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***GAVIN NEWSOM, Governor***
***CHARLTON H. BONHAM, Director***

October 26, 2021

*Via Electronic Mail and Online Submission*

Mr. Bill Buelow, P.G.
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**Subject: Comments on the Santa Ynez River Valley Groundwater Basin's Western Management Area Draft Groundwater Sustainability Plan**

Dear Mr. Buelow:

The California Department of Fish and Wildlife (CDFW) appreciates the opportunity to provide comments on the Santa Ynez River Valley Groundwater Basin's Western Management Area Groundwater Sustainability Agency (WMA-GSA) Draft Groundwater Sustainability Plan (Draft GSP) prepared pursuant to the Sustainable Groundwater Management Act (SGMA).

As trustee agency for the State's fish and wildlife resources, CDFW has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species (Fish & Game Code §§ 711.7 and 1802).

Development and implementation of groundwater sustainability plans (GSPs) under SGMA represents a new era of California groundwater management. CDFW has an interest in the sustainable management of groundwater, as many sensitive ecosystems, species, and public trust resources depend on groundwater and interconnected surface waters (ISWs), including ecosystems on CDFW-owned and managed lands within SGMA-regulated basins.

SGMA and its implementing regulations afford ecosystems and species specific statutory and regulatory consideration, including the following as pertinent to GSPs:

- GSPs must **consider impacts to groundwater dependent ecosystems** (GDEs) (Water Code § 10727.4(l); see also 23 CCR § 354.16(g));
- GSPs must consider the interests of all beneficial uses and users of groundwater, including environmental users of groundwater (Water Code § 10723.2) and GSPs must **identify and consider potential effects on all beneficial uses and users of groundwater** (23 CCR §§ 354.10(a), 354.26(b)(3), 354.28(b)(4), 354.34(b)(2), and 354.34(f)(3));
- GSPs must **establish sustainable management criteria that avoid undesirable results** within 20 years of the applicable statutory deadline, including **depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water** (23 CCR § 354.22 *et seq*. and Water Code §§ 10721(x)(6) and 10727.2(b)) and describe monitoring networks that can identify

adverse impacts to beneficial uses of interconnected surface waters (23 CCR § 354.34(c)(6)(D)); and,

- GSPs must **account for groundwater extraction for all water use sectors,** including managed wetlands, managed recharge, and native vegetation (23 CCR §§ 351(al) and 354.18(b)(3)).

Furthermore, 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. (*Environmental Law Foundation v. State Water Resources Control Board* (2018), 26 Cal. App. 5th 844; *National Audubon Society v. Superior Court* (1983), 33 Cal. 3d 419.) 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." (*National Audubon Society*, *supra*, 33 Cal. 3d at 446.) Accordingly, 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.

Individually and collectively, the SGMA statutes and regulations, and Public Trust Doctrine considerations, necessitate that groundwater planning carefully consider and protect environmental beneficial uses and users of groundwater, including fish and wildlife and their habitats, GDEs, and ISWs.

**COMMENT OVERVIEW**

CDFW supports ecosystem preservation and enhancement in compliance with SGMA and its implementing regulations based on CDFW expertise and best available information and science. CDFW understands the Santa Ynez River Valley (3-015) (Basin) is rated as a medium priority basin under SGMA with 15 priority points. The Basin sits isolated from other SGMA Basins with only San Antonio Creek Valley (3-014) adjacent to the north that is also rated as a medium priority basin with 15 priority points. These Santa Ynez River Valley Groundwater Basin has been separated into three management areas. They are the Western Management Area (WMA), Central Management Area (CMA) and the Eastern Management Area (EMA). CDFW offers the following comments and recommendations below to assist WMA-GSA in identifying and evaluating impacts on biological resources including GDEs within the adjacent groundwater basins. Additional suggestions are included for WMA-GSA's consideration during revisions of the Draft GSP.

**SPECIFIC COMMENTS AND RECOMMENDATIONS**

**Comment #1: Section 2b.6-1 Interconnected Surface Water for the Santa Ynez River**

**Issue:** The Draft GSP still does not provide enough information to conclude that the surface water is not hydraulically connected to the underlying water table. Page 2b-40 of the Draft GSP states, *"The portion of the Santa Ynez River between the Lompoc Narrows and the Pacific Ocean is identified as seasonally interconnected surface water because at times surface water in this reach is hydraulically connected to the underlying water table in the principal aquifer. The reach is considered seasonally interconnected because the Santa Ynez River is dry for significant periods of time during the year, and as a result is not "hydraulically connected" to the underlying water table.*" Groundwater-dependent habitats, including ISWs, 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 such as in this case. This will compromise instream dissolved oxygen and cause temperature fluctuations that certain species cannot survive. The frequency and duration of exposure to lowered groundwater tables and low-flow or no-flow conditions caused by groundwater pumping, as well as habitat and species resilience, will dictate vulnerability to changes in groundwater elevation. Various aquatic species, such as the federal Endangered Species Act (FESA) listed species (NMFS 2013) SYR southern California steelhead (*Oncorhynchus mykiss;* steelhead), rely on perennial instream flow, and any interruption to flow can risk species survival.

**Recommendation #1(a):** CDFW agrees that the Santa Ynez River (SYR) between Lompoc Narrows and the Pacific Ocean is an interconnected surface water. CDFW disagrees that this portion of the river is not hydraulically connected to the underlying water table. CDFW recommends the final GSP identify this area as potentially hydraulically connected, until the WMA-GSA collects enough data to prove otherwise.

**Recommendation #1(b):** The Draft GSP indicates there is abnormal groundwater elevation fluctuations in this portion of the river. CDFW recommends A detailed evaluation of surface water-groundwater interactions, understanding the associated underground lithology is critical to understanding the reason this section of the river has low or no flow throughout the year. Furthermore, impacts caused by changes in groundwater elevation should also be considered in the evaluation of groundwater management effects on GDEs and ISW.

**Comment #2: Section 2c.1-3 Surface Water and the Santa Ynez River Alluvium**

**Issue:** The Draft GSP does not provide enough information to conclude that surface waters do not affect groundwater levels. Page 2c-8 of the Draft GSP states, "*In addition, as discussed in the HCM (Section 2a.2), the Santa Ynez River Alluvium upstream of the Lompoc Narrows is part of the subflow of the River, which is regulated by SWRCB. Because subflow is considered surface water and not groundwater, the Santa Ynez River Alluvium would not be classified as a principal aquifer or managed by a GSP under SGMA. Therefore, the Santa Ynez River Alluvium is considered part of the underflow of the Santa Ynez River and is treated as part of the surface water in the historical, current, and projected water budgets*". The WMA-Hydrologic Conceptual Model (HCM) Memo states during downstream water right releases, water infiltrates and recharges the alluvium (WMA-HCM Memo, Page 27). The HCM Memo acknowledges that the younger alluvium in the upper aquifer is being recharged from water right releases. However, the WMA 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 upstream of the Lompoc Narrows 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).

The WMA-HCM Memo also states that groundwater in the WMA discharges to the Santa Ynez River when the groundwater elevation is higher than the stream channel thalweg. Groundwater discharge to the river will occur during wet winter and spring months. However, during the

summer and dry winter months, the streamflow loses water to the groundwater aquifers of the Santa Ynez alluvium subarea and Lompoc Plain (WMA-HCM Memo, p.33). This is another example of an interconnected surface water that WMA-GSA describes in their WMA-HCM Memo but did not identify and analyze in the WMA-GC Memo.

**Recommendation #2(a):** CDFW recommends the WMA-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 WMA-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 WMA 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. Furthermore, identifying and appropriately considering GDEs in the WMA 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 WMA-GSA to identify and consider all GDEs within the WMA per Code of Regulations, Title 23 § 354.16(g).

**Recommendation #2(b):** CDFW strongly recommends the WMA-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).

**Comment #3: Section 2b.6-2 Interconnected Surface Water for Tributaries to the Santa Ynez River**

**Issue:** The Draft GSP still does not provide enough information to conclude that there are no interconnected surface waters within SYR tributaries. Page 2b-43 of the Draft GSP states, "*All of the tributaries within the WMA (Figure 2b.6-1) are ephemeral. Several small streams flow year-round in canyons outside of the WMA and south of the Lompoc Plain (Bright et al. 1997). Once these flows reach the unconsolidated alluvial deposits within the boundary of the WMA, all of the flow infiltrates and recharges the groundwater. Thus, the perennial flows in these tributaries are not influenced by groundwater management actions in the WMA and would not be classified as having interconnected surface water under SGMA because they are disconnected from the water table in the primary aquifer and "completely depleted" as sources of groundwater recharge in the WMA.*" The Draft GSP does not provide enough information to conclude SYR tributaries do not meet the SGMA definition for interconnected surface water nor there are no interconnected surface waters within SYR tributaries.

CDFW believes WMA-GSA has not provided adequate justification for its conclusion that the tributaries within the WMA do not meet SGMA's definition of interconnected surface waters simply because they do not receive measurable flow at all times of year. 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).)

The WMA-GSA has not provided sufficient information for its conclusion that lack of measurable flow within the tributaries means the tributaries are "*completely depleted*" under this definition. Even assuming the tributaries are "*completely depleted*" during part of the year, there is no requirement within SGMA or its implementing regulations that surface waters have measurable surface flows at all times of the year to qualify as an interconnected surface water. 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).

The health of the steelhead population is a significant concern to CDFW. Managing the groundwater within the Santa Ynez River Valley is particularly critical to the survival and recovery of steelhead. 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.

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-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; therefore, any interruption to flow can risk species survival.

**Recommendation #3(a):** CDFW recommends a more careful review of existing information on surface water-groundwater interconnectivity and recommends the WMA-GSA clarify methods used to categorize losing streams as disconnected.

**Recommendation #3(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.

**Recommendation #3(c):** CDFW proposes that the final GSP incorporate Recommendation #1(b).

**Comment #4: Section 2a.4-2-1 Emerging Agricultural Crops: Cannabis Cultivation (Cannabis Priority Watershed)**

**Issue:** 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 2a-39 of the Draft GSP states that "*Santa Ynez*

*River Valley is not identified as a Cannabis Priority Watershed with a high concentration of cannabis cultivation.*" 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, 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.

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.

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 (*Empidonax traillii extimus*), least Bell's vireo (*Vireo bellii pusillus*), red-legged frog (*Rana draytonii*), and seaside bird's beak (*Cordylanthus rigidus ssp. littoralis*) (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. 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).

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.

**Recommendation #4:** 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.

**Comment #5: Section 2a.4-2-1 Emerging Agricultural Crops: Cannabis Cultivation**

**Issue #5.1:** 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 eastern and northern portions of the Lompoc Plain near the SYR and tributaries to the SYR, areas that, as stated on pages 2b-41 – 2b-44, will not be managed under SGMA by the WMA GSA. Page 2a-40 of the Draft GSP states, "*Table 2a.4-3 summarizes the status of current applications by parcel within the WMA to the County of Santa Barbara for cannabis Land Use Permits. Within the WMA, 78% of the cannabis applications are for parcels that in 2016 were used for agriculture. This indicates primarily a change of crop type, rather than an expansion of agriculture land use*". Cannabis cultivation is a water intensive crop that can have a significant impact to environmental beneficial users of groundwater

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 Santa Ynez River. CDFW is concerned that without management of the Santa Ynez Alluvium under SGMA by the WMA GSA, significant and unreasonable surface water depletions may occur, compromising groundwater dependent ecosystems within and along the streams.

**Recommendation #5.1(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 2a-27, "*Key areas for recharge to the Lower Aquifer include along the Purisima Hills in the Lompoc Upland and Santa Rita Upland, and to a lesser extent in the Lompoc Terrace and Burton Mesa. Additionally, the Lompoc Plain receives most of its substantial recharge from the Santa Ynez River and much lesser quantities from percolation of runoff in the tributaries in the adjoining subareas. Percolation from the Santa Ynez River channel is the most important source of recharge for the Lompoc Plain, and is controlled by the magnitude and timing of releases from Cachuma Reservoir*". 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.

**Recommendation #5.1(b):** CDFW recommends the Santa Ynez River Valley be classified as a Cannabis High Priority Watershed.

**Issue #5.2:** 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 2a-27, "*Key areas for recharge to the Lower Aquifer include along the Purisima Hills in the Lompoc Upland and Santa Rita Upland, and to a lesser extent in the Lompoc Terrace and Burton Mesa. Additionally, the Lompoc Plain receives most of its substantial recharge from the Santa Ynez River and much lesser quantities from percolation of runoff in the tributaries in the adjoining subareas. Percolation from the Santa Ynez River channel is the most important source of recharge for the Lompoc Plain, and is controlled by the magnitude and timing of releases from Cachuma Reservoir*".

**Recommendation #5.2:** 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.

**Comment #6: Section 2b.6-3 Groundwater Dependent Ecosystems in the Western Management Area**

**Issue:** The Draft GSP still does not provide enough information to conclude that potential GDEs should be excluded from the GSP and has not addressed CDFW comments on the previously released technical memos. Page 2b-45 of the Draft GSP states that "*These potential GDEs were assessed into three categories based on the relationship to the aquifer (Figure 2b.6-3). If depth to groundwater has historically exceeded the 30-foot depth identified by the Nature Conservancy as representative of groundwater conditions that may sustain common phreatophytes and wetland ecosystems (Rohde et al. 2018), the potential GDE was identified as unlikely to be affected by groundwater management (Category C on Figure 2b.6-3). Riparian areas of the Santa Ynez River were identified as being managed by the SWRCB as part of Santa Ynez River surface and subflow (Category B on Figure 2b.6-3). The remaining area consists of GDEs likely related to groundwater levels (Category A on Figure 2b.6-3). Table 2b.6-2 below summarizes the land areas involved*."

***Table 2b.6-2: Potential WMA Groundwater Dependent Ecosystem Categorization***

| Potential GDE Category | Description | Acres | Percentage |
|---|---|---|---|
| A | Potential GDE Associated with a Principal Aquifer | 2,256 | 44% |
| B | Riparian vegetation not subject to SGMA | 1,201 | 23% |
| C | Unlikely to be Affected by Groundwater Management | 1,704 | 33% |
| **Total** | | **5,161** | **100%** |

The potential GDEs were assessed into three 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.

**Recommendation #6(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.

**Recommendation #6(b):** CDFW recommends the WMA-GSA include, at a minimum, the GDEs identified within the Basin in the final GSP. The WMA-GSA has not provided enough data to conclude that the Lower Aquifer groundwater pumping definitively does not affect GDEs within the Basin. If the WMA-GSA reaches that conclusion in the future, then then 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.

**Recommendation #6(c):** CDFW recommends the WMA-GSA identify potential impacts to fish and wildlife beneficial uses, users of groundwater, and interconnected surface waters caused by depletions of groundwater. Furthermore, the evaluation should consider species water needs for all life history stages when defining undesirable results and setting minimum thresholds required by SGMA. For example, CDFW recommends the evaluation describe flow conditions necessary to ensure hydrologic connectivity for each stage of the steelhead life cycle. Different fish and wildlife species have different water needs. Understanding the timing of water availability with respect to species needs across all life history phases will allow groundwater planners to better account for groundwater management impacts to fish and wildlife species and users of groundwater and interconnected surface waters.

## GENERAL COMMENTS AND RECOMMENDATIONS

### Comment #7: Sensitive Species and Habitats

**Issue:** Many sensitive species and habitats in the Santa Ynez WMA comprise of GDEs, the natural communities that rely on groundwater to sustain all or a portion of their water needs. Some of the special-status species in the Santa Ynez River watershed that rely on surface water supported and supplemented by groundwater include the federally endangered steelhead; southwestern pond turtle (*Actinemys pallida*), a CDFW species of special concern (SSC) and U.S. Forest Service sensitive species; California red-legged frog (*Rana draytonil*), a CDFW SSC and ESA-listed species; western spadefoot toad (*Spea hammondii*), a CDFW SSC and Bureau of Land Management sensitive species; and California tiger salamander (*Ambystoma californiense*), an ESA-listed and California Endangered Species Act (CESA)-listed species. Some of the special-status species in the SYR watershed that rely on surface water supported and supplemented by groundwater include the federally endangered steelhead; southwestern pond turtle (*Actinemys pallida*), a CDFW species of special concern (SSC) and U.S. Forest Service sensitive species; California red-legged frog (*Rana draytonil*), a CDFW SSC and ESA-listed species; western spadefoot toad (*Spea hammondii*), a CDFW SSC and Bureau of Land

Management sensitive species; and California tiger salamander (*Ambystoma californiense*), an ESA-listed and California Endangered Species Act (CESA)-listed species.

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 red-legged 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 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.

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 WMA 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 WMA.

**Recommendation #7:** CDFW highly recommends the WMA-GSA map out locations where there are interconnected surface waters and document aquatic habitats and other GDEs as required under SGMA. The WMA-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 WMA.

**Comment #8: Draft GSP vs. Final GSP**

**Issue:** The GSA may need to revise the GSP before it is finalized an adopted by the GSA.

**Recommendation #8:** CDFW recommends the WMA-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.

**CONCLUSION**

CDFW has significant concerns about ISWs for the SYR, and its tributaries, and surface water and the SYR alluvium, interconnected surface water for tributaries to the SYR, cannabis cultivation into the future and CDFW urges the WMA-GSA to plan for and engage in responsible groundwater management that minimizes or avoids these impacts to the maximum extent feasible as required under applicable provisions of SGMA and the Public Trust Doctrine.

In conclusion, the Draft GSP does not comply with all aspects of SGMA statute and regulations, and CDFW deems the Draft GSP inadequate to protect fish and wildlife beneficial users of groundwater for the following reasons:

1. The assumptions, criteria, findings, and objectives, including the sustainability goal, undesirable results, minimum thresholds, measurable objectives, and interim milestones are not reasonable and/or not supported by the best available information and best available science. [CCR § 355.4(b)(1)] (See Comments # 1, 2, 3, and 5);

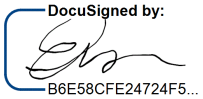
2. The Draft GSP does not identify reasonable measures and schedules to eliminate data gaps. [CCR § 355.4(b)(2)] (See Comments # 1, 2, 3 and 4);

3. The sustainable management criteria and projects and management actions are not commensurate with the level of understanding of the basin setting, based on the level of uncertainty, as reflected in the Draft GSP. [CCR § 355.4(b)(3)] (See Comments # 2, 3, 4, 5 and 6);

4. The interests of the beneficial uses that are potentially affected by the use of groundwater in the basin, have not been considered. [CCR § 355.4(b)(4)] (See #6 and 7).

CDFW appreciates the opportunity to provide comments. Additionally, we appreciate WMA-GSA continued coordination with CDFW while WMA-GSA develops a final GSP. If you have any questions or comments regarding this letter, please contact Steve Slack, Environmental Scientist, at Steven.Slack@wildlife.ca.gov.

Sincerely,

DocuSigned by:

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Erinn Wilson-Olgin
Environmental Program Manager I
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Enclosures (Literature Cited)

ec: California Department of Fish and Wildlife

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