatures in the EMA.</p>		
Steve Slack (CDFW)	GSP drafts	Finalizing GSP	The GSA may need to revise the GSP before it is finalized and adopted.	CDFW recommends the EMA-GSA provide a red-lined version of the final GSP to understand the changes made between the Draft GSP and final GSP. Alternatively, CDFW recommends the GSA provide a summary of changes made and comments addressed by the GSA in preparation of a final GSP.	The final Plan will include a complete list of all the public comments received on the draft Plan, and will also include responses to all of the comments received. The form of these responses and addressed comments are included in this table in the finalized Plan. A redline version of the Plan will be provided to show the changes made between the draft Plan and the final Plan.
Nancy Emerson (WE Watch)	1-1	Implementation timeline	<p>The almost 1,000 page Plan (which includes the Executive Summary, and seven sections with appendices, tables, and figures) is a thorough, detailed examination of the Central Management Area GSA Plan, which ties into the potential statewide plan to achieve groundwater sustainability. The Plan has been carefully constructed and appears to be detailed enough to be able to be utilized for the implementation of local and statewide groundwater sustainability.</p> <p>WE Watch recommends that, even though the State has allowed 20 years to achieve necessary sustainability after development of an approved Groundwater Sustainability Plan, our local implementation period be no more than 10 years, and preferably 5 years. The Eastern Management Area is 1,800 AF short of being rated as "sustainable." That status could change rapidly if drought years persist, temperatures rise, population growth increases, and open space converts to housing or the type of agriculture that overuses water.</p> <p>Groundwater is the primary source of water in the Santa Ynez Valley because the amount of State Water is so unreliable from year to year and the amount of water available from the Santa Ynez River is so small, especially in times of drought. How climate change will affect the Valley is uncertain and we need to be prepared to deal with a worst-case scenario both short-term (5-10 years) and long-term (20 years and beyond).</p> <p>In a 2018 landmark report on California water solutions, the Environmental Water Caucus' first Strategic Goal indicates that groundwater management needs to be overhauled. A new sustainable groundwater management approach that allows 20 years for implementation is unreasonable, and it would never have been contemplated in this report and put off for such a long period.</p>	None	<p>The approach for implementation of the Plan follows the requirements of the SGMA Regulations, which require that the groundwater basin maintain or achieve sustainability within 20 years of Plan adoption. During that period, the GSA will conduct and present an assessment every year in an annual report on the status of implementation and will provide an opportunity to review and update the status of the sustainability goals every five years. The schedule for implementation is presented in Section 7, and the methodology and scope of the 5-year evaluation and update are provided in Section 7.4. Through this process, the public, groundwater producers, and other stakeholders will have opportunities to provide input to the decision-making process, including the scheduled and progress towards implementation and sustainability.</p> <p>As presented in Section 7.2 (Administrative Approach and Implementation Timing), implementation of Group 1 management actions will begin within 1 year of GSP adoption, which will be continually monitored and assessed with regard to meeting the sustainable management criteria. The timing of this implementation may be adjusted based on the progress made and timing of the factors listed in that section, which include groundwater production, drought conditions, or other factors.</p> <p>Climate change is discussed in accordance with the GSP guidance and SGMA regulations in Section 3.3.5 – Projected Water Budget and Appendix F, which documents the numerical water budget.</p>

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Nancy Emerson (WE Watch)	1-1	Implementation timeline	Section 1. Introduction to Plan Contents. The following section will need to be modified for the revised implementation period. This includes Sections 1.1, 1.3 (pg. 1-1)	None	The executive summary in Section ES-6 provides the elements of the conceptual road map for implementation. The details of the implementation are presented in Table 7-1. The timing of implementation is open to public review and input following submission of the Plan.
Nancy Emerson (WE Watch)	2-19	Implementation timeline	The following section will need to be modified for the revised implementation period. Section 2. Administrative Information. Section 2.2.2.5. (pg. 2-19)	None	The timing of implementation is open to public review and input following submission of the Plan. Refer to section 7.2 and Figure 7-1.
Nancy Emerson (WE Watch)	3-1	Implementation timeline	The following section will need to be modified for the revised implementation period. Section 3. Basin Setting. Section 3.1 (pg.3-1)	None	The timing of implementation is open to public review and input following submission of the Plan (Section 7.2; Figure 7-1).
Nancy Emerson (WE Watch)	4-10	Data gaps	Section 4.3.2 Assessment & Improvement of Monitoring Network. The plan needs to say gaps are so spatially large that the groundwater level monitoring network is inadequate and insufficient. This will assist the justification for the Plans action items related to adding monitoring wells. (pg. 4-10)	None	Section 4.2.1 of the Plan presents both the spatial distribution of the monitoring networks and the areas where the addition of monitoring wells would improve the HCM and monitoring of the EMA. (refer to Figure 4-2, which presents this visually). The existing groundwater level monitoring network satisfies the well density guidance cited in the BMP (Section 4.3.2). Section 6.3 provides the requested justification for the expansion for the monitoring network. To expand the monitoring network, the GSA welcomes any well owners to volunteer their wells as candidates for inclusion in the monitoring network. As mentioned in Section 4.3.2, two areas are identified within the EMA (see Figure 4-2) where the addition of monitoring wells would improve the hydrogeologic conceptual model. Any assistance that can be offered to this end would be appreciated and would benefit the effective management of the EMA.
Nancy Emerson (WE Watch)	5-1	Implementation timeline	The following section will need to be modified for the revised implementation period. Section 5. Sustainable Management Criteria. The change to a 5-Year (or a 6 to 10-Year Plan) will affect at least the following: Section 5.2, Table 5-2, Figure 5-3, and Section 5.3.2, 5.5.4, 5.6.4, 5.9.3, 5.10.4, and 5.10.4. (pg. 5-1)	None	The timing of implementation is open to public review and input following submission of the Plan.
Nancy Emerson (WE Watch)	6-1	Implementation timeline	The following section will need to be modified for the revised implementation period. Section 6. Projects and Management Actions. The change to a 5-year (or to a 6 to 10-Year Plan) will affect these portions of Section 6: Section 6-1, Group Two Management Actions, Section 6-7, 6-9. (pg. 6-1)	None	The timing of implementation is open to public review and input following submission of the Plan.
Nancy Emerson (WE Watch)	7-1	Implementation timeline	Section 7. Plan Implementation Changes will need to be made to the 5-Year GSP Evaluation and Update to consider the 5-Year Plan as the final implementation date, at least for the Group 1 Action Items. If necessary, the implementation date beyond the 5-Year limit can be adjusted by one-year increments, but in no case should the implementation date go beyond a 10 year period from the start of implementation. The time period beyond the 5-Year period will depend on the overall groundwater condition of agencies in a particular area. (pg.7-1)	None	The timing of implementation actions is open to public review and input following submission of the Plan.
Nancy Emerson (WE Watch)	7-4 and 7-5	Communications and public engagement	Section 7.4 & 7.5. Annual Reporting and 5-Year GSP Updates. In addition to communication with the State, ongoing communication with groundwater users and the entire community is needed if the Plan is to be implemented successfully and the public reassured about the long-term sustainability of the groundwater on which our lives in the Valley depend. This means not only the GSA, but individual agencies being asked to help by keeping their users informed about the plan and its implementation. (pgs. 7-4 & 7-5)	None	Ongoing communication will be conducted throughout the implementation period in accordance with the implementation Plan presented in Section 7.1 using a communication tool to post data, reports and meetings, all of which will promote successful public involvement to guide the future activities within the GSA.
Nancy Emerson (WE Watch)	7-7 and 7-8	Implementation	Section 7.6. & 7.7. Plan Budget and Funding. WE Watch urges that the action priority be to get a governance structure in place and funded with commitments to implement the plan. (pgs. 7-7 & 7-8).	None	The important issues of funding the implementation measures presented in Sections 6 and 7 of the Plan are being reviewed and will require further input and development through the GSA and public stakeholder process. While specific funding mechanisms are not required to be included in the Plan, they will be priority issues early in 2022 following submission of the Plan.

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Commenter	Section	Theme	Comment	Commenter's Recommendation	Response
Tim Gorham	6	Drought	Why is the County continuing to issue private water well drilling permits in the middle of a long term drought and will the GSP restrict new water well drilling as part of the CMA if necessary?	None	As discussed in Section 2.2.4, the County of Santa Barbara, including but not limited to its Department of Environmental Health Services, is the only agency with well permitting authority within the County. As set forth by Section 6 of the Plan, through coordination with the County well permitting authority, the EMA GSA may seek to develop supplemental conditions to be placed on new wells and new production in the EMA. The GSA may also work with the County well permitting authority to evaluate the applicability of CEQA for new wells, or categories thereof, in the EMA. Among other related Projects and Management Actions, Section 6 of the Plan further provides that wells within the EMA will need to be metered and registered and report pumping to the GSA.
Tim Gorham	3.2	Aquifers	The Hydrologic Conceptual Model states that the Paso Robles Fm "extends from the surface to approximately 3500 ft below the ground surface with an average thickness of 1500 ft". In the eastern uplands area according to several well logs the Paso Robles Fm has water bearing sands only in the upper 600 ft (approx. 50% ss and gravels). The top 150 ft is now depleted and below 600 ft the Paso is mostly mud. The economic limit to drilling is approximately 1000ft and below that any water bearing sands will be non potable. The reader must understand the aquifer limitations of the Paso Robles Fm and clearly potable water bearing sands are not present to 3000ft.	None	Section 3 of the Plan presents both the variation of thickness and depth of the Paso Robles Formation (Section 3.1.4.3 and Table 3-4) as well as discussion about the difference between the coarser upper and finer lower Paso Robles Formation. This difference in hydraulic properties between the two members of the Paso Robles Formation is also discussed within Appendix F, which documents the model development calibration. The groundwater elevations within this formation are discussed within Section 3.2.1.1, which treat the groundwater within the heterogeneous Paso Robles Formation as a single unit in keeping with the planned management of this principal aquifer. It is agreed that there is likely poor quality groundwater present at depth.
Tim Gorham	5	Groundwater levels	In recent CAG meetings the Agriculture members keep repeating that "they see no ground water levels falling in their wells". How is that consistent with the many hydrographs in the GSA that show steeply falling water levels thru 2018 and when data is included from the more recent drought years 2018-2021 even steeper declines in SWL.?	None	The hydrographs included in the Plan are presented on Figures 3-22 and 3-23 for the Paso Robles Formation (and those in Appendix D) do indeed show a decline during the current drought. The water level data "illustrate the long-term stability of water levels over time except during drought periods" per Section 3.2.1.2. Furthermore, "Some wells show water elevation decreases of more than 100 feet during prolonged drought cycles, but most wells appear to fully recover within a few years when the drought conditions end" per the same section of the Plan. These variations in water level were considered when setting the Minimum Thresholds for water levels. The GSA will monitor groundwater conditions to assess whether groundwater levels stabilize when normal rainfall conditions return. If water levels do not recover and the decline appears to be a result of groundwater conditions occurring throughout the Basin, the GSP outlines actions that the GSA may take to avoid undesirable results.
Tim Gorham	3.3	Climate change	The global warming climate model included in the GSP indicates a slight increase in annual rain fall thru 2045. How is that consistent with the last 9 years of significantly lower than normal rain fall?	None	The DWR guidance for projection of climate patterns was based on both the historic dataset discussed in Section 3.3.1 and shown on Figure 3-45, and climate change that was used for preparation of the water budgets for the Plan indeed show a slight increase (on average) in high intensity lower duration rainfall on average on a long-term basis. Note that the historic variability and long term changes due to climate change factors are incorporated into the planning, which together indicate an increase in temperature and ET, which increases crop water demand. Within that average long-term period, the predicted climate change factors also include periods of variability including wet and dry conditions, some of which are similar to the current drought. With that, it may be that the magnitude of the current drought may have exceed the predicted climate change guidance. The condition of the basin and change in storage will be re-evaluated each year and reported in the annual report. The GSA may choose to respond to continued water level decline and reduction in storage due to drought but is only required to if it is determined that undesirable results are evident due to groundwater conditions occurring throughout the Basin and water levels do not recover when normal conditions return.
Tim Gorham	5	Groundwater levels	The GSP states: "while no significant and unreasonable effect has been observed in the EMA as a result of lowering ground water levels to date" this is inconsistent with water well data in the EMA uplands where we have had to replace wells due to sanding and falling SWL, several shallow private wells in the area have gone dry (they have had to hook up to our system).	None	While groundwater levels have been lowering during the current drought as shown on the hydrographs presented in in Appendix D, there is a demonstrated "long-term stability of water levels over time except during drought periods" as discussed in Section 3.2.1.2. Furthermore, "Some wells show water elevation decreases of more than 100 feet during prolonged drought cycles, but most wells appear to fully recover within a few years when the drought conditions end" per the same section

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			That statement leaves the reader with the feeling that "all is well"!		of the Plan. While the anecdotal reports of well replacements have been brought up during public meetings that were conducted in the public comment period, and while new well permits have continued to issue through the County within the past 18 months, there is no published information about whether these wells are "replacement" wells installed due to low water levels. That said, the ongoing drought raises concerns that the storage deficit is likely to increase beyond what was computed in the Plan for the historical period through 2018. This issue will be further evaluated and the data will be updated through 2021 as the first annual report is prepared, which is in preparation and will be submitted to the DWR in April 2022.
Tim Gorham	3.3	Groundwater levels	IN Oct of 2014 the County of Santa Barbara published "County of SB Groundwater Status Report" stating in Table 1 that the Santa Ynez Upland Basin had 900,000 acft of "usable water in storage" with an overdraft of 2,020/yr giving our area of the SYB over 82 years of water supply even without recharge! That information was passed on to our water users for many years until recently when we are faced with severely falling SWL requiring the drilling of new wells and discussions of water rationing.	None	Stating the total volume of useable storage within the entire groundwater basin does not provide the proper context for achieving sustainability within the EMA in accordance with SGMA as presented in the Sustainability Goal in Section 5.2 of the Plan, which pertains to the entire Basin. The sustainability goal requires long-term groundwater elevations to be adequate to support existing and future reasonable and beneficial uses throughout the Basin. An important aspect of this is that sustainability is pertinent to the existing infrastructure in the Basin, including existing depths of agricultural, municipal, and domestic wells. For this reason, the extraction of the entire storage volume of groundwater within the EMA would not support sustainable management of the groundwater resource for all beneficial uses.
Tim Gorham	3.3	Water budget	The Water Budget indicates a negative outflow of 1830 AFY which is a relatively small number. When you look at the drought years of 2012-2018 the budget indicates a 6500 AFY negative budget. When you add in the recent drought data thru 2021 water year things look even worse.	None	The current drought indeed extends past the drought years included in the "current period" in the Plan. The groundwater conditions that have occurred since 2018 will be assessed in the first annual report, which will be submitted in April 2022.
Gay Infanti	3.3	Water budget	Are the DWR guidelines for incorporating climate change into the GSPs reasonable given the current climate situation? Do you expect DWR to update this guidance to take into consideration the long-term drought? Current water budget is significantly worse than historic-based (1982-2018) water budget (only 41% of historical average). If this trend continues or gets worse, the sustainable yield will be much lower than currently budgeted. Therefore, it's critical to verify all of the estimated inflow/outflow volumes used in developing the water budgets asap so we can adjust as needed before we experience undesirable results. Also, the water budgets depend on imported water that probably won't be available for several years and perhaps never again. If either the SWP or Cachuma project deliveries are cut below those estimates, municipalities will be forced to use more G/W or purchased water, which is becoming very scarce and very expensive.	None	Preparation of the projected water budgets relied upon DWR-provided climate change data and methods which used global climate models and radiative forcing scenarios recommended for hydrologic studies in California by the Climate Change Technical Advisory Group, as discussed in section 3.3.5.1 of the Plan. These guidance data that were used for the Santa Ynez EMA are specific to this Basin as discussed in the Plan. Within the long term period, the predicted climate change factors include periods of variability including wet and dry conditions, some of which are similar to the current drought. As more data is collected during GSP implementation, it may be determined during subsequent 5-year updates of the Plan that the magnitude of the current drought exceeds the predicted climate change guidance. The GSA may decide in the future that it wishes to address declining water levels resulting from the ongoing drought by implementing one or more of the management actions and projects presented in the GSP. The projected future availability of SWP water is based on extensive modeling (CalSim) conducted by the State on their own project, which is presented in planning guidance and documentation from the CCWA and DWR's Delivery Capability Report of 2019. This report showed low allocations during these recent years as part of DWR's projections of long-term average availability of SWP supplies. The discussion of SWP reliability has been updated to reflect the most recent delivery projection. (Section 3.3.5.1)
Gay Infanti	3.3	Surface water	Please explain how CCWA and DWR can say that DWR has the delivery capacity of a minimum of 58% allocation of SWP water that may be available to the EMA in their planning guidance? If that were true, Solvang wouldn't already be in a Stage 2 Drought Emergency with 20% mandatory reductions in water usage, as well as trying to purchase water on the open market to provide to residents next year when 0% allocations are expected.	None	The future availability of SWP water was based on the average SWP water availability presented in Planning guidance from the CCWA and DWR's Delivery Capability Report of 2019. You correctly point out that recent allocations are less than 5 percent. The discussion of SWP reliability has been updated to reflect the most recent delivery projection. (Section 3.3.5.1)

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Commenter	Section	Theme	Comment	Commenter's Recommendation	Response
Gay Infanti	5	Groundwater levels	Section 5.5.1, last paragraph : "There have been no reports from stakeholders in the EMA that wells needed to be deepened." I think this situation needs to be verified. I know of one individual whose well had to be drilled deeper due to reduced production, and have heard in our discussions that one mutual water company had one or more wells going dry. What is the process for reporting these and where is it documented? I think the EMA needs to know if the lack of reports actually means that no wells have either been deepened or gone dry.	None	This statement has been revised to clarify that well "deepening" often consists of well replacement. While there has been an increase in new well permits issued by the County within and outside the SYRWCD within the past 18 months, there is no indication about whether these wells are "replacement" wells. Efforts will be made over the next several years to determine the planned use of forthcoming wells, which may include replacement. A website sponsored by DWR (statewide distribution of reported household water supply shortage) identifies locations where well supplies have been depleted. Only one location is reported in Santa Barbara County (not in Santa Ynez). Well replacements will be tracked in the future, and the GSA and the SYRWCD have added a link to their respective websites where anyone can report a water outage in a well.
Gay Infanti	6	Projects and management actions	Section 6-7 discusses the possibility of developing a Base Pumping Allocation to stabilize the volume of G/W pumping in the EMA. Since there is an annual pumping deficit already, since G/W levels have not recovered since the last wet period, and since an ongoing drought is forecast, I think this MA is a necessity and should be given priority along with verification of pumping volumes via well metering/reporting.	None	The EMA GSA plans to continually monitor and assess its progress in ensuring the sustainable management criteria are met. Under conditions where minimum thresholds are projected to be reached, the EMA GSA will perform assessments to determine whether the trends are related to groundwater pumping throughout the Basin, drought conditions, or other factors. If groundwater level data are trending toward reaching minimum thresholds as a direct consequence of groundwater pumping in the EMA, then the EMA GSA may consider the implementation of Group 2 management actions and Group 3 projects. The Group 2 management actions include possible development and implementation of a Groundwater Allocation (BPA) Program, a GEC Marketing and Trading Program, and a Voluntary Agricultural Crop Following Program. A pre-requisite to the implementation of a Groundwater BPA Program and a GEC Marketing and Trading Program will be the implementation of a Well Registration and Well Meter Installation Program, which is included in Group 1 and planned for beginning the implementation process within 1-year of GSP adoption and submittal. Group 3 projects include various infrastructure and related approaches to add and diversify water supplies.
Gay Infanti	6	Funding	This section discusses financing options for G/W pumping fees that include parcel fees and parcel tax. How would this work for Solvang, which has municipal wells providing water to all residential and commercial users? Unlike parcels with their own well(s), the parcel owners in Solvang have no direct control over G/W pumping and only indirectly via the city's conservation programs and drought emergency ordinances. In addition these municipal parcels are substantially smaller than AG parcels, so using a parcel fee or tax that is applied to all parcels in the EMA, regardless of whether they contain G/W wells, regardless of parcel size or amount of water used by each, would be unfair. Obviously there is not enough detail in this document to understand if either of these approaches is contemplated, but I hope not. G/W pumping fees should be levied per G/W well, not parcel, and should also include consideration of pumped volume.	None	The important issues of funding the implementation measures presented in Sections 6 and 7 of the Plan are being worked on and, while not required to be fully developed in the Plan, will be a priority of the GSA in early 2022 following submission of the Plan.
Gay Infanti	6	Technical error	The first sentence of the last paragraph on this page, which concerns partnering with SB County's Precipitation Enhancement Program, is garbled - it seems to be missing some words. (p. 6-60)	None	There is a typo in this sentence. It has been revised to read as follows: "The project would be to provide financial assistance to the Santa Barbara County Water Agency for the continued operation and potential expansion of the existing precipitation enhancement program that has been operated by Santa Barbara County Water Agency since 1981". (Section 6)
Gay Infanti	ES	General	This is a general comment. Overall, the Draft EMA GSP is comprehensive and well written. I think GSI has done an exceptional job. See below for specific comments and questions on the draft document.	None	Thank you for your comment. It has been a pleasure to conduct this work for the GSA.
Gay Infanti	2	Map	Figure 2-2 shows the Chumash Reservation on the east side of Hwy 154 - I believe this is the Camp 4 property that was recently annexed. The rest of the reservation is not identified specifically on the map in this figure, although there is an area outlined in dark blue shown where Sanja de Cota creek meets the SY river.	None	The updated mapped extents of the Chumash Reservation were provided by the Attorney for the Tribe, who is a member of the Citizens Advisory Group (CAG).

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Gay Infanti	2	Municipal	Section 2.2.3.32, Solvang's comprehensive update of its General Plan is currently underway so the Conservation and Open Space element discussed in this section will change. Solvang's new census information was also recently received indicating that Solvang's population has increased to ~6,000.	None	References to the General Plan in Section 2.2.3.3 were updated to clarify that the General Plan is being updated.
Gay Infanti	3	Water budget	Table 3-17, Water Budget Sources, qualitative data ratings indicating the level of confidence in the estimate are shown for each listed component - a high rating being the best. However, most of the discussion following this Table address the level of uncertainty for each individual element - low being the best. This is confusing. I think this section would be easier to read and understand if, for the sake of consistency, one or the other qualitative rating is used in both Table 3-17 and the discussion sections following it, i.e., either level of confidence or level of certainty to qualitatively rate the data source.	None	The SGMA regulations require discussion of uncertainty, which is included in the text preceding and within Table 3-17 (Plan Section 3.3.2). To that end, the table includes a note that "Higher quality data represent lower uncertainty." The text preceding the table has been updated to reflect this relationship and eliminate the inconsistency.
Mark Capelli (NMFS)	General	Interconnected surface waters and GDEs	<p>Unfortunately our review indicates the Draft GSP does not adequately address the recognized instream beneficial uses of the Santa Ynez River and its major tributaries within the boundaries of the Eastern Management Area, or other GDE, potentially affected by the management of groundwater within the Eastern Management Area. In particular, the Draft GSP does not adequately address the depletion of interconnected shallow groundwater basins and the pattern of groundwater extraction that have occurred historically, currently, or likely to occur in the future, and its potential adverse effects on the federally listed endangered southern California steelhead (<i>Oncorhynchus mykiss</i>).</p> <p>Of particular concern is the potential adverse effects on designated critical habitat for southern California steelhead within the Santa Ynez River, and the Alisal, Quiota, and Hilton creek tributaries, within the boundaries of the Eastern Management Area. The surface flows at the confluence of Alisal, Quiota, and Hilton creek tributaries are important for maintaining surface hydrologic connectivity for steelhead (and other native aquatic-dependent species) attempting to migrate between these tributaries and the middle reaches of the Santa Ynez River.</p>	None	A response to each of the prior comments is included in this comment log, which presents rationale for the responses to each of the NMFS comments with regard to the draft Water Budget and Basin Setting (Section 3). Note that the draft Water Budget of November 2020 was thoroughly revised in March 2021, the revisions for which are included in the draft Plan.
Mark Capelli (NMFS)	General	Interconnected surface waters and GDEs	NOAA's National Marine Fisheries Service (NMFS) has previously provided extensive comments on these issues, which have not been adequately addressed in the Draft GPS for the Eastern Management Area (see, the attached NMFS letters of April 28, 2021, "Draft Santa Ynez River Valley Groundwater Basin – Eastern Management Area Groundwater Sustainability Plan – Basin Setting: Groundwater Budget" and July 7, 2021, "Santa Ynez River Valley Groundwater Basin – Eastern Management Area Groundwater Sustainability Plan Section 5 – Sustainable Management Criteria")	None	Responses have been prepared for the earlier round of comment received from NMFS, which are included in this comment log, including some revisions to the text of the Plan as warranted. These comments are appreciated and the Plan has been revised to clarify the analysis with regard to the important issues of interconnected surface waters and GDEs. Please refer to other Responses to Comments herein.

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Commenter	Section	Theme	Comment	Commenter's Recommendation	Response
Joseph Hughes, Santa Ynez Water Group	General	Landowner representation	<p>Landowner Representation. There is no exclusive agricultural landowner representation on any of the GSAs' governing committees. Each committee is composed of representatives from governmental agencies with non-agricultural constituencies. For example, the Western Management Area GSA Committee is made up of (1) Santa Ynez River Water Conservation District; (2) the County of Santa Barbara; (3) the City of Lompoc; (4) Mission Hills Community Services District; and (5) Vandenberg Village Community Services District. Both the Central Management Area GSA Committee and the Eastern Management Area GSA Committee are similar. This does not represent the entirety of the water users and interests in the Basin and excludes any direct representation from the agricultural community. Thus, at the outset, the make-up of the GSAs was flawed.</p> <p>The only avenue your GSAs allowed agricultural landowners to voice their unique opinions or concerns is through the Citizens Advisory Groups. But, just as the name suggests, those groups are only advisory, are weighted toward non-agricultural interests, and carry no decision-making authority. Put simply, agricultural landowners have been intentionally disenfranchised from the decision-making.</p> <p>We are aware that the GSAs are exploring a potential reorganization of their governance structure. Whether that reorganization results in each GSA remaining as three separate GSAs or forming a single coordinated GSA, it is likely that each GSA will revisit or draft new organizational documents. When doing so, we ask that each GSA include a voting director position for an agricultural landowner representative on each decision-making body formed or otherwise reorganized.</p>	None	<p>The agricultural community has been actively engaged throughout the GSP development process and has provided written and verbal comments on multiple sections of the GSP, participated in GSA committee meetings, and participated in CAG meetings. The comment indicates that agricultural landowners have been "intentionally disenfranchised" from decision-making, but that is not the case. Per express SGMA requirements, the formation of the EMA GSA includes a combination of local agencies that have water supply, water management, or land use responsibilities within the EMA. (See Water Code sections 10721(n), 10723.6.) Moreover, although SGMA provides the opportunity for mutual water companies to participate in a GSA (Water Code section 10723.6(b)), landowners in the EMA made their own choice in not pursuing that level of involvement on the GSA.</p> <p>Currently, agricultural representation in the EMA is through SYRWCD and the County of Santa Barbara. ID No.1 also purveys up to 50 percent of its water supply to agricultural customers. Furthermore, as recognized by the comment, several agricultural representatives were intentionally selected to serve on the EMA Citizens Advisory Group and have actively served in that important capacity throughout the Plan development process. Formation of the Citizens Advisory Group was not mandatory under SGMA, yet the GSA believed the Group would ensure a critical level of stakeholder review and input, and for nearly two years the Group provided direct feedback to the GSA on the development and specific content of the Plan. Future governance and membership of the GSA will be considered after the GSP is submitted to DWR.</p>
Joseph Hughes, Santa Ynez Water Group	General	Projects and management actions	<p>Implementation of Projects and Management Actions. We are also concerned with the projects and management actions identified by the GSAs in the draft GSPs. While we understand that many of the GSAs' respective Group 1 projects and management actions focus primarily on monitoring and reporting efforts, all other projects single out and discriminate against agricultural landowners. The burden of sustainability is therefore placed solely on the backs of agricultural landowners.</p> <p>Funding for these projects and management actions mirrors that problem. We are aware that the GSAs are considering a groundwater extraction fee, assessment, or other property-related fee to fund the GSAs' projects and management actions. As those considerations continue, we encourage the GSAs to pursue the most equitable option in levying that financial burden. Agricultural landowners should not be unfairly targeted with projects and management actions, and then be forced to pay for their development and implementation.</p>	None	<p>With regard to the Group 2 Management Actions, the only one included in the GSP that is specifically tailored to the agricultural pumpers in the EMA is the Voluntary Agricultural Crop Following Program, which is designed to provide benefit and flexibility to agricultural and other pumpers in the EMA in the event that Program implementation is determined to be needed in the future. The other Group 2 Management Actions would likely include some level of participation by all producers (agricultural and non-agricultural) in the EMA. None of the Group 3 Projects in the GSP apply specifically to agricultural pumpers.</p> <p>The details of how the Groundwater Extraction Fee Program or any other fees will work have not been determined at this time. Per Section 6.4.3 of the GSP, "The Groundwater Pumping Fee Program will be developed in an open and transparent process. Targeted outreach meetings and technical workshops, in addition to regularly scheduled EMA GSA meetings, will be held periodically to inform all groundwater pumpers and other stakeholders about the details of the proposed Groundwater Pumping Fee Program. Groundwater pumpers and interested stakeholders will have the opportunity at these meetings to learn about the programs as well as the opportunity to provide input and comments on how the pumping fee program may be implemented in the EMA".</p>

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Commenter	Section	Theme	Comment	Commenter's Recommendation	Response
Joseph Hughes, Santa Ynez Water Group		Overlying groundwater rights	<p>Consideration of Overlying Groundwater Rights. Our last concern underlies all that the GSAs are doing. None of the GSAs have considered the effects their actions will have on overlying groundwater rights of agricultural landowners. This omission is evident in the draft GSPs as the GSAs focus exclusively on the interests of municipal groundwater users. This violates the mandates of SGMA requiring your GSAs to consider the interests of all beneficial uses and users of groundwater. Our hope is that the GSAs expand their focus and discharge their duty to consider all interests in the Basin as required by SGMA.</p> <p>We understand the complexities of the issues and the challenges in developing a GSP. Our desire is a successful GSP, and to be part of the process. But we cannot do that if the GSAs intentionally disenfranchise agricultural landowners and their senior overlying rights in the Basin. Please have the attorney advising the GSAs on these issues contact me so that we can discuss how best to resolve our concerns.</p>	None	<p>The Plan does not include any allocation of water rights, which is outside of the scope of this GSP and SGMA regulations and guidance. The Plan does however contemplate a range of potential projects and management actions that are intended to address undesirable results, if observed, which SGMA requires. Options include a potential allocation program that would be designed to provide for a fair allocation and management of available groundwater supplies within the sustainable yield of the basin. Details of how an allocation program would be developed, implemented, and funded will be discussed in public meetings after the GSP is submitted to DWR, if the program is needed in the future. As set forth throughout the Plan, avoiding undesirable results and managing the basin within its sustainable yield actually helps to protect all beneficial uses and users of groundwater over the long-term, specifically including agricultural landowners.</p>
NMFS (previous comments)	8-9	Definitions	<p>The definition of an undesirable result does not recognize the adverse effects of periodic reduction of groundwater on GDE, including the use by spawning and rearing steelhead. The effects of periodic groundwater reductions on out-of-stream beneficial uses (e.g., domestic or agricultural water supplies) may be addressed with alternative water sources. Nevertheless, instream beneficial uses such as GDE may be more vulnerable to such groundwater reductions, for which there is no alternative water source to sustain the GDE.</p>	None	<p>Undesirable results are defined in the GSP in accordance with Water Code Section 10721 of SGMA. GDEs and potential GDEs have been identified in the public draft and final versions of the Plan and potential impacts to GDEs have been specifically considered in setting the sustainable management criteria.</p>
NMFS (previous comments)	10	Interconnected surface waters and GDEs	<p>The sustainable goals are expressed explicitly and exclusively in terms of groundwater levels, and do not recognize the important relationship between groundwater levels and the surface flows (particularly base flows) that contribute to the maintenance of GDE. This is an important omission that should be corrected in the revised document because GDE for the EMA basin includes the use of surface flow by the federally listed endangered southern California steelhead for migration, spawning and rearing.</p>	None	<p>The sustainability goal in Section 5.2 has been revised in the public draft and final versions of the Plan to include a goal related to avoiding depletion of interconnected surface water and impacts to GDEs resulting from groundwater conditions occurring throughout the Basin.</p>

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NMFS (previous comments)	11	Interconnected surface waters and GDEs	The sustainable objectives includes avoiding chronic reduction of groundwater, but not the adverse effects of periodic reduction of groundwater on GDE, including the use by spawning and rearing steelhead. The effects of periodic groundwater reductions on out-of-stream beneficial uses (e.g., domestic or agricultural water supplies) may be addressed with alternative water sources. However, instream uses such as GDE are more vulnerable to such groundwater reductions, because there is generally no alternative water source to sustain the GDE.	None	Potential adverse effects on GDEs resulting from groundwater conditions occurring throughout the Basin and significant and unreasonable depletion of interconnected surface water are discussed in Section 5.10, specifically within Section 5.10.1 of the public draft and final versions of the Plan. Areas within the EMA where there may be spawning and rearing habitat for listed steelhead have been identified as surface water that exists in the lower Santa Ynez River system below Bradbury Dam. The Plan fully recognizes the surface water spawning and rearing habitat for steelhead that has been identified by the National Marine Fisheries Service, the California Department of Fish and Wildlife, and the State Water Resources Control Board in previous and ongoing efforts dating back to the 1990s to develop and implement surface flow and non-flow measures in the mainstem lower Santa Ynez River and certain tributaries for the protection of public trust resources, including but not limited to steelhead and its critical habitat. (See, e.g., National Marine Fisheries Service September 2000 Biological Opinion for U.S. Bureau of Reclamation Operation and Maintenance of the Cachuma Project on the Santa Ynez River in Santa Barbara County, California; State Water Resources Control Board Water Order WR 2019-0148 for the Cachuma Project on the Santa Ynez River.) The member agencies of the EMA GSA remain actively involved with numerous federal, state, and local entities in proceedings before the State Water Board and in the current re-consultation process under the federal Endangered Species Act to protect steelhead and its critical habitat in the lower Santa Ynez River system. (See, e.g., August 2020 Term 18 Plan submitted by United States Bureau of Reclamation to State Water Board pursuant to Order WR 2019-0148.) Please refer to other Responses to Comments herein regarding the extent of interconnection between groundwater and surface water that has been designated as spawning and rearing habitat for steelhead.
NMFS (previous comments)	12-13	Undesirable results	The criteria for defining undesirable results do not, but should, provide meaningful guidance. Some deal with causes not effects, and the effects are expressed in terms that are simply re-statements of goals, not criteria or objectives for meeting identified goals. As a result, there is no way of knowing with a reasonable level of assurance whether identified goals have been truly attained, and whether changes in operations would be necessary to achieve the goals.	None	The criteria for measurable objectives and minimum thresholds have been revised in the public draft Plan, which was prepared after this comment was submitted originally and the final versions of the Plan. The public draft Plan addresses this comment. (Section 5.3.2)
NMFS (previous comments)	13-16	Interconnected surface waters and GDEs	In reviewing the methods used to establish thresholds and objectives, it appears that all of the metrics were physical or chemical, lacking any biological metrics. As NMFS has indicated in its previous comment letter, it is essential to determine what flows adequately supports the freshwater life history phases of steelhead. Without an understanding of these hydrologic/biotic relationships, a Groundwater Sustainability Plan (GSP) cannot ensure that significant and unreasonable adverse impacts from groundwater depletion (and in the case of the Santa Ynez River, the integrally related surface water diversion/groundwater recharge program) are avoided.	None	Section 5.3.3.5 has been revised in the public draft and final versions of the Plan to indicate that designated critical habitat for steelhead will be included in consideration of potential GDEs. It is not within the scope of the Plan to determine what surface water flows adequately support the freshwater life history of steelhead. Please refer to related Responses to Comments herein.
NMFS (previous comments)	15	Interconnected surface waters and GDEs	The Draft Criteria indicates that it relies on "Published documents and independent analysis that identify the extent and distribution of potential GDEs." However the Draft Criteria, as well as the Basin Setting: Groundwater Budget appear to rely on methodology that uses vegetation as the principal means of identifying GDE (e.g., The Nature Conservancy 2019). While this method may be useful for identifying select GDE, it is not adequate to identify GDE that are not defined by vegetation alone. For steelhead, the GSP should also consider the information provided in NMFS' designated critical habitat for this species as well as in NMFS identification of intrinsic potential habitat.	None	Section 5.3.3.5 has been revised in the public draft and final versions of the Plan to indicate that designated critical habitat for steelhead was included in consideration of potential GDEs. No information is available to indicate that listed steelhead are present within the GDE areas identified using vegetative mapping methods in the EMA. Habitat present in the Santa Ynez River mainstem area is not supported by groundwater, it is supported by surface water; thus, that habitat is not considered in this plan.

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NMFS (previous comments)	16	Interconnected surface waters and GDEs	The Draft Criteria should also include Individual Minimum Thresholds that address GDE other than those defined by the presence of riparian vegetation.	None	See previous response
NMFS (previous comments)	17-18	Interconnected surface waters and GDEs	The Draft Criteria analyzes lowering groundwater levels primarily in terms of affecting groundwater supplies for out-of-stream beneficial uses, and undesirable results that would affect these uses. It does not, but should, explicitly address other instream beneficial uses, such as those associated with GDE. The Draft Criteria should be revised to include a discussion of specific GDE, including those associated with the federally listed endangered southern California steelhead.	None	See previous response
NMFS (previous comments)	19-23	Interconnected surface waters and GDEs	As with the discussion of lowering groundwater levels, the Draft Criteria discusses minimum thresholds primarily in terms of groundwater supplies for out-of-stream beneficial uses. To develop a clear understanding of the consequence of the Committee's minimum threshold, which is currently lacking, the Draft Criteria should be revised to include a discussion of the predicted consequences of the proposed threshold on GDE, including those associated with the federally listed endangered southern California steelhead.	None	See previous response
NMFS (previous comments)	24	Interconnected surface waters and GDEs	The Draft Criteria recognizes that the CMA is hydrologically down gradient of the EMA and is hydrologically connected. However, the Draft Criteria indicates: "Based on available information, groundwater gradients at the boundary between the EMA and SACV are such that groundwater does not flow between the EMA and SACV and therefore, the SACV would not be impacted by the minimum threshold for the chronic lowering of groundwater levels sustainability indicator in the EMA." (p. 24) As NMFS has noted in previous comments, while groundwater management actions in the mainstem of the Santa Ynez River may not directly affect flow in the tributaries to the Santa Ynez River, drawing down the groundwater near the confluence of the tributary and the Santa Ynez River can affect the hydraulic connectivity between the tributaries and the river. This hydraulic connectivity (even if only seasonal) can have implications for the movement (or migration) of a variety of fish and or amphibian species (See State Water Resources Control Board 2011). These tributaries, therefore, should not be considered as disconnected from the water table, but should be classified in the revised document as having interconnected surface water in accordance with the SGMA.	None	Section 5.5.2.4 in the public draft and final versions of the EMA's Plan have been revised to recognize that the location of production wells in close proximity to the boundary between the EMA and San Antonio Basin could affect the groundwater gradient and alter connectivity. This GSP does not contemplate any groundwater management actions in the mainstem of the Santa Ynez River. Surface water flows in the River are subject to the regulatory authority of the SWRCB along with state and federal wildlife agencies. As set forth in the Plan and these Responses to Comments, comprehensive regulatory efforts have been instituted dating back to the 1990s to develop and implement surface flow and non-flow measures to protect public trust resources, specifically including steelhead, in the lower Santa Ynez River and certain tributaries (see, e.g., National Marine Fisheries Service September 2000 Biological Opinion for U.S. Bureau of Reclamation Operation and Maintenance of the Cachuma Project on the Santa Ynez River in Santa Barbara County, California; State Water Resources Control Board Water Order WR 2019-0148 for the Cachuma Project on the Santa Ynez River; August 2020 Term 18 Plan submitted by United States Bureau of Reclamation to State Water Board pursuant to Order WR 2019-0148). Please refer to Sections 3.2.6 and 5.10 of the Plan and other Responses to Comments herein regarding the extent of interconnection between groundwater and surface water and the lack of designated spawning and rearing habitat for listed steelhead within the upland groundwater management area of the EMA.
NMFS (previous comments)	5.5.2.6	Groundwater levels	The Draft Criteria states that, "No federal, state, or local standards exist for chronic lowering of groundwater levels." (p. 25). While it is true that there are not numeric standards, this statement does not appear to recognize the broad standards that that are established by SGMA.	None	The statement in the Draft Criteria is provided in the context of the SGMA regulations set forth directly above the statement in the public draft and final versions of the Plan, which were prepared since this comment was written. The Plan fully recognizes the broad standards established by SGMA and addresses applicable federal, state, and local standards that apply to sustainable groundwater management in the basin.

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NMFS (previous comments)	26-27	Interconnected surface waters and GDEs	See comments above for 5.5.3: In reviewing the methods used to establish thresholds and objectives, it appears that all of the metrics were physical or chemical, lacking any biological metrics. As NMFS has indicated in its previous comment letter, it is essential to determine what flows adequately supports the freshwater life history phases of steelhead. Without an understanding of these hydrologic/biotic relationships, a Groundwater Sustainability Plan (GSP) cannot ensure that significant and unreasonable adverse impacts from groundwater depletion (and in the case of the Santa Ynez River, the integrally related surface water diversion/groundwater recharge program) are avoided	None	It is not within the scope of this Plan to determine what surface water flows adequately support the freshwater life history of steelhead or to regulate surface water diversions. Please refer to related Responses to Comments herein. The GSA recognizes that NMFS and various other federal, state, and local agencies are actively engaged in several ongoing state and federal regulatory proceedings in place to ensure adequate surface water flows to support and protect all freshwater life history phases of steelhead in the lower Santa Ynez River. Please refer to related Responses to Comments herein.
NMFS (previous comments)	33	Interconnected surface waters and GDEs	As noted above, the Draft Criteria, appears to focus primarily on out-of-stream beneficial uses, but should be revised to expressly and explicitly deal with all of the beneficial uses that are associated with GDG, including the federally listed endangered southern California steelhead.	None	Section 5.6.2.3 in the public draft and final versions of the Plan expressly includes GDEs as a beneficial use. The section has been revised in the public draft Plan, which was prepared after this comment was submitted originally, to address beneficial uses that are associated with GDEs. Listed steelhead have not been identified in the groundwater areas that could be affected by GSA groundwater management activities.
NMFS (previous comments)	52-62	Interconnected surface waters and GDEs	As noted above, the Draft Criteria appear to rely on methodology that use vegetation as the principal means of identifying GDE. A decrease in groundwater levels less than the depth of the root zone can result in effects to surface flows, particularly base flows (See Brunke and Goslin 1977, Fetter 1997). As a consequence, the Draft Criteria do not address all the potential GDE, including the federally listed endangered southern California steelhead. Also, in addition to the riparian areas in the vicinity of the confluence of Alamo Pintado and Zanja de Cota Creek with the Santa Ynez River, other reaches of the Santa Ynez River within the EMA (between Hilton Creek and Alisal Creek) are potentially affected by groundwater withdrawals. Additionally, the confluences of Alisal Creek, Quiota Creek, San Lucas Creek, and Zaca Creek (below Bradbury Dam), and Tepusquet Creek, Cachuma Creek and Santa Cruz Creek (above Bradbury) and the Santa Ynez River could be impacted by groundwater withdrawals from the EMA. The Draft Criteria should be revised to recognize these other GDE, including those associated with the federally listed endangered southern California steelhead.	None	Listed steelhead have not been identified within the groundwater areas where the EMA has groundwater management responsibilities and so the minimum threshold has been established to avoid significant and unreasonable adverse impacts to the riparian vegetation in the areas of the tributaries where a connection between groundwater and surface water has been identified (Alamo Pintado and Zanje de Cota Creeks). Tributaries flowing directly into Lake Cachuma above Bradbury Dam are disconnected from the principal aquifers and are not affected by groundwater conditions in the EMA.
NMFS (previous comments)	59	Interconnected surface waters and GDEs	The Draft Criteria also asserts: "The minimum threshold for depletion of interconnected surface water is set to protect habitat and sensitive species at specific locations in the EMA where there is a connection between groundwater and surface water. The minimum threshold for depletion of interconnected surface water in the EMA is not anticipated to impact sustainability in the CMA because conditions that are necessary to avoid impacts to Category A GDEs [i.e., those supporting identified beneficial use in the subject areas] in the EMA will continue to support flows into the CMA." (p. 59) This approach does not adequately recognize all the potential GDE, or does it provide any metric for guiding groundwater withdrawals, or set any numeric standard for the maintenance of base flows necessary to support GDE. The Draft Criteria should be revised to include specific metrics for GDE, including those associated with the federally listed endangered southern California steelhead.	None	See previous response. The public draft and final versions of the Plan demonstrate that subsurface interconnection between the EMA and the CMA is relatively minor and does not support GDEs. A specific metric has been applied to avoid significant and unreasonable adverse impacts to identified GDEs in the areas where groundwater may be supporting GDEs. Steelhead have not been identified in these areas. The map of "Intrinsic Potential Steelhead Spawning and Rearing Habitat" included with the comment letter does not represent known or actual steelhead habitat as set forth in the principal state and federal regulatory proceedings pertaining to the lower Santa Ynez River system.
NMFS (previous comments)	6	GDEs	Because the Draft Budget is being prepared under the authority of SGMA, the introduction should explicitly acknowledge the need to address Groundwater Dependent Ecosystems (GDE) in the introduction	None	The introduction to Section 3 in the public draft and final versions of the Plan explicitly address the needs to sustainably manage the groundwater resource for all of the beneficial uses within the EMA including agricultural, municipal, domestic and environmental uses.

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NMFS (previous comments)	9	Aquifers	<p>4th paragraph: The Draft Budget indicates: "The Santa Ynez River and associated underflow within the Santa Ynez River Alluvium is included in the surface water system that is summarized in the budget. As surface water, the Santa Ynez River Alluvium is not considered a principal aquifer because the water within this geological unit is present within the defined bed and banks of the channel and thus is not considered groundwater in accordance with Water Code, Section 10721(g). The surface water system is managed under the jurisdiction of the California State Water Resources Control Board (SWRCB) and is not within the purview of SGMA. Therefore, water both above ground and below ground within the Santa Ynez River, defined as the Santa Ynez River Water Conservation District's (SYRWCD's) Zone A portion of the EMA, is quantified as surface water."</p> <p>This statement raises a number of issues that should be addressed in the revised document. First, it should be noted that the Eastern Management Area includes more than just the mainstem of the Santa Ynez River; it also includes a number of tributaries, including, but not limited to: Zaca Creek, Alamo Pintado Creek, Happy Canyon, Alisal Creek, Hilton Creek, Quiota Creek, San Lucas Creek, Santa Aqueda Creek, Teqepis Creek, Cachuma Creek, and Santa Cruz Creek. Second, the revised Draft Budget should clarify whether (1) a formal determination regarding the nature and status of the subflow has been made, and by what authority; (2) how a "principal aquifer" is defined for the purposes of SGMA; (3) if such a formal designation has been applied, and by what authority; and, (4) the specific provisions of the SGMA supporting this interpretation of the scope of a GSP, specifically for the Central Management Area of the lower Santa Ynez River.</p>	None	The principal aquifers and their definition according to SGMA and the SGMA Regulations are discussed in Section 3.1.4 in the public draft and final versions of the Plan. This description of the principal aquifers and the relationship between the GSA and the Santa Ynez River is discussed in Section 3.1.4. The management of the Santa Ynez River and associated underflow by the SWRCB has been well-established over many decades, as discussed in Section 3.1.1. Further discussion of the basis for these authorities is presented in Appendix G of this GSP. Please also refer to related Responses to Comments herein.
NMFS (previous comments)	12	Water budget	The water budget should explicitly acknowledge the tributaries within the Eastern Management Area that contribute to the groundwater resources within the Eastern Management Area.	None	As described in Section 3.3.1 in the public draft, which was finalized after this comment was submitted, and final version of the Plan, the water budget and numerical flow model includes estimates of the flow through the tributaries that drain the San Rafael Mountains and Santa Ynez Uplands to the north and Santa Ynez Mountains to the south including Zaca Creek, Alamo Pintado Creek, Happy Canyon, Alisal Creek, Hilton Creek, Quiota Creek, San Lucas Creek, Santa Aqueda Creek, and Teqepis Creek, Cachuma Creek and Santa Cruz Creek.
NMFS (previous comments)	13	Water budget	Figure 3-42: The revised Draft Budget should include justification for selecting water years 1982 through 2018 as the historical water budget period. Of particular concern, while the period of record chosen includes two wet and dry periods, the selected period does not necessarily capture the change in land uses and the associated groundwater pumping from the Eastern Management Basin. An assessment should be made of the land-use practices over a longer period to better assess the groundwater pumping patterns within the Eastern Management Area.	None	A more complete discussion of the basis for selecting the historical water budget period selection is included in Section 3.3.1 in the public draft and final versions of the Plan. This period captures multiple wet, dry, and normal hydrologic periods and includes the period that high quality data was available for the analysis. There is no need to consider land use changes prior to 1982 for groundwater management purposes going forward.
NMFS (previous comments)	17	Water budget	3.3.2.1 See comments above regarding tributaries to the Santa Ynez River within the Eastern Management Area.	None	As described in Section 3.3.1, the water budget includes estimates of the flow through the tributaries that drain the San Rafael Mountains and Santa Ynez Uplands to the north and Santa Ynez Mountains to the south including Zaca Creek, Alamo Pintado Creek, Happy Canyon, Alisal Creek, Hilton Creek, Quiota Creek, San Lucas Creek, Santa Aqueda Creek, and Teqepis Creek. Flow from Cachuma Creek and Santa Cruz Creek are included in the numerical groundwater flow model.

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NMFS (previous comments)	18	Water budget	3.3.2.1.2 The Draft Budget apparently limits, "Native streamflow in the Santa Ynez River main stem and in tributary creeks to the Santa Ynez River downstream of Bradbury Dam . . ." It is not clear why this limitation is use, since there are other tributaries to the Santa Ynez River above Bradbury Dam which are also within the Easter Management Area (e.g., Cachuma Creek, Santa Cruz Creek). The revised Draft Budget should therefore explain the basis for this limitation.	None	Runoff occurring in the Santa Cruz and Cachuma Creek sub-water sheds flows into Lake Cachuma. Pumping in the upland basin within the EMA and implementation of the GSP will not affect groundwater use in the Santa Cruz or Cachuma Creek sub-watersheds (for agricultural, domestic, municipal or environmental uses), nor groundwater and surface water conditions within these tributaries. Please note changes made in Section 3.3.2.1.
NMFS (previous comments)	19	Interconnected surface waters and GDEs	<p>The Draft Budget states, "The Santa Ynez River and underflow is accurately gauged and highly regulated. Therefore, the level of uncertainty of these data is low." While there are stream flow gauges on the Santa Ynez River that provide information on stream flow fluctuations, these gauging program does not consistently record base flows for a variety of reasons (including timely gauge calibration, shifting channel morphology, etc.). However, these lower base flows can be critical to some GDE such as rearing juvenile O. mykiss and other native aquatic species. The Draft Budge also notes, "The flow from the tributary creeks, however, is ungauged and estimated based on BCM and SYRHM data outputs. The uncertainty of these data are considered high because large scale regional models are being used to estimate these water budget terms." As noted above these lower base flows can be critical to some GDE such as rearing juvenile O. mykiss and other native aquatic species. Finally, the Draft Budget states "In our opinion, the uncertainty associated with estimated tributary flow does not limit the GSA's ability to manage the Santa Ynez Uplands groundwater system because the tributary flow terms are relatively small when compared to the other water budget terms."</p> <p>This assessment does not appear to be valid for two fundamental reasons. First, the uncertainty regarding the contribution of tributary flows, individually and cumulatively, to the groundwater/surface water conditions in the mainstem of the Santa Ynez River within the Eastern Management Area is unknown. Second, the contribution of the tributary flows, relative to other sources of groundwater/surface water to the water budget, is not an appropriate measure for assessing importance of the tributaries GDE, or the tributaries' contribution to GDE in the mainstem of the Santa Ynez River within the Eastern Basin. Furthermore, comparing the relative size of the tributary flow to supporting out-of-stream consumptive beneficial uses of water associated with the Eastern Management Basin is not an appropriate metric in assessing their importance to GDE. Even small contributory flows can be important in sustaining habitats utilized by native aquatic species that have adaptive mechanisms that allow them to carry out their life-cycles, including rearing during periods of naturally small base flows.</p>	None	Section 3.3.2.1 has been revised to clarify that the uncertainty of tributary flows is considered moderate because large scale regional models and a calibrated groundwater model for the EMA are being used to estimate these water budget terms. The uncertainty associated with estimated tributary flows will not limit the GSA's ability to manage the Santa Ynez Uplands groundwater system and avoid significant and unreasonable adverse impacts to GDEs by utilizing the monitoring and associated sustainability thresholds established for two of the tributaries. Tributary flows and potential for depletion of interconnected surface water flows were evaluated in the GSP using the groundwater flow model; depletion was not found to be significant. Monitoring efforts that are included in the GSP will provide additional data and reduce the uncertainty associated with estimating tributary flows and assessing interconnectivity and potential significant and unreasonable depletion.
NMFS (previous comments)	Table 3-3	Water budget	This table does not, but should, include the tributaries to the Sant Ynez River above Bradbury Dam that are also within the boundaries of the Eastern Management Area, but should. These include: Cachuma Creek and Santa Cruz Creek.	None	A footnote has been added to this table (now Table 3-18) to clarify that Santa Cruz and Cachuma Creeks flow though the Santa Ynez Uplands directly into Lake Cachuma.
NMFS (previous comments)	19-20	Water budget	3.3.2.1.4 The Draft Budget states, "Mountain front recharge from the Santa Ynez Mountains that flows directly into streams and the Santa Ynez River Alluvium (considered to be surface water) was calculated using the adjusted and calibrated BCM model as described in Section 3.3.2.1.2." The revised Draft Budget should clarify if the reference to	None	Section 3.3.2.1 has been revised to clarify that mountain front recharge flows directly into the tributary streams (surface water) and ultimately into the Santa Ynez River Alluvium (underflow is also considered to be surface water). Additional numerical model documentation regarding how mountain front recharge was handled appears in Section 3.2 and Appendix F. The water budget and numerical model each have uncertainties that have been identified in the GSP. Each has

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			<p>"considered to be surface water" was intended to refer to both the tributary flows into streams and the Santa Ynez River Alluvium. Also, see comments above regarding issues and questions raised about the authority of SGMA over these groundwater resources.</p> <p>The Draft Budget concludes, "We do not believe that uncertainty associated with estimates of mountain front recharge limit the GSA's ability to manage the Santa Ynez Uplands groundwater system because the overall water budget is consistent with the calibrated groundwater flow model." As noted above NMFS this conclusion appears unsupported given the uncertainty of the groundwater inputs, and the potential importance of even small inputs in supporting GDE, including native <i>O. mykiss</i> and other native aquatic species.</p>		<p>been developed using best available science and data. As new data are collected and the groundwater model updated every 5 years, uncertainties will diminish. As currently prepared, the water budget analysis and groundwater model are suitable in accordance with SGMA for helping the GSA make decisions about how the basin should be managed within its sustainable yield.</p>
NMFS (previous comments)	21	Water budget	3.3.2.2.3 The Draft Budget states, "We do not believe that uncertainty associated with estimates of mountain front recharge limit the GSA's ability to manage the Santa Ynez Uplands groundwater?" See comments above regarding this uncertainty.	None	Additional numerical model documentation describing these estimates and uncertainty appears in Section 3.2 and Appendix F. Section 3.3.2.1.4. See previous response.
NMFS (previous comments)	20	Aquifers	3.3.2.2 The Draft Budget states, "Note that the groundwater system includes only the aquifers in the Santa Ynez Uplands portion of the EMA and specifically excludes all water within the Santa Ynez River Alluvium, which is managed as surface water under the jurisdiction of the SWRCB." See comments above regarding this issue.	None	In the context of SGMA and this Plan "groundwater" refers to water within the two principal aquifers in the Santa Ynez Uplands (Paso Robles Formation and Careaga Sand) and does not include water within Santa Ynez River system. For purposes of this Plan and the hydrogeologic conceptual model, water within the Santa Ynez River system, both above and below ground, is surface water subject to the regulatory jurisdiction of the SWRCB. In accordance with SGMA and the SGMA Regulations, the Plan fully analyzes the relationship and interconnectivity between the groundwater system and the surface water system in the EMA, and the Plan is prepared to ensure sustainable management of the groundwater system. Appendix K includes further discussion of the hydrogeological, jurisdictional, and legal basis for this conclusion. Please also refer to related Responses to Comments herein.
NMFS (previous comments)	23	Water budget	3.3.2.3.1 See comments above regarding the accuracy of measuring base flows.	None	The gauged streamflow within the Santa Ynez River is considered to be accurate and therefore the uncertainty associated with this data is considered low. Section 3.3.2.3.1
NMFS (previous comments)	24	Interconnected surface waters	3.3.2.3.2 The Draft Budget states, "This [subsurface] outflow occurs at the downstream end of the EMA along the border with the CMA." However, there are subsurface outflows from the tributaries (Cachuma Creek and Santa Cruz Creek) at the upstream end of the East Management Area; the outflow location can be influenced by the lake level in Cachuma Reservoir.	None	Surface water from the tributaries upstream of Bradbury Dam, including Santa Cruz and Cachuma Creek, flows into Lake Cachuma. Pumping in the upland basin within the EMA and implementation of the GSP will not affect the Santa Cruz or Cachuma Creek sub-watersheds (for agricultural, domestic, municipal or environmental uses), nor groundwater or surface water conditions within these areas. (Changes made in Section 3.3.2.1)
NMFS (previous comments)	35	Water budget	3.3.3 The Draft Budget states, "The period for water years 1982 through 2018 was selected as the historical water budget period because it is long enough to capture typical climate variations (with two wet and two dry hydrologic cycles) and includes recent changes in imported water supply availability, changes to water demand associated with cropping patterns, and associated land use." As noted above, while the period of record chosen includes two wet and dry periods, this period does not necessarily capture the change in land uses and the associated groundwater pumping from the Eastern Management Basin. An assessment should be made of the land-use practices over a longer period to better assess the groundwater pumping patterns within the Eastern Management Area; the results of that assessment should be presented in the revised Draft Budget	None	<p>The period selected for the historical water budget in the Plan was selected based on criteria listed in the first paragraph of Section 3.3.3 and is limited by the availability of relevant data, which includes documented land use data.</p> <p>As presented in Section 3.3.1 (page 3-108), the "37-year period selected for the historical water budget includes the most recently available information" and "considered the availability of good-quality data for the principal water budget components, including streamflow, precipitation, and land use, which will be discussed individually later. For example, in the historical period (since the first land use survey of the EMA was available in 1985), the documented land uses changed significantly, with decreases in pastureland and coincident increases in other types of agricultural uses." Considering land use changes that occurred prior to 1982 is not necessary for management of the EMA going forward.</p>

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NMFS (previous comments)	37	Water budget	3.3.3.1.1 Table 3-7 shows that the average annual combined tributary surface water inflow is approximately 44% of the inflow from the Santa Ynez River; however, the calculation only includes tributaries within the Eastern Management Area that are downstream of Bradbury Dam and does not include any surface water inflow from tributaries above Bradbury Dam within the Eastern Management Area (e.g., Cachuma Creek and Santa Cruz Creek). The revised Draft Budget should include an analysis that corrects this condition.	None	A footnote has been added to this table (now Table 3-22) to clarify that tributary surface water flow within Cachuma and Santa Cruz Creeks are accounted for as they enter Lake Cachuma, enter the Santa Ynez River, and enter the Santa Ynez River system portion of the EMA as surface and subsurface flow. Section 3.3.3.1.2
NMFS (previous comments)	37	Water budget	Table 3-8 indicates the annual subsurface outflow of groundwater is essentially the same for the average, minimum, and maximum. This seem anomalous, given the different annual levels of surface water inflow noted in Table 3-7. Also, Table 3-9 indicates the difference between the average and the maximum and minimum rate of Phreatophyte Evapotranspiration is around 5%; again this seem anomalous given wide range of annual weather conditions. The same comment applies to Table 3-10. It is not clear how this calculation was made. The revised Draft Budget should include an explanation that clarifies or corrects this issue.	None	Discussion has been added to the text in Sections 3.3.3.2 and 3.3.3.5 to more fully describe the variation in outflow and inflow components of the water budget.
NMFS (previous comments)	38	Water budget	Table 3-10 records a significant impact on groundwater outflow during minimum annual water years when groundwater pumping has decreased approximately 10% from the average annual water year, but groundwater outflow decreased approximately 96%. This pattern has potentially significant implication for supporting GDE, including O. mykiss and other native aquatic species.	None	Discussion has been added to the text in Sections 3.3.3.2 and 3.3.3.5 to more fully describe the variation in outflow and inflow components of the water budget. The effects of the groundwater outflow on GDEs is revised in Sections 3.2.6 and 5.10. The latter section presents the modeled results of the timing and magnitude of surface water depletions in the GDE areas.
NMFS (previous comments)	46	GDEs	3.3.3.6.1 The discussion of sustainable yield estimates of the groundwater basin(s) in the Eastern Management Area focuses on out-of-stream consumptive uses of groundwater and does not, but should, include an explicit discussion of the role of groundwater in sustaining GDE, including, but not limited to the federally endangered southern California steelhead.	None	The discussion of GDEs was revised considerably relative to the earlier draft, to which this comment refers and now explicitly describes the role, timing and magnitude of groundwater's interactions with the GDE areas. Listed steelhead are not present within the areas managed by the GSA and instead are comprehensively managed and protected as part of several ongoing state and federal regulatory proceedings pertaining to the lower Santa Ynez River. Please refer to related Responses to Comments herein.
NMFS (previous comments)	47	GDEs	3.3.3.7 The depiction of these components of a water budget focuses on out-of-stream consumptive beneficial uses. However, it should also expressly include a discussion of historical water supplies that have supported GDE within the Eastern Management Area, including but not limited to the federally listed endangered southern California steelhead, as well as other native aquatic species.	None	As described in other responses, this analysis of GDEs has been substantially expanded since this comment was written about an earlier version of this section. The changes are included in the public draft version of the Plan, which addresses this comment. Listed steelhead are not present within the areas managed by the GSA and instead are comprehensively managed and protected as part of several ongoing state and federal regulatory proceedings pertaining to the lower Santa Ynez River. Please refer to related Responses to Comments herein.
NMFS (previous comments)	48-54	Water budget	3.3.4 See comment above regarding the period of record chosen for the Draft Budget.	None	The discussion of the period of record for the water budget was addressed in a response to another comment. The period selected for the historical water budget in the Plan was selected based on criteria listed in the first paragraph of Section 3.3.3 and is limited by the availability of relevant data, which includes documented land use data.
NMFS (previous comments)	55-56	GDEs	3.3.5 The Draft Budget expressly describes only out-of-stream uses of groundwater and surface water (Solvang ID No. 1, Mutual Water, Rural Domestic, Agricultural Pumping), but only expressly recognized non-consumptive out-of-stream uses of groundwater (i.e., Phreatophyte). It does not expressly recognize the other beneficial uses of the surface and groundwater of the Eastern Management Area. The CCRWQCB has listed cold freshwater habitat, fish spawning, reproduction and/or early development, migration of aquatic organisms, and habitat for rare, threatened, and endangered species, as beneficial uses for the Santa Ynez River under their Central Coast Basin Plan (CCRWQCB 2019); these should be explicitly described in the revised Draft Budget. Additionally, there are GDE that should be enumerated and described, as part of the	None	As described in other responses, this analysis of GDEs has been substantially expanded since this comment was written about an earlier version of this section. The changes are included in the public draft version of the Plan, which addresses this comment. Underflow of the Santa Ynez River is a component of the surface water system and is not groundwater for purposes of the Plan in accordance with framework established by SGMA and the SGMA Regulations. As noted above, listed steelhead are not present within the areas managed by the GSA and instead are comprehensively managed and protected as part of several ongoing state and federal regulatory proceedings pertaining to the lower Santa Ynez River. Please refer to related Responses to Comments herein.

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			suite of beneficial uses, and their locations, that must be addressed as part of the GSP for the Eastern Management Area.		

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NMFS (previous comments)	57	GDEs	<p>3.3.5.1.1 The Draft Budget notes, "The projected changes to streamflow do however apply through the tributaries that flow through the Santa Ynez Uplands and ultimately into the Santa Ynez River." The revised Draft Budget should clarify what this statement means. For instance, is the intent to exclude the tributaries within the Eastern Management Area from consideration in the Draft Budget? We would note that perennial surface water/or flow is not required by SGMA to identify a GDE. Rather, connection via a saturated zone between groundwater and surface water "at any point" when surface waters are not otherwise depleted constitutes an interconnected connection condition. We would note further that seasonally or ephemeral surface flows can be important to a variety of fish and amphibian species (see for example, Erman and Hawthorne 1976, and Boughton et al. 2009). Further, while groundwater management actions may not directly affect flow in the upper reaches of these tributaries, drawing down the groundwater near the confluence of the tributary and the Santa Ynez River can affect the hydraulic connectivity between the tributaries and the river. This hydraulic connectivity (even if only seasonal) can be important for the movement (or migration) of a variety of fish and or amphibian species. These tributaries, therefore, should not be considered as disconnected from the water table, but should be classified as having interconnected surface water under SGMA. Finally, we would note that the SWRCB's analysis and water rights order focused on the mainstem of the Santa Ynez River, and specifically did not address flow requirements in the tributaries to the lower Santa Ynez River. However, the SWRCB did note, "Operations of the dam have also resulted in an increased potential for mortality from stranding and desiccation caused when surface flows in tributaries where fish are residing are disconnected from the main channel"</p>	None	<p>As presented in Section 3.3.1, the "37-year period selected for the historical water budget includes the most recently available information" and "considered the availability of good-quality data for the principal water budget components, including streamflow, precipitation, and land use, which will be discussed individually later. For example, in the historical period (since the first land use survey of the EMA was available in 1985), the documented land uses changed significantly, with decreases in pastureland and coincident increases in other types of agricultural uses."</p> <p>The majority of the tributaries are considered ephemeral. This means that a portion of rainwater runoff may ultimately percolate into the underlying Paso Robles Formation or Careaga Sand in these areas. This flow occurs as unsaturated flow and so a continuous saturated zone between the base of the tributary and the underlying aquifer does not exist and are disconnected from the water table, except in the lower reaches of two tributaries where the underlying aquifer discharges to surface water. This occurs in Alamo Pintado and Zanje de Cota Creek. This is where the interconnection between surface water and groundwater occurs in the EMA and where GDEs (ecosystem supported by groundwater) have been identified in the Plan.</p> <p>Operation of Bradbury Dam and the effects of changing reservoir levels on tributaries are not within the purview of SGMA or the responsibility of the EMA GSA. Please refer to related Responses to Comments herein.</p>
TNC (Pablo Ortiz-Partida)	Figures 2-2 and 2-7	DACs and Human right to water	<p>The identification of Disadvantaged Communities (DACs), drinking water users, and tribes is incomplete. The GSP describes and maps tribal lands in the Eastern Management Area (EMA) in Figure 2-2. The GSP also identifies and maps the location of each DAC within the EMA. However, the plan fails to clearly document the population of each DAC. Additionally, Figure 2-7 provides a map of communities within the EMA served by groundwater, but does not specifically provide the drinking water source for DACs.</p> <p>While the plan provides a density map of domestic wells in the EMA, the GSP fails to provide depth of these wells (such as minimum well depth, average well depth, or depth range). These missing elements are required for the GSA to fully understand the specific water demands of beneficial users, and to support the consideration of beneficial users in the development of sustainable management criteria and selection of projects and management actions.</p>	Provide the population of each identified DAC. 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). Include a map showing domestic well locations and average well depth across the EMA.	There are no disadvantaged communities (DAC) identified within the boundaries of the EMA based on information presented in the updated 2019 IRWMP. The extent of the areas of Communities Dependent on Groundwater is presented on Figure 2-7.

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TNC (Pablo Ortiz-Partida)	3	Interconnected surface waters	<p>The identification of Interconnected Surface Waters (ISWs) is insufficient, due to lack of supporting information provided for the ISW analysis. The GSP presents a conceptual representation of gaining, losing, and disconnected streams (Figure 3-34. Gaining and Losing Streams). The GSP presents a map (Figure 3-35. Stream Classifications) of the EMA's stream reaches, as classified by the USGS National Hydrography Dataset (NHD), with labels 'Perennial' and 'Intermittent'. The relationship of these terms, however, are not discussed in relation to the gaining, losing, and disconnected terms presented in the prior figure. If the GSP is making the unstated assumption that perennial reaches are equivalent to interconnected reaches, this is an incorrect conclusion. 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. Using seasonal groundwater elevation data over multiple water year types is an essential component of identifying ISWs. The GSP does not present or analyze depth to groundwater data when identifying ISWs in the EMA.</p>	<p>Provide a map showing all the stream reaches in the EMA, with reaches clearly labeled as interconnected 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>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>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>Reconcile ISW data gaps with specific measures (shallow monitoring wells, stream gauges, and nested/clustered wells) along surface water features in the Monitoring Network section of the GSP.</p>	<p>Please refer to previous responses to this comment and also refer to responses to CDFW comments. Other than the areas discussed in the GDE section, the tributary alluvium is not classified as interconnected surface water at any point, because these areas do not meet both elements of the applicable SGMA definition.</p> <p>Depth to water contour maps were developed for analysis of the interconnection of the groundwater dependent ecosystems, the areas of which are within proximity to the ground surface are presented on Figure 3-37 - Potential Groundwater Dependent Ecosystems 30-foot Depth to Groundwater Screening in Section 3.2.6.1.2. This section describes the method used for this analysis.</p> <p>Groundwater elevation contour maps are provided in responses to the SGMA requirements for the two principal aquifers during the SGMA period (since 2015, which are subject to evaluation under SGMA) on</p> <p>Figure 3-20 - Paso Robles Formation Groundwater Elevation Contour Map, Spring 2018 and</p> <p>Figure 3-21 - Careaga Sand Formation Groundwater Elevation Contour Map, Spring 2018 in Section 3.2.1.1.</p> <p>The variability of these groundwater conditions are presented in hydrographs in Section 3.2.1.2 for as far into the past as the period of record allows, long prior to the recommended 10-year period starting in 2005.</p>

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TNC (Pablo Ortiz-Partida)		GDEs	<p>NC dataset polygons were incorrectly removed based on the assumption that they are supported by the shallow, perched water table. However, shallow aquifers that have the potential to support well development, support ecosystems, or provide baseflow to streams are principal aquifers, even if the majority of the EMA's pumping is occurring in deeper principal aquifers. If there are no data to characterize groundwater 2 conditions in the shallow principal aquifer, then the GDE should be retained as a potential GDE and data gaps reconciled in the Monitoring Network section of the GSP.</p> <p>NC dataset polygons were incorrectly removed from riparian areas of the Santa Ynez River that are considered to be managed by SWRCB as part of Santa Ynez River surface and underflow, and are not considered connected to "groundwater" under SGMA. The GSP has provided no map or details on the physical extent of the basin and wells that have been permitted, licensed and managed as underflow by the SWRCB. According to California's Electronic Water Rights Information Management System (eWRIMS), there appear to be only a handful of water rights permits (2 active and 7 inactive) that fall under "underflow" within the EMA (Figure 1). While a few water rights in the EMA may have "underflow" permits or licenses, the GSP has failed to substantiate the assertion that the shallow aquifer - in its entirety - is classified and managed as "underflow" by the SWRCB. We are generally concerned that the GSP is grossly extrapolating the existence of "underflow" in the shallow alluvium across the entire basin from a limited number of "underflow" points of diversions within the basin that are actually being managed by SWRCB. If the SWRCB is not managing the entire shallow aquifer as "underflow" and the beneficial users of groundwater and surface water reliant on it - this water is actually groundwater and is instead subject to SGMA regulations.</p>	<p>Show the extent of the shallow aquifer that is classified and managed as "underflow" by the SWRCB. For example, include a map and description of extraction points and whether they source "underflow" or "groundwater" from the shallow alluvium. Discuss SWRCB Order WR 2019-0148 and explain how it relates to SGMA and the definition of ISW in the EMA. Cite relevant sections of the order, maps, and cross-sections.</p> <p>Re-evaluate the EMA's GDEs noting the incorrect removal criteria listed above. Refer to Attachment D of this letter for best practices for using local groundwater data to verify whether polygons in the NC Dataset are supported by groundwater in an aquifer. If insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons as "Potential GDEs" in the GSP until data gaps are reconciled in the monitoring network.</p> <p>Provide depth-to-groundwater contour maps, noting the best practices presented in Attachment D. 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.</p>	<p>The groundwater conditions within the principal aquifers are described within Section 3.2.1 and mapped, contoured and described based on the best-available data, which are presented on Figures 3-20 (Paso Robles Formation) Figure 3-21 (Careaga Sand). These groundwater conditions do not describe the underflow of the tributary alluvium nor the areas of perched water, because these areas are not Principal Aquifers as defined by SGMA and the SGMA Regulations, as further described in Section 3.1.4. (See, e.g., SGMA Regulations section 351(aa).)</p> <p>The Nature Conservancy dataset polygons used to define GDEs are not shown in riparian areas of the Santa Ynez River area because the Santa Ynez River and associated underflow is part of the surface water system in the EMA. For these reasons, riparian communities in this area are not groundwater dependent in accordance with SGMA. As noted above, the lower Santa Ynez River system is comprehensively managed and protected as part of several longstanding state and federal regulatory proceedings. Please refer to related Responses to Comments herein.</p>
TNC (Pablo Ortiz-Partida)	3-90	GDEs	<p>The GSP states (3-90): "Contoured groundwater elevation data for spring 2015 was used to determine areas where the Natural Communities polygons were within 30 feet depth to groundwater. Spring 2015 groundwater elevations were chosen for this analysis because this marked a period of the greatest recent data availability. These data are considered representative of average spring-summer conditions within the last 5 years."</p>	<p>We recommend using groundwater data from multiple seasons and water year types to determine the range of depth to groundwater around NC dataset polygons. 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 NC dataset polygons. We recommend that a pre-SGMA baseline period (10 years from 2005 to 2015) be established to characterize groundwater conditions over multiple water year types.</p>	<p>The analysis described in Section 3.2.6 refers to the period described by the regulations on the top of page 3-87 of that section: "including data from January 1, 2015, to current conditions."</p> <p>As noted in that section: groundwater elevations are generally the highest in the spring, following recharge from winter rains. Spring-time groundwater elevations in 2015, are considered representative of average high-water level conditions and so was used to identify potential GDEs where the elevation of the water table is within 30 feet of ground surface. This analysis, which relies on the higher spring water elevation is considered to be more protective of GDEs than the use of fall water levels, which typically have lower groundwater elevations. The period selected also represents the period when SGMA was enacted; GDEs observed after January 2015 are subject to evaluation under SGMA. The method included in the Plan addresses these concerns and improves on identification of the interaction between groundwater elevations in the immediate vicinity of the potential GDEs.</p>
TNC (Pablo Ortiz-Partida)	3.2.6.1.1	GDEs	<p>We commend the GSA for including an inventory of flora and fauna species in the EMA's GDEs. Section 3.2.6.1.1 presents a discussion of potential GDE vegetation classifications, and each of these GDE units is mapped individually on Figure 3-36 (Natural Communities Commonly Associated with Groundwater Dataset). Table 3-14 presents the special-status species within the EMA. Within Section 3.2.6.1.1 (Potential GDE Vegetation Classifications), the GSP states that the maximum rooting depth of valley oak (<i>Quercus lobata</i>) is 80 feet. However, this deeper rooting depth was not used when verifying whether valley oak polygons from the NC Dataset are supported by groundwater.</p>	<p>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. 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 from the NC Dataset are connected to groundwater. It is important to emphasize that actual rooting depth data are limited and will depend on the plant species and site-specific conditions such as soil and aquifer types, and availability to other water sources.</p>	<p>The approach taken to identify potential GDEs within the EMA relied upon TNC guidance for a 30-foot rooting depth criterion. As noted in the comment, actual rooting depth data are limited and require site specific information including soil type, soil moisture, exposure (north or south facing), geologic setting, presence/absence of perched water, etc. As described in Section 6.3, the EMA GSA plans to conduct additional studies on the nature and extent of potential GDEs in the EMA.</p>

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TNC (Pablo Ortiz-Partida)	2-15	Native vegetation	Native vegetation and managed wetlands are water use sectors that are required to be included in the water budget. , The integration of native vegetation into the water budget is sufficient. We commend the GSA for including the groundwater demands of this ecosystem in the historical, current and projected water budgets. The GSP states on p. 2-15 that there are no managed wetlands in the EMA.	None	The inclusion of native vegetation into the water budget, as presented in the Plan, is both prudent and required for accurate analysis for the historical, current and projected water budgets.
TNC (Pablo Ortiz-Partida)	Appendix J	DACs	<p>Although the Communication and Engagement Plan describes efforts to conduct outreach to DACs during GSP development, including the use of culturally appropriate language, education about the SGMA process, and quarterly newsletters in English and Spanish, there is no active participation of DACs within the EMA CAG.</p> <p>Public involvement and engagement with environmental stakeholders are described in very general terms. Aside from allowing environmental organizations involvement in the SGMA process regarding environmental uses of groundwater and invitations to apply to participate on the Citizens Advisory Group, there are no specific details of outreach to environmental communities.</p> <p>The Communication and Engagement Plan does not include specific, targeted outreach and engagement opportunities to DACs, tribal stakeholders, and environmental stakeholders during the GSP implementation phase.</p>	<p>In the Communication and Engagement Plan, describe active and targeted outreach to engage all stakeholders 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>Utilize DWR's tribal engagement guidance to comprehensively address all tribes and tribal interests in the basin within the GSP.</p>	<p>A single tribal land is located within the boundaries of the EMA: Santa Ynez Band of Chumash Indians. As discussed in Section 2.2.1.4, the Chumash tribal government is participating directly in the SGMA process for the EMA GSA through its representative on the Citizens Advisory Group (CAG) and will remain involved during the entirety of the implementation process. The location of this tribal land is presented on Figure 2-2.</p> <p>Based on several datasets, there are no DACs within the EMA (refer to the 2019 County-wide Integrated Regional Water Management Program report, 2020 California Air Resources Board and 2018 California Climate Investments Priority Populations online maps). Outreach has been conducted in accordance with the Communication and Engagement Plan, which included outreach to private well domestic owners within the entire EMA. This outreach included meetings with tribal leaders from the Santa Ynez Band of Chumash Indians.</p>
TNC (Pablo Ortiz-Partida)	SMC	DACs and Human right to water	<p>For chronic lowering of groundwater levels, the GSP presents a well impact analysis to assess the potential impacts of water level decline on domestic wells screened in the Paso Robles Formation and Careaga Sand. The GSP states (p. 5-20): "Based on the well impact analysis, the GSA Committee agreed to set the minimum threshold for representative wells screened in the Paso Robles Formation at 15 feet below spring 2018 groundwater levels." At this groundwater elevation, 33% of domestic wells are predicted to have water levels fall below the top of the screen. The GSP states (p. 5-20): "Based on the well impact analysis, the GSA Committee agreed to set the minimum threshold for representative wells screened in the Careaga Sand at 12 feet below spring 2018 groundwater levels." At this groundwater elevation, 39% of domestic wells are predicted to have water levels fall below the top of the screen. Despite this well impact analysis, the GSP does not sufficiently describe whether minimum thresholds will avoid significant and unreasonable loss of drinking water, especially given the absence of a well mitigation plan in the GSP.</p> <p>In addition, the GSP does not sufficiently describe or analyze direct or indirect impacts on DACs or tribes when defining undesirable results, nor does it describe how the existing groundwater level minimum thresholds will avoid significant and unreasonable impacts to DACs and domestic well users beyond 2015 and be consistent with Human Right to Water policy.</p>	Describe direct and indirect impacts on drinking water users, DACs, and tribes when describing undesirable results and defining minimum thresholds for chronic lowering of groundwater levels.	<p>The well impact analysis presents the rationale for the setting of minimum thresholds and measurable objectives to Avoid Chronic Lowering of Groundwater Levels for all well users in the EMA, including agricultural, municipal wells, and domestic wells, as described in Section 5.3.3.1 in the Plan. This analysis, described in detail in Section 3.2, was conducted over several months in development of the Plan with several public meetings to set the MTs and MOs with the input of the GSA and public. Minimum thresholds were set based on consideration of all of these groundwater users, which includes the tribe.</p> <p>As discussed in Section 5.5.2, there was considerable debate among stakeholders about how much depletion of supply could result from water levels falling below the top of screen. Municipal, agricultural, and domestic wells have different sensitivities to this condition and will experience depletion of supply differently. The methodology and results of this analysis were discussed with stakeholders and ultimately chosen by the GSA Committee as the basis for establishing undesirable results and minimum thresholds.</p> <p>Special consideration was given to domestic well owners who cannot easily respond to a reduction in supply, particularly during extended dry periods, and would have to absorb substantial cost if wells had to be replaced and deepened. The GSA decided to not allow water levels in municipal wells to drop below the top of screen if possible and to set the MT to be protective of domestic wells. Local agricultural interests expressed that their water supplies would be less adversely affected by water levels falling below top of screen because they have not observed undesirable results or depletion of supply, and therefore wanted to set the minimum thresholds at deeper levels. The needs of all of the water users were considered, and the minimum thresholds were selected to represent groundwater conditions that would be protective of all of the beneficial users.</p>
TNC (Pablo Ortiz-Partida)	SMC	DACs	For degraded water quality, the GSP presents water quality standards for constituents of concern (COCs) in Table 5-3. The GSP establishes minimum thresholds pertaining to salts and nutrients as follows (p. 5-41): "Concentrations of TDS, chloride, sulfate, boron, sodium, and nitrate are equal to or greater than WQOs in 50 percent of representative wells or are equal to concentrations present when SGMA was enacted	<p>Describe direct and indirect impacts on drinking water users, DACs, and tribes 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>Evaluate the cumulative or indirect impacts of proposed minimum</p>	The method presented in Section 5 includes the rationale for the setting of minimum thresholds and measurable objectives to avoid the degradation of water quality in compliance with the SGMA regulations. The analysis presented is protective of all groundwater uses and users in the EMA, including agricultural, municipal, and domestic wells, and affected GDEs as presented in in Section 3.2.3 and 5.3.3.3 in the Plan. The presented methods are protective of public health for domestic and municipal water supply in response to the State's early review of

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			<p>(January 2015). The WQOs [Water Quality Objectives] for each constituent are presented in Table 5-3 are considered the minimum thresholds for salts and nutrients. In cases where the ambient (prior to January 2015) water quality exceeds the WQO, the ambient water quality is considered the minimum threshold." The GSP does not state which COCs this applies to or present the ambient concentrations, however. The GSP should include SMC for all COCs in the EMA that may be impacted by groundwater use and/or management, in addition to coordinating with water quality regulatory programs.</p> <p>The GSP only includes a very general discussion of impacts to drinking water users when defining undesirable results and evaluating the impacts of proposed minimum thresholds. The GSP does not, however, mention or discuss direct and indirect impacts on DACs, drinking water users, or tribes when defining undesirable results for degraded water quality, nor does it evaluate the cumulative or indirect impacts of proposed minimum thresholds on DACs, drinking water users, or tribes.</p>	<p>thresholds for degraded water quality on drinking water users, DACs, and tribes.</p> <p>In Table 5-3 (Water Quality Standards for Selected Constituents of Concern), compare WQOs, MCLs, and ambient (prior to January 2015) water quality concentrations. Ensure that the most protective value is chosen for the minimum threshold.</p> <p>Set minimum thresholds and measurable objectives for all water quality constituents within the EMA. Ensure they align with drinking water standards.</p>	<p>several plans in other basins, which includes protection of users within the single tribal area in the EMA.</p> <p>The protection of drinking water users is based on state and federal drinking water standards and on water quality objectives established by the Regional Water Quality Control Board to protect all groundwater uses. The GSA did not set minimum thresholds for contaminants that might be detected in groundwater because these constituents are regulated under the authority of the RWQCB and DDW.</p>
TNC (Pablo Ortiz-Partida)	SMC	GDEs	<p>When defining undesirable results for chronic lowering of groundwater levels, the GSP states that high rate of pumping in the Paso Robles Formation or Careaga Sand could result in potential impacts to GDEs (p. 5-13). However, these impacts are not described or analyzed. This is problematic because without identifying potential impacts on GDEs, minimum thresholds may compromise these environmental beneficial users. Since GDEs may be present in areas of the EMA that are not adjacent to ISW (see our comments in the GDE section of this letter), they must also be considered when developing SMC for chronic lowering of groundwater levels.</p> <p>For depletion of interconnected surface water, the GSP mentions, but does not sufficiently analyze, the impacts of minimum thresholds on terrestrial GDEs. The GSP states: "The minimum threshold for this sustainability indicator is presented below and in Table 5-6: Groundwater levels measured at the piezometers proposed to be installed in the GDE areas of Alamo Pintado and Zanja de Cota Creek are 15 feet below the stream bed. This minimum threshold was selected because it represents the lowest groundwater level that most GDE plants can typically access with their roots, assuming that capillary action will bring groundwater further up into the profile. It is also intended to ensure that groundwater use does not significantly reduce the flow of surface water from the tributaries into the Santa Ynez River." Furthermore, the GSP makes no attempt to evaluate the impacts of the proposed minimum threshold on environmental beneficial users of surface water. The GSP does not explain how the chosen minimum thresholds and measurable objectives avoid significant and unreasonable effects on surface water beneficial users in the EMA, such as increased mortality and inability to perform key life processes (e.g., reproduction, migration).</p>	<p>Define chronic lowering of groundwater SMC directly for environmental beneficial users of groundwater. 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 on 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 EMA. 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 EMA are reached.¹⁵ The GSP should confirm that minimum thresholds for ISWs avoid adverse impacts on both environmental beneficial users of groundwater and surface water 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>When establishing SMC for the basin, consider that the SGMA statute [Water Code §10727.4(l)] specifically calls out that GSPs shall include "impacts on groundwater dependent ecosystems".</p>	<p>Undesirable results and minimum thresholds for chronic declines in water levels and significant and unreasonable depletion of interconnected surface water took into consideration the need to avoid impacts to GDEs in accordance with SGMA, the SGMA Regulations, and DWR guidance. Undesirable results with respect to GDEs and approaches to avoid impacts to GDEs are described in section 5.10.1 through section 5.10.4.</p> <p>The proposed monitoring wells to be located with the identified GDE area are intended to provide monitoring data that can be used to assess depletion of interconnected surface water and significant and unreasonable adverse impacts to GDEs resulting from groundwater conditions occurring throughout the Basin. Additional projects and management actions described in Section 6.3 will be conducted by the EMA GSA to further evaluate the nature and extent of potential GDEs within the EMA.</p>

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TNC (Pablo Ortiz-Partida)	General	Climate change	<p>The integration of climate change into the projected water budget is insufficient. The GSP incorporates climate change into the projected water budget using DWR change factors for 2030 and 2070. However, the plan does not consider multiple climate scenarios (e.g., the 2070 extremely wet and extremely dry climate scenarios) in the projected water budget. The GSP should clearly and transparently incorporate the extremely wet and dry scenarios provided by DWR into projected water budgets or select more appropriate extreme scenarios for the EMA. While these extreme scenarios may have a lower likelihood of occurring, their consequences could be significant and their inclusion can help identify important vulnerabilities in the basin's approach to groundwater management.</p> <p>The GSP incorporates climate change into key inputs (e.g., precipitation and evapotranspiration) of the projected water budget. However, imported water should also be adjusted for climate change and incorporated into the surface water flow inputs of the projected water budget. Furthermore, the GSP does not provide a sustainable yield based on the projected water budget with climate change incorporated. If the water budgets are incomplete, including the omission of projected climate change effects on imported water inputs, and sustainable yield is not calculated based on climate change projections, then there is increased uncertainty in virtually every subsequent calculation used to plan for projects, derive measurable objectives, and set minimum thresholds. Plans that do not adequately include climate change projections may underestimate future impacts on vulnerable beneficial users of groundwater such as ecosystems and domestic well owners.</p>	<p>Integrate climate change, including extremely wet and dry scenarios, into all elements of the projected water budget to form the basis for development of sustainable management criteria and projects and management actions.</p> <p>Incorporate climate change into surface water flow inputs, including imported water, for the projected water budget. Estimate sustainable yield based on the projected water budget with climate change incorporated.</p> <p>Incorporate climate change scenarios into projects and management actions.</p>	<p>Central tendency climate change factors provided by DWR were used for the projected future water budgets in accordance with DWR guidance. The EMA may choose to evaluate more extreme climate conditions in the future. It is anticipated that the effects of climate change and extended drought will be described in each annual report and evaluated as part of the GSP update process every five years. The GSA will use this information to determine whether additional management actions are warranted if undesirable results are observed.</p> <p>The projected future availability of imported SWP water is based on extensive CALSIM modeling conducted by the State, which is presented in Planning guidance from the CCWA and DWR's Delivery Capacity Report of 2019. This report showed and specifically accounted for low SWP allocations during these recent years. The discussion of SWP reliability in the Plan has been updated to reflect the most recent very low delivery projection. (Section 3.3.5.1.3)</p>
TNC (Pablo Ortiz-Partida)	Monitoring Networks	Data gaps	<p>The consideration of beneficial users when establishing monitoring networks is insufficient, due to lack of specific plans to increase the Representative Monitoring Sites (RMSs) in the monitoring network that represent shallow groundwater elevations around GDEs in the EMA. Figure 4-2 (Groundwater Level Monitoring Network Low Well Density Areas) does highlight the areas of data gaps in the EMA based on well density in the EMA. The GSP, however, does not specifically acknowledge data gaps in the GDE monitoring network for the Category B potential GDEs noted in Section 3.2.6 (Groundwater Dependent Ecosystems).</p> <p>Because maps of RMSs did not include DACs, tribes, domestic wells, and GDE mapping layers, it was difficult to determine whether or not the RMSs adequately represent water quality conditions and shallow groundwater elevations around DACs, tribes, domestic wells, and GDEs in the EMA.</p>	<p>Provide maps that overlay monitoring well locations with the locations of DACs, domestic wells, tribes, and GDEs to clearly identify potentially impacted areas.</p> <p>Increase the number of RMSs in the shallow aquifer across the EMA as needed to adequately monitor shallow groundwater elevations supporting beneficial users such as GDEs and shallow domestic wells.</p> <p>Provide specific plans, such as locations and a timeline, to fill the data gaps in the GDE monitoring network. Evaluate how the gathered data will be used to identify and map GDEs.</p>	<p>Section 5 and 6 include extensive discussion about plans to address data gaps with regard to water level monitoring in the EMA, including the two GDE areas as presented in Section 5.10.2 and on Figure 4-4. The specific locations shown on Figure 4-4 may be adjusted slightly but are designed specifically for the protection of the GDEs within these areas. These monitoring wells are in addition to the monitoring wells presented on Figure 4-1 (Groundwater Level Monitoring Network) and Figure 4-2 (Groundwater Level Monitoring Network Low Well Density Areas) and are solely intended for assessing surface water depletion and impacts to GDEs that could result from pumping.</p> <p>The specific plans and timeline for installation of these monitoring wells is discussed in Section 6.3 as one of the Group 1 Management Actions. The monitoring wells will be installed during implementation of the GSP.</p>

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TNC (Pablo Ortiz-Partida)	Projects & Management Actions	DACs, GDEs	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, and drinking water users. The proposed projects and management actions that would improve the water supply, GDE habitats, or provide benefits to DACs within the EMA are currently classified as Group 2 or 3 projects, and the GSA does not have specific plans to develop these projects. Therefore, potential project and management actions may not protect beneficial users during the GSP implementation phase. Groundwater sustainability under SGMA is defined not just by sustainable yield, but by the avoidance of undesirable results for all beneficial users. We recommend including specific plans to implement a drinking water well impact mitigation program since the SMC section of the GSP outlines that up to 39% of domestic wells will be impacted at minimum thresholds.	<p>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.</p> <p>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.</p> <p>The GSP discusses the Group 3 Project: Distributed Stormwater Managed Aquifer Recharge (DSW-MAR). Note that recharge ponds, reservoirs, and facilities for managed aquifer 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 further guidance on how to integrate multi-benefit recharge projects into your GSP, refer to the "Multi-Benefit Recharge Project Methodology Guidance Document."</p> <p>Develop management actions that incorporate climate and water delivery uncertainties to address future water demand and prevent future undesirable results.</p>	<p>The well registration program described in Section 6 is intended to include all domestic wells, including well information provided by tribal members. No DACs are present within the EMA. This information will help the GSA understand whether undesirable results are being experienced by domestic well owners. A drinking water well impact mitigation program is not required by SGMA and is considered unnecessary at this time. The GSA will address undesirable results experienced by domestic wells owners if necessary. To this end, the GSA and the SYRWCD have added a link to their respective websites where anyone can report a water outage in a well.</p> <p>There are no disadvantaged communities identified within the EMA, based on several datasets (refer to the updated 2019 County-wide Integrated Regional Water Management Program report; 2020 California Air Resources Board and 2018 California Climate Investments Priority Populations online maps; and DWR's DAC mapping data from 2018 at the places and tract scales).</p>
Joseph Hughes, Santa Ynez Water Group	Projects & Management Actions	Overlying groundwater rights	<p>As previously expressed to the GSA, our members primary concern continues to be the GSA's failure to adequately consider the interests of agricultural landowners holding overlying groundwater rights and the effects of the GSA's actions on those landowners. This lack of consideration is evident in the GSA's proposed projects and management actions and associated financing structure.</p> <p>For example, the draft GSP anticipates increased pumping demands by groundwater users who hold appropriate groundwater rights. (Draft GSP, Table 3-37.) The draft GSA goes on to provide that projects or management actions may be implemented in response to these projected increases in demand. (Draft GSP, Section (3.3.3.7.)) Further, the draft GSP proposes a "proportional and equitable approach to funding implementation of the GSP. . . ." (Draft GSP, Section 6.2.) This will result in fees being levied for groundwater pumping "against all groundwater pumpers in the [Eastern Management Area]. . . ." (Draft GSP, Section 6.4.) Therefore, effectively, the GSA is requiring agricultural landowners who hold overlying groundwater rights to pay for the increased pumping of groundwater users who hold appropriate groundwater rights. Our members do not agree that this approach is equitable, as intended by the GSA.</p>	None	<p>The Plan does not include any allocation of pumping or water rights, which is outside of the scope of this GSP and SGMA regulations and guidance. The Plan does however contemplate a range of projects and management actions that are intended to address undesirable results, if observed. Options include a potential allocation program that would be designed to provide for a fair allocation of available groundwater supplies within the sustainable yield of the basin and consistent with water rights. Details of how an allocation program will be developed, implemented, and funded will be discussed in public meetings after the GSP is submitted to DWR, if the program is needed in the future. As set forth throughout the Plan, avoiding undesirable results and managing the basin within its sustainable yield actually helps to protect all beneficial uses and users of groundwater over the long-term, specifically including agricultural landowners.</p> <p>The comment states that agricultural landowners with overlying rights are being required to pay for the increased pumping of groundwater users who hold appropriate rights, but that is not correct. The Plan is not required to and does not establish or otherwise describe how the actual costs of maintaining groundwater sustainability will be allocated within the EMA. With that in mind, financial planning and possible approaches to cost allocation will be high priority matters following completion and submission of the Plan. Notably, all appropriate groundwater producers and those overlying producers in the EMA who are located within the SYRWCD have paid groundwater pump charges to SYRWCD for over 50 years to help pay for groundwater monitoring, reporting, and related management activities. On the other hand, agricultural landowners located outside the SYRWCD, which constitutes the majority of groundwater production in the EMA, have not incurred any costs to date related to a groundwater pump charge.</p>
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	2.3.1	Overlying groundwater rights	SYRWCD, City of Solvang, and ID No. 1 are incorrectly listed as overlying groundwater rights holders on p. 2-38	None	Comment noted. The text has been revised.

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Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	3.2.3	Management actions	Section 3.2.3 states that the "GSP focuses on constituents that relate to beneficial uses of groundwater that might be impacted by groundwater management activities" and later says "projects and management actions that are currently being considered, even if tentatively, are not anticipated to directly cause concentrations of any of these constituents in groundwater to increase" (emphasis added). These statements are conflicting. It is requested that the GSP clarify whether there is a demonstrable causal relationship between groundwater management or groundwater pumping and water quality degradation.	None	<p>None of the Group 1 or Group 2 Management Actions have any direct relationship between groundwater management or groundwater pumping and water quality degradation. Three of the Group 3 Projects could potentially pertain to and help address potential water quality degradation as needed, including the following:</p> <ul style="list-style-type: none"> • City of Solvang / Santa Ynez Community Services District WWTF Recycled Water & Reuse In Lieu of Groundwater Pumping or Indirect Potable Reuse • Los Olivos Community Service District WWTF Recycled Water & Reuse In Lieu of Groundwater Pumping or Indirect Potable Reuse • Santa Ynez Band of Chumash Indians WWTF Recycled Water & Reuse In Lieu of Groundwater Pumping or Indirect Potable Reuse <p>In this regard, Section 6.10.5 of the Plan states: "Each of the identified Group 3 projects would require planning and permitting prior to implementation, and all would require compliance with applicable regulations, including CEQA. These permitting and regulatory compliance issues for any specific project would be addressed during the study, planning, preliminary design/engineering, and permitting phases of any project that is identified by the EMA GSA for potential future consideration."</p>
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	3.2.5	Interconnected surface waters	This section does not include estimates of the quantity and timing of interconnected surface water depletions as required by GSP Emergency Regulations §354.16(f).	None	<p>Within the EMA, the areas of the tributary alluvium that ultimately recharge the underlying Principle Aquifers (Paso Robles Formation and Careaga Sand) occur throughout the lengths of the tributary but are disconnected from the underlying groundwater, with the exception of the areas identified in the GDE discussion near the distal ends of two of these tributaries. Outside of these two areas, the tributary alluvium is not classified as interconnected surface water because these areas do not meet both elements of the applicable SGMA definition where: "the 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."</p> <p>Within these two areas, additional clarification to this point has been added to Section 3.2.5 and the modeling used to support the quantification of this in Section 5.10.</p>
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	3.2.5.1	Tributary alluvium	<p>The 4th paragraph discusses various perennial reaches of various creeks that cross the EMA. Other than near the southern boundary of the Santa Ynez Uplands area, the text does not state whether interconnection exists along these reaches. The GSP could be improved by including a conceptual discussion concerning the approximate location and timing of interconnection along the remainder of the perennial reaches, if any.</p> <p>When taken together, the last two sentences of the 4th paragraph may be interpreted to imply that all perennial surface water flow is sourced from EMA groundwater (presumably during non-storm flow conditions). It is requested that the text be revised to indicate that many of the perennial reaches extend north of the basin boundary, indicating that they are, at least in part, spring fed from the surrounding bedrock of the San Rafael Mountains.</p>	None	<p>Clarification to this point has been added to Section 3.2.5 about the lack of a continuous saturated zone between the tributaries and the underlying principle aquifer except at the very distal ends of the tributaries where groundwater discharges to surface water. Everywhere else, the tributary reaches are losing and do not form a continuous saturated zone. The groundwater model was used to quantify the amount and timing of surface water depletion in the areas where the interconnection exists as discussed in Section 5.10. Please also refer to related Responses to Comments herein.</p>

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Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	Figure 3-52	Water budget	Comparison of Figure 3-52 with the representative hydrographs provided in the appendices, suggests that the water balance is not following groundwater level trends. Based on the hydrographs for the Paso Robles Formation, the cumulative storage change should peak sooner (earlier in the 2000s) and should do so at a higher value that is significantly greater than the starting value of zero (groundwater levels were notably higher in the early 2000s as compared to the 1982). The groundwater level trends also suggest that the declining storage in the 1980s is overestimated. Based on these observations, there is a concern that the historical water budget is not well "calibrated" to the groundwater level data and is biased toward overestimating storage declines and underestimating storage increases. As a result, there is a concern that the historical water balance overstates the EMA storage deficit.	None	The water budget values were compared to water levels within Section 3 during development of the overall Plan. While the water levels in the Paso Robles Formation show a strong correlation with climatic conditions with water elevation decreases of more than 100 feet during prolonged drought cycles in some wells, most wells appear to fully recover within a few years when the drought conditions end over the historic period, likely related to groundwater pumping and climatic conditions. The timing of storage change was calculated based on available datasets described in Section 3.3.2 on Table 3-17. The water duty factors that were chosen to be historically consistent with SYRWCD self-reported values, in coordination with the entire Basin. Groundwater levels vary throughout the basin and some may not precisely match the overall change in storage trend. The groundwater model was calibrated to many dozens of wells in the EMA and the computed change in storage using the model over the historical period was a very close match to the estimated change of storage used in the water budget for that period. During Plan implementation, the installation of flow meters on all wells in the EMA and other actions presented in Sections 5 and 6 will ensure that total groundwater production is accurately quantified, which will improve the estimated change in storage.
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	Water budget	Water budget	The projected increase in irrigated acreage is likely overstated. Based on feedback from growers in the Santa Ynez Water Group, the current trend is one of higher value, higher water demand crops leaving the region. As crops leave the region area, there is less incentive to convert pastureland or other land into irrigated land. The "large increase expected" in cannabis stated in memo will likely occur on previously unirrigated acres, if it happens at all. It is requested that the projected water budget be updated considering this comment. The water duty factors for vineyards are too high. A more realistic water duty is closer to 1 – 1.2 AFY/acre, inclusive of both irrigation and frost protection (per vineyard operators in Santa Ynez Water Group). It is requested that the projected water budget be updated considering this comment.	None	The projected increase in irrigated acreage was based on various data, including comments made by a number of agricultural growers and landowners in the EMA. It is not possible to determine at this time exactly where the increase in cannabis production will occur. The actual amount and location of irrigated crop production will be reevaluated every 5 years when the GSP is updated. The water duty factors were chosen to be historically consistent with SYRWCD self-reported values, in coordination with the entire Basin. The choice of the water duty factors for vineyards was established and revised based on discussion during public meetings, of which the SYWG was part. As set forth in Section 3.3.5.1.2: "There has been some discussion in public meetings that the water duty factor of 1.60 acre-feet per acre per year for vineyards may be too high and the current water use for the crop may be closer to 1.0 to 1.2 acre-feet per acre per year inclusive of irrigation and frost protection." Installation of flow meters that is part of the GSP will help quantify the actual amount of water produced and will assist in further estimating actual water duty factors for the EMA based on particular crop types.
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	SMC	Groundwater levels	Chronic Lowering of Groundwater Levels – The logic behind the minimum thresholds is questionable and the minimum thresholds themselves appear arbitrary. The GSP concludes that well operational issues that may be associated with groundwater levels below the top of well screens are indicative of significant and unreasonable depletion of supply. First, well operational issues are not a depletion of supply in of themselves; rather they are infrastructure issues that can be remedied through well redevelopment, well replacement, or backup wells, which could be implemented as GSP projects. It is suggested that depletion of supply not be viewed as well issues that can be remedied; rather, depletion of supply is more appropriately characterized as the inability to produce adequate water because the water isn't there. Second, the "well impact" analysis provides clear evidence contrary to the GSP conclusions. Approximately 25-30% of the wells in the EMA had groundwater levels below top of screen in 2018, yet the GSP states that no reported significant and unreasonable effects occurred (see p. 5-13). If the premise is that groundwater levels below top of screen causes significant and unreasonable effects, then why haven't numerous instances of significant and unreasonable effects been reported already? Moreover, the number of wells with groundwater levels below the top screen at minimum threshold groundwater elevations is not materially different	None	The minimum threshold is based on the well-documented reasons summarized in the sustainability goal (Section 5.2), which includes "Long-term groundwater elevations are adequate to support existing and future reasonable and beneficial uses throughout the Basin." The minimum thresholds were based on well-documented water levels and documented well-completion information, which was discussed during several public meetings. The protection of all known agricultural, municipal, and domestic wells from loss of production (depletion of supply) is a priority and the selected minimum thresholds were chosen to "Maintain sufficient groundwater volumes in storage to sustain current and ongoing beneficial uses and users of groundwater which maintains access to groundwater supplies, including during prolonged drought conditions while avoiding undesirable results (Section 5.2.1). The loss of ability of any of the users to be able to access groundwater with existing wells would violate the sustainability goal. As indicated in Responses to Comments above and as set forth throughout the Plan, avoiding undesirable results and managing the basin within its sustainable yield actually helps to protect all beneficial uses and users of groundwater over the long-term, specifically including agricultural landowners. In regard to the second comment, the well impact analysis was the method chosen in public meetings to achieve this goal, which was based on public input for agricultural, environmental, domestic, and municipal uses (listed in alphabetical order). The GSA contemplated the analysis at length and it was determined that the selected method was protective of most groundwater users, which became the basis of the minimum threshold. The method is protective of existing well infrastructure, because the GSA believes it is an unfair burden for most users to

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			<p>than the number of wells at 2018 groundwater levels. (0% more municipal wells, 0-3% more agricultural wells, and 1.7-4% more domestic wells). There is no justification for why the very small increase in the number of wells with groundwater levels below top of screen results causes the EMA to cross the line into the realm of significant and unreasonable effects. No specific, demonstrable effects that are not occurring at 2018 levels, but are expected to occur at the minimum threshold levels are identified. For these reasons, the minimum thresholds seem arbitrary.</p> <p>The GSP states that the magnitude of impacts from groundwater levels below tops of well screens differs depending on well type (i.e., agricultural versus municipal, versus domestic) and notes that domestic wells tend to be shallower and may be more sensitive to water levels falling within the screen interval. The GSP goes on to say that municipal wells serve drinking water to citizens living in the EMA and so supply reduction cannot be easily addressed. Agricultural wells often are deeper and have longer well screens that can tolerate loss of efficiency and more drawdown resulting from water levels falling below top of screen. It is noted that there is nothing that has or would prevent municipal or domestic well owners from drilling deeper wells. It is unfair to restrict the use of the groundwater resource and/or charge fees to benefit specific types of beneficial users who have not made the same level of investment to access the groundwater resource as others. If the GSP is to keep groundwater levels high enough to prevent well issues for those who have not fully invested in infrastructure to access the resource during droughts, then those users should fund the management actions necessary to do so, particularly in the case of appropriators whose groundwater rights are junior to the overlying landowners.</p>		<p>replace current infrastructure with deeper wells should water levels decline significantly and unreasonably.</p>
<p>Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)</p>	<p>SMC</p>	<p>Degraded water quality</p>	<p>The GSP could be improved by explaining how the GSA will differentiate between changes in concentrations caused by groundwater pumping or GSA activities versus other mechanisms.</p>	<p>None</p>	<p>None of the Group 1 or Group 2 Management Actions have any direct relationship between groundwater management or groundwater pumping and water quality degradation. Three of the Group 3 Projects could potentially pertain to and help address potential water quality degradation as needed, including the following:</p> <ol style="list-style-type: none"> 1. City of Solvang / Santa Ynez Community Services District WWTF Recycled Water & Reuse In Lieu of Groundwater Pumping or Indirect Potable Reuse 2. Los Olivos Community Service District WWTF Recycled Water & Reuse In Lieu of Groundwater Pumping or Indirect Potable Reuse 3. Santa Ynez Band of Chumash Indians WWTF Recycled Water & Reuse In Lieu of Groundwater Pumping or Indirect Potable Reuse <p>In this regard, Section 6.10.5 of the Plan states: "Each of the identified Group 3 projects would require planning and permitting prior to implementation, and all would require compliance with applicable regulations, including CEQA. These permitting and regulatory compliance issues (including water quality) for any specific project would be addressed during the study, planning, preliminary design/engineering, and permitting phases of any project that is identified by the EMA GSA for potential future consideration".</p>
<p>Bryan Bondy (via letter from Joseph Hughes,</p>	<p>SMC</p>	<p>Subsidence</p>	<p>The subsidence minimum threshold does not appear to be supported by any evidence to indicate that significant and unreasonable effects would occur if it were exceeded. The three bullets listed on page 5-46 and text elsewhere in Section 5.9 may be more appropriately called "land surface</p>	<p>None</p>	<p>The subsidence MT is based on published values for accuracy. The text has been updated to differentiate between land surface elevation changes and land subsidence. Land surface may rise or fall, elastically, in any one year. Land surface elevation fluctuation may or may not indicate long-term permanent subsidence.</p>

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Santa Ynez Water Group)			elevation changes” instead of “land subsidence”, because the data sets relied on up do not differentiate between land surface elevation changes resulting from tectonic activity versus elastic or inelastic land subsidence due to groundwater withdrawal. N: “The InSAR data provided by DWR is subject to measurement error. DWR has stated that, on a statewide level, the total vertical displacement measurements between June 2015 and June 2018 is subject to two error sources (Brezing, personal communication): 1. The error between InSAR data and continuous GPS data is 16 mm (0.052 feet) with a 95% confidence level 2. The measurement accuracy when converting from the raw InSAR data to the maps provided by DWR is 0.048 feet with 95% confidence level. Simply adding the errors 1 and 2 results in a combined potential error of 0.1 foot (or 1.2 inches). While this is not a robust statistical analysis, it does provide an estimate of the potential error in the InSAR maps provided by DWR. A land surface change of less than 0.1 feet is therefore within the noise of the data, and is equivalent to no subsidence in this GSP.”		This can be caused by tectonic activity in the earth. It can also be caused by grading activities, particularly in agricultural areas or housing developments.
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	SMC	Interconnected surface waters	The depletions of interconnected surface water minimum threshold of 15 feet below the stream bed was selected based on the conclusion that it is the lowest groundwater level that most GDE plants can typically access with their roots. However, Table 3-13 indicates that Coast Live Oaks occupy approximately one-half of the Category A GDE, which have a rooting depth of approximately 30 feet ¹ . Riparian mixed hardwood makes up the balance of the Category A GDE area, with a shallower typical rooting depth. If a deeper minimum threshold (say 30 feet) was used and the result was replacement of riparian mixed hardwood with Coast Live Oaks, would that be a significant and unreasonable effect?	None	The analysis of GDEs in Section 3.2.6 does not consider the replacement of one GDE species with another as such analysis does not represent the existing GDEs that have been identified. Selection of a deeper minimum threshold would increase the possibility of significant and unreasonable adverse impacts to the groundwater dependent riparian community that is presently there.
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	6.1	Management actions	Section 6.1 states “The EMA GSA has developed a portfolio of potential management actions and projects compatible with the respective operational philosophies that can be implemented in a phased manner as the conditions I the Basin dictate” (emphasis added). What are the “operational philosophies” and what is their source?	None	For clarification purposes, the referenced sentence has been revised as follows: “The EMA GSA has developed a portfolio of potential management actions and projects compatible with EMA GSA sustainability goal that can be implemented in a phased manner as the conditions in the Basin dictate. The GSP sustainability goal referenced in Section 6.1 of the GSP reflects input from the EMA GSA, the EMA Citizens Advisory Group (CAG), stakeholders, and the public at large.
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	6.1	Management actions	Section 6.1 states “Further, the EMA GSA may determine that the implementation of Group 2 management actions and/or Group 3 projects is desirable for reasons other than reaching sustainability within the EMA and may elect to implement initiatives from either Group 2 or 3 at any time.” Please provide examples and please explain what authority the EMA GSA would use to implement projects or management actions for any reason other than to achieve sustainability.	None	As clearly set forth in the Plan, any future decision to implement Group 2 management actions and/or Group 3 projects will be a function of groundwater conditions existing in the basin and the need to avoid undesirable results and maintain groundwater sustainability as defined by SGMA and established by the Plan. If at such time such a decision is made, any actions that would be associated with such action(s) would be accompanied by CEQA review, if required, and developed and implemented in accordance with all applicable laws and regulations and in accordance with a fully transparent and inclusive public stakeholder process.

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Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	6.1	Management actions	Section 6.1 states “Based on the results of the analysis that was performed in conjunction with the development of this GSP, the EMA GSA concludes that the sustainability goals described in this GSP and required under the provisions of SGMA can be achieved through the implementation, as needed, of the Group 1 management actions described in Sections 6.3 through 6.6.” What is the referenced analysis and where can details be found?	None	<p>Please refer to GSP Sections 6.4.7, 6.5.7, 6.6.7, and 6.9.7. The sustainability goals can be achieved as described in those sections, including (briefly) the following:</p> <p>As a critical element of the GSP implementation, the Groundwater Pumping Fee Program is expected to mitigate a portion of the estimated storage deficit by motivating groundwater users that currently do not pay any pump charge to reduce pumping or pump groundwater supplies in a more sustainable fashion (6.4.7). Installation of meters and an extraction fee has been shown to reduce pumping in other basins.</p> <p>The management action described in this section will be designed and implemented for the specific purpose of obtaining data that will allow an enhanced understanding of the total volume of water being extracted. (6.5.7)</p> <p>The implementation of water use efficiency and best management measures have been shown to reduce water usage by up to 20 percent or more. Assuming EMA-wide implementation of these programs achieves a 10 percent reduction in pumping, the resulting benefit would be approximately 1,450 AFY. (6.6.7)</p> <p>A voluntary fallowing and conversion program involving 10 percent of the irrigated cropland could result in a benefit of approximately 1,450 AFY. (6.9.7)</p> <p>When taken together, implementation of these Group 1 management actions will likely total at least 1800 AFY, an amount equal to the estimated storage deficit for the historical period.</p>
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	6.2	Overlying groundwater rights	Section 6.2 states “A proportional and equitable approach to funding implementation of the GSP and any optional actions will be developed in accordance with all state laws and applicable public process requirements” (emphasis added). Section 6.4 adds “Fees to be levied for groundwater pumping will likely be in addition to a tiered base fee structure that will be levied against all groundwater pumpers in the EMA, including de minimis pumpers” The SYWG overlying rights holders do not agree that a proportional approach to funding GSP implementation applied to all groundwater pumpers is equitable because it does not consider groundwater rights priorities. Because overlying landowners’ groundwater rights are senior to appropriators; The SYWG overlying rights holders believe consideration should be given to requiring appropriators to first reduce their pumping and/or fund actions necessary to achieve the sustainable yield.	None	<p>As noted above, the important issues of funding the implementation measures presented in Sections 6 and 7 of the Plan will require further input and development through the GSA and public stakeholder process. While specific funding mechanisms are not required to be included in the Plan, they will be priority issues early in 2022 following submission of the Plan.</p> <p>The Plan contemplates a range of potential projects and management actions that are intended to address undesirable results, if observed, which SGMA requires. Options include a potential allocation program that would be designed to provide for a fair allocation and management of available groundwater supplies within the sustainable yield of the basin and in consideration of water rights. Details of how an allocation program would be developed, implemented, and funded will be discussed in public meetings after the GSP is submitted to DWR, if the program is needed in the future. As set forth throughout the Plan, avoiding undesirable results and managing the basin within its sustainable yield actually helps to protect all beneficial uses and users of groundwater over the long-term, specifically including agricultural landowners.</p>
Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	Water budget	Storage deficit	The GSP water budgets indicate a “storage deficit” under historical and projected future conditions. Despite the specific requirement to identify and quantify overdraft conditions, (GSP Emergency Regulations §354.18(5)), the GSP does not explicitly indicate whether an overdraft condition exists because of the how the term “storage deficit” is used in the text, apparently in place of “overdraft.” It is requested that the GSP clearly state whether overdraft conditions existed over a period of years during which water year and water supply conditions approximate average conditions and, if so, quantify the overdraft.	None	<p>The EMA has chosen to use the word storage deficit rather than the term overdraft in order to avoid legal interpretations of the term overdraft, which is not specifically defined in SGMA. According to DWR, overdraft occurs where the average annual amount of groundwater extraction exceeds the long-term average annual supply of water to the basin. The GSP has met the requirement to identify the amount of groundwater extraction that exceeds the long term average annual supply during the historical, current, and projected future conditions.</p>

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Bryan Bondy (via letter from Joseph Hughes, Santa Ynez Water Group)	6.2	Management actions	Table 3-37 presents projections of increasing pumping by EMA appropriators. Section 3.3.3.7 (Reliability of Historical Surface Water Supplies) and Section 3.3.5.2 (Summary of Projected Water Budget) describes the potential for additional increases in pumping by groundwater appropriators in the EMA not captured in Table 3-37 to address potential decreases in Lake Cachuma or imported water supplies. The draft GSP goes on to say that projects or management actions may be implemented by the GSA to address these increased demands. Based on text in Section 6.2, it is anticipated that the costs for these projects or management actions would be paid for by all EMA groundwater users. The SYWG believes it would be more appropriate for the costs for any projects or management actions to address increased pumping by the appropriators be paid for by the appropriators instead of sharing those costs with senior water rights holders.	None	The GSP contemplates potential modest increases in pumping to serve both municipal and agricultural uses in the future. Should undesirable results be observed, and water levels and storage continue to decline, the GSA has the authority to implement projects and management actions to address the condition as described in Section 6. The GSA also has the authority to levy fees to pay for the programs. As noted above, the important issues of funding the implementation measures presented in Sections 6 and 7 of the Plan will require further input and development through the GSA and public stakeholder process after the GSP is submitted. Any fees that will be levied will be developed in an open and transparent process. Targeted outreach meetings and technical workshops, in addition to regularly scheduled EMA GSA meetings, will be held to inform all groundwater pumpers and other stakeholders about the details of the proposed Groundwater Pumping Fee Program. Groundwater pumpers and interested stakeholders will have the opportunity at these meetings to learn about the programs as well as the opportunity to provide input and comments on how the pumping fee program may be implemented in the EMA.
Sharyne Merritt	General	Multiple	Questions raised by neighboring farmers: Have the Farm Bureau and vintner's association been engaged so meters and fee requirements don't come as a surprise? Is it possible for additional directors to be added to the GSA Board? such as local water agencies, an environmental director, or an agricultural director. Will implementation of the GSP affect new wells (as in Cuyama) and/or the Growth of Buellton (as Urban Growth Boundary) runs out?	None	As noted in Responses to Comments above, the agricultural community has been actively engaged throughout the GSP development process and has provided written and verbal comments on multiple sections of the GSP, participated in GSA committee meetings, and participated in CAG meetings. The comment indicates that agricultural landowners have been "intentionally disenfranchised" from decision-making, but that is not the case. Per express SGMA requirements, the formation of the EMA GSA includes a combination of local agencies that have water supply, water management, or land use responsibilities within the EMA. (See Water Code sections 10721(n), 10723.6.) Moreover, although SGMA provides the opportunity for mutual water companies to participate in a GSA (Water Code section 10723.6(b)), landowners in the EMA made their own choice in not pursuing that level of involvement on the GSA. Currently, agricultural representation in the EMA is through SYRWCD and the County of Santa Barbara. ID No.1 also purveys up to 50 percent of its water supply to agricultural customers. Furthermore, as recognized by the comment, several agricultural representatives were intentionally selected to serve on the EMA Citizens Advisory Group, and have actively served in that important capacity throughout the Plan development process. Formation of the Citizens Advisory Group was not mandatory under SGMA, yet the GSA believed the Group would ensure a critical level of stakeholder review and input, and for nearly two years the Group provided direct feedback to the GSA on the development and specific content of the Plan. Future governance and membership of the GSA will be considered after the GSP is submitted to DWR.
Mark Infanti (Solvang City Council Member)	General	Disadvantaged communities; Interconnected surface waters	The TNC seemed to have drinking water for disadvantaged communities as a priority while the GSA is trying to make sure that all the users have water. They do suggest a map showing all the stream reaches in the EMA, with reaches clearly labeled as interconnected or disconnected.		As included in responses to the TNC comments: There are no disadvantaged communities identified within the EMA, based on several datasets (refer to the updated 2019 County-wide Integrated Regional Water Management Program report; 2020 California Air Resources Board and 2018 California Climate Investments Priority Populations online maps; and DWR's DAC mapping data from 2018 at the places and tract scales). The discussion about interconnected surface waters is presented throughout the responses to comments and has been clarified within the text of the Plan. The lower reaches of Alamo Pintado and Zanja de Cota Creek represent the only locations within the EMA where surface water within the tributary alluvium is interconnected with a continuous saturated zone. These areas are interconnected with the underlying principal aquifers and appear to support GDEs. An evaluation of potential significant and unreasonable depletion of interconnected surface water in these areas is presented in Section 5.10.2. A GDE monitoring program has been included in the Plan for these areas.

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Mark Infanti (Solvang City Council Member)	General	Interconnected surface waters	Fish and Wildlife review listed concerns for the surface water for fish. This included suggestions for maps identifying species, identify the estimated quantity and timing of streamflow depletions and map depletions of interconnected surface waters.		These issues have been significantly expanded upon within these responses to comments and in the text of the Plan.
Mark Infanti (Solvang City Council Member)	Water Budget	Timeframe of water budget	NOAA also listed impact on the GDE and fish. Their comment that I found pertinent was “the revised Draft Budget should include justification for selecting water years 1982 through 2018 as the historical water budget period” and “an assessment should be made of the land-use practices over a longer period to better assess the groundwater pumping patterns within the Eastern Management Area.”		A more complete discussion of the basis for selecting the historical water budget period selection is included in Section 3.3.1 in the public draft and final versions of the Plan. This period captures multiple wet, dry, and normal hydrologic periods and includes the period that high quality data was available for the analysis. There is no need to consider land use changes prior to 1982 for groundwater management purposes going forward.