

March 30, 2016

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Ms. Bisnett:

Thank you for the opportunity to comment on the Draft Groundwater Sustainability Plan Emergency Regulations released by the Department of Water Resources (DWR) on February 18, 2016. We write today to request and recommend that you consider the following comments regarding the regulations.

In general, Camrosa Water District believes that the draft regulations are too expansive, overly prescriptive, and would likely result in burdensome and unnecessary costs for local Groundwater Sustainability Agencies (Agencies). The preliminary summary of the SGMA Draft Emergency Regulations for Groundwater Sustainability Plans (Plans) and Alternatives states that “the draft regulations preserve the role of local agencies in managing their basins and achieving sustainability,” but the prescriptiveness of the regulations themselves belie this assertion.

The attached pages provide detailed comments and line edits to the draft emergency regulations, but in general our comments reflect the following:

- Camrosa supports the concept of “substantial compliance” proposed by DWR in the regulations, but as written the requirements are onerous and may not be applicable or necessary depending on the unique characteristics of the basin. In order to mitigate the onerous nature of the regulatory requirements, substantial compliance must be highlighted and clarified. As each high- and medium-priority basin has its own unique characteristics, not all of the substantial compliance standards may be applicable or necessary.
- The regulations seem to presume that groundwater basins are not operating sustainably; for those high- and medium-priority basins impacted by quality concerns rather than overdraft, this is not necessarily the case. Rendering currently functional management measures obsolete—by such requirements as the exclusive use of DWR water budget data, for example—not only does a disservice to responsible groundwater stewards, but is also inefficient and wasteful. The draft regulations should be uniformly revised to generally defer to the judgment and expertise of local Agencies, which will rely on local geologists, engineers, scientists, and stakeholders to develop Plans and alternative plans to demonstrate sustainability. DWR should demonstrate trust in local agencies by applying more stringent and prescriptive requirements only when an Agency has not made good faith efforts.

- The draft regulations create requirements that go far beyond what was envisioned in the Sustainable Groundwater Management Act: they push toward the idea of one Plan per basin, which was very specifically not included in the SGMA statute; require a more centralized “coordinating” or “submitting” agency for inter- and intrabasin coordination than was originally envisioned; require agencies to use only the water budget data provided by DWR; and seem to require BMPs developed by the Department, or local equivalents, when the statute was very clear that BMPs were not intended to be imposed as regulatory standards, but rather as alternative methods to be selected and used at the discretion of each Agency. DWR should clearly identify the purpose and need for any element of Plan content that exceeds the strict reading of the statute.
- The draft regulations should clarify that DWR’s evaluation and approval will be solely based on meeting locally driven sustainability criteria, as opposed to DWR’s preferred criteria. This extends to the kind and quantity of data the regulations require. For instance, the draft regulations prescribe using NAVD88 datum, which would require many Agencies to run expensive reference-point elevation surveys even when the sustainability goals can be achieved in a basin by using existing datum. The Agency should be able to evaluate and report representative data.
- Requirements for “contingency projects and actions” proposed in the draft regulations are unnecessary, set the tone for presumed failure, and will be unworkable in many cases. Agencies must be allowed to modify and adapt projects based on local conditions and needs.
- SGMA does not require or suggest DWR involvement in determining or remedying whether a Plan adversely affects an adjacent basin. The draft regulations need to conform to a statutory framework that defers resolution of “adverse effect” between basins to the responsible Agencies.

Thank you again for the opportunity to comment. I’m happy to have any questions you, the Board, or staff might have about these comments.

Sincerely,

A handwritten signature in black ink that reads "Tony Stafford". The signature is written in a cursive, flowing style.

Tony Stafford, General Manager

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**Camrosa Water District Comments
on SGMA Draft Emergency Regulations
for Groundwater Sustainability Plans and Alternatives
released February 18, 2016**

- P. 1, Section 350.2 (a): This section requires the Plan to achieve sustainability within 20 years of implementation without adversely affecting the ability of an adjacent basin to implement their Plan or achieve sustainability goal. How is this determined, other than protest (or silence) by the adjacent basin or public comments? How is it adjudicated in the event of disagreement of the basin parties? Section 355.10 on page 44 delegates the responsibility for disputes to a Coordinating Agency; is the Coordinating Agency different from the "Submitting Agency" referenced in Section 357.4(b) on page 52? If so, please differentiate, and define Submitting Agency in Section 351.
- P. 4, Item (k): The definition of groundwater flow includes "volume." Groundwater flow is simply groundwater movement in response to a hydraulic gradient, while volume is typically associated with a specific component of groundwater flow. So the department seems to be creating a new definition.
- P. 7, Section 352.4 (c): This is contradictory to 352.4 (a), which allows the Agency to adopt its own best management practices *or* the Department's BMPs. Section (c) indicates that the Agency "shall" amend its BMPs if DWR modifies its BMPs, and not until the next five-year review, which implies that all Agencies are required to amend their plans as a result of DWR modifying its BMPs. Item (c) should recognize that an Agency may adopt their own BMPs, as allowed under 352.4 (a), and not be subject to the modifications adopted by the Department, if that is the intent.
- P. 7, Section 352.6 (a) (1): We assume that cumulative volumes reported for water budget components, for monthly, annual or multiple-year periods, shall be reported in acre feet, but that flow rates such as pumping and streamflow may be described and presented in gallons per minute (gpm) and cubic feet per second (cfs), respectively, as these are customary flow rates.
- P. 8, Section 352.6 (b) (3): There are many wells constructed prior to DWR Bulletin 74-90 that may be useful for monitoring groundwater levels and groundwater quality, and such wells should not be excluded as monitoring features of a Plan. It may be appropriate to state a preference for wells that are constructed in accordance with standards given in DWR Bulletin 74-90 and as amended, but it should not exclude these other wells from use. For example, there are many cable tool completed wells still in use today that provide valuable information for monitoring a groundwater basin's conditions.
- P. 9, Section 352.6 (b) (4): This requirement is overly prescriptive and not necessary in all circumstances. See previous comment. The "qualified personnel" mentioned in Section 354.12 should be allowed to determine if the well being used for monitoring meets the needs of the monitoring program.
- P. 9, Section 352.6 (c) (1): Submittal of electronic information is overkill, duplicative and overly onerous. Submittal of the Plan in PDF format should be sufficient.

- P. 9, 352.6 (d) (1): Submittal of electronic hydrographs is overkill, duplicative and overly onerous. Submittal of the Plan in PDF format, which contains the hydrographs, should be sufficient.
- P. 10, Section 352.6(f): Section 355.12, referenced in this section, does not exist. It should reference 355.10.
- P. 11, Section 353.2 (a): We would discourage the use of forms for submittal of Plans, as hydrogeology, basins operations, and water types and uses are highly variable. We would prefer that the Department develop guidelines for the types of information desired and let each Agency address these guidelines most efficiently for its unique situation.
- P. 11, Section 353.4 (b): We assume that the “qualified personnel” referenced in the certification statement are those same personnel listed in Section 354.12. Please confirm. “Qualified Personnel” should be defined.
- P. 13, Section 353.8 (c) (3): This section should require that any technical comments be identified as such and that those comments be provided by qualified personnel as listed in Section 354.12. While it is the public’s right to comment, comments of a technical nature should come from qualified persons. Public comments that are opinions or beliefs should be labeled as such to differentiate them from technical comments submitted by qualified persons.
- P. 13, Section 353.8 (f): The Agency should not be required to respond to comments of a technical nature that are submitted by the public and provided by a non-qualified person.
- P. 16, Section 354.8 (g) (3): This item should be removed from the requirement. Conducting such assessments of “proposed land use activities” is speculative at best until a proposed specific land use is moved forward through an entitlement process. The entitlement process will include a comprehensive assessment of environmental impacts, including impacts on groundwater quality and quantity, e.g., through the California Environmental Quality Act (CEQA) process. This item is overreaching and overly onerous to the Agency. The Agency, and other parties interested in groundwater, will have the opportunity to weigh in on proposed specific land uses as they are entitled.
- P. 17, Section 354.8 (g) (4): This item is overly onerous and overreaching and should be removed from the requirement. The Agency may identify the groundwater supply available, but it is beyond the Agency’s reach to make a determination about land use. It is up to the land use planning agencies, such as cities and counties to determine land use. It may be appropriate for the Agency to coordinate and communicate with local land use agencies, but it is not appropriate for Agencies to make determinations of land use.
- P. 17, Section 354.8 (g) (5): This item should be removed from the requirement. See previous comment. This item is even more overreaching as it may call for an Agency to make assessments of land use plans outside of their jurisdictions.

- P. 17, Section 354.8 (g) (7): This item should be removed from the requirement. See previous three comments, especially the comment regarding page 16, Section 354.8 (g) (3).
- P. 17, Section 354.8 (g) (8): This item should be removed from the requirement. See previous four comments, especially comments regarding page 16, Section 354.8 (g) (3) and page 17, Section 354.8 (g) (5).
- P. 18, Section 354.12: We recommend that the Department add the following words to the end of the last sentence of this section: “with demonstrated experience in water resources management.”
- P. 19, Section 354.14 (a) (3): Use of the word “definable” is too strong; perhaps replace with “customary or generally accepted.”
- P. 19, Section 354.14 (c) (1): What is considered “another qualified” source? Please provide examples and/or basis for determining qualified sources.
- P. 20, Section 354.14 (c) (2): What constitutes a “qualified” map? Please provide examples and/or basis for determining qualified maps.
- P. 20, Section 354.14 (c) (6): This item is out of place in this list of elements, as “source location, distribution system, and point of diversion for imported water supplies” are not related to hydrogeology. Perhaps move this to the Water Budget discussion in Section 354.18
- P. 20, Section 354.16 (a) (1): DWR should provide guidance on what is an acceptable date range for “current.” We suggest that this range be within five years of submittal of the Plan.
- P. 20, Section 354.16 (a) (2): DWR should recognize that “long-term” will be interpreted differently in different basins. Perhaps it is more practical to request hydrographs based on available groundwater-level data.
- P. 20, Section 354.16 (b): It is not clear if the DWR intends this storage data to be different than 354.18 (a) (5) and (6). If this is a redundant request, it should be removed.
- P. 21, Section 354.16 (c): “Seawater intrusion front” is not defined. We assume that the Department is leaving it up to the local Agency to provide a definition of what they consider to be the “seawater intrusion front,” (which may be a zone as opposed to a distinct line given the complexities of seawater intrusion); if so, the regulations should state this. Perhaps include this intent in Section 351.
- P. 21, Section 354.16 (d) (1): This requirement is overly onerous and redundant to activities of the Regional Water Quality Control Boards, which themselves are challenged to have this level of detail readily available. It would seem appropriate to provide a map or screen shot of the State Water Resources Control Board Geotracker map of contamination sites, but not require the Plan to provide the detailed information as requested under this Item, as Geotracker is accessible to the public.

- P. 21, Section 354.16 (d) (2): This requirement is overly onerous and redundant to activities of the Regional Water Quality Control Boards, which themselves are challenged to have this level of detail readily available. Again, perhaps a map or screenshot of the Geotracker GAMA database is sufficient for purposes of the Plan as Geotracker is accessible to the public.
- P. 21, Section 354.18: We assume that DWR references surface water only to the extent that groundwater and surface are interconnected via the water budget of the groundwater basin. We do not think that it is necessary for a Plan to deal with use of surface waters that are not impacting the groundwater budget or basin quantity and quality conditions. For example, there may be operations of surface water systems (imported water or local surface water systems) that do not contribute to a groundwater basin's water budget, so an Agency should not be required to report on those operations, other than to acknowledge their existence.
- P. 21, Section 354.18 (a) (1): Water from subsidence and injection should be added to the list.
- P. 21, Section 354.18 (a) (2): We suggest replacing the word "demands" with "discharges," which is more common usage.
- P. 22, Section 354.18 (a) (3) and (4): We assume that DWR references surface water only to the extent that groundwater and surface are interconnected via the water budget of the groundwater basin. We do not think that it is necessary for a Plan to deal with use of surface waters that are not impacting the groundwater budget or basin quantity and quality conditions. For example there may be operations of surface water systems (imported water or local surface water systems) that do not contribute to a groundwater basin's water budget, so an Agency should not be required to report on those operations, other than to acknowledge their existence.
- P. 22, Section 354.18 (a) (5): We recommend changing this to annual change in volume of groundwater storage based on the end of the water year, and cumulative change in storage over the previous long-term period, where "long-term" is defined as the period for which change in groundwater storage can be reasonably computed. This may result in giving the seasonal low-storage conditions, but this is more relevant on a long-term basis combined with a tabulation of cumulative changes in groundwater storage. In some basins, the decline in storage during the low-storage condition may, and likely will, be more important to determining compliance with sustainability objectives, e.g., subsidence.

We also recommend that changes in groundwater storage be evaluated based on both 1) the change in groundwater levels between periods (i.e., change in groundwater levels times storativity or specific yield), and 2) basin water budgets (i.e., change in storage = inflows – outflows). Discrepancies will aid in identifying potential data gaps to be addressed in future assessments.

- P. 22, Section 354.18 (b): This section is a noble attempt to provide guidance on developing a water budget for use in assessing groundwater sustainability, but it could be made more clear and complete. Also,

reference to adjudications proceedings and basin management plans would provide roadmaps, through detailed illustrations, of how to prepare water budget.

This section should be organized around the following concepts to be more clear and complete:

1. *Development of a representative period, which can be used to assess basin water budgets and potential yield, that takes into account the following:*
 - a. *Long-term climate variability that include wet and dry cycles: Item 354.18 (b) (2) (B) refers to a minimum of 10 years, and Item 354.18 (b) (3) (A) refers to 50-years, which are too prescriptive and may not be representative time frames. The representative period should be selected by a qualified professional and with documented justification.*
 - b. *Has a mean precipitation that is consistent (the same) as the long-term mean precipitation*
 - c. *Starts and ends with a relatively dry period to avoid water in transit*
 - d. *Land use is relatively constant or can be accounted for in its effects on groundwater recharge and discharge*
 - e. *Surface water bodies' physical characteristics are constant over the period or their effects on groundwater recharge, and discharge can be accounted for in the water budget analysis*
 - f. *Availability of data, i.e., ideally water budget components have been measured or can be reasonably estimated*
2. *Consideration of temporary surplus and groundwater storage capacity that may be available for short-term removal and buffering deficits (i.e., groundwater discharge exceeds groundwater recharge).*
 - a. *Potential temporary surplus groundwater storage that can be removed and put to beneficial use; for example, potential for lowering high groundwater levels that allow for groundwater discharge that is not beneficially used (e.g., groundwater discharge to the ocean, streams or dry lakes where groundwater is lost to evaporation and/or otherwise wasted).*
 - b. *How much storage capacity of the basin can be used to buffer against droughts without causing undesirable results? How low can groundwater levels go throughout the basin or parts of the basin? A large inland groundwater basin is like a large surface reservoir, with a large operational volume, and can buffer against larger droughts than smaller basins. For example, small alluvial basins or coastal basins may not have sufficient usable storage capacity to allow for significant storage depletion during droughts and recovery when wet conditions return (i.e., small basins will fill up quickly and then any available runoff that could recharge the groundwater basin would simply runoff as there would be no room for additional recharge).*
3. *Potential basin yield for current cultural conditions?*
 - a. *Perennial yield – change in storage = 0 over the long term (the representative period), so that inflows and outflows are balanced (even though there may be huge swings in deficits and surpluses year to year). For coastal basins, any inflow from seawater (or sea to landward movement of groundwater) should not be counted as inflow.*
 - b. *Cultural changes over time, and effects on groundwater recharge and discharge, should be accounted for in determining the perennial yield. For example, lining of a stream channel, land use changes, etc. that would reduce groundwater recharge (or discharge) will impact the long-term water budget and this should be included in the assessment of yield.*
 - c. *Changes in basin operations can significantly affect basin yield, both positively and negatively. Some basins are operated within a concept known as Operational Yield, which accounts for availability of supplemental water supplies and management of recharge to and discharges*

from the basin. Changes in basin operations should be accounted for in assessing yield over the representative period.

4. *Undesirable Results: operations of a basin within its perennial yield or operational yield may still lead to undesirable results, depending on specific effects on groundwater levels, which largely control the initiation and ongoing occurrence of undesirable results. For example, seawater intrusion may occur in a basin that is operated within its perennial yield if pumping is concentrated near the coast, creating a hydraulic gradient that is seaward to landward. Another example is where land subsidence develops as a result of heavy pumping and lowering of groundwater levels in a portion of a basin containing significant vertical sections of silt and clay units. Undesirable results are addressed further in Section 354.26.*

We suggest that the Department refer to examples of groundwater budget assessments that could be used to guide Agencies in preparation of groundwater basin water budgets, such as the adjudications of the Santa Maria Groundwater Basin, Seaside Groundwater Basin, Antelope Valley Groundwater Basin and managed basins such as the Orange County Groundwater Basin, Central and West Coast Basin by the Water Replenishment District of Southern California, Cadiz Valley Conservation, Recovery and Storage Project in San Bernardino County, etc.

P. 22, Section 354.18 (b) (3): We suggest that the representative period (i.e., repeat the hydrology into the future for projection purposes) identified in the previous comment be used to project future basin yields and water budgets (but accounting for undesirable effects as described in Section 354.26), giving consideration to uncertainties of these projected water budget components as described in this item. It should be left to the local Agencies to identify uncertainties and how those uncertainties will be addressed. The local land use planning agencies would then need to acknowledge and address these uncertainties in their planning.

P. 23, Section 354.18 (c): It appears that DWR is leaning strongly towards mandating the use of sophisticated groundwater-surface water flow models to assess basin groundwater budgets. There is a statement about “an equally effective method or tool.” Whereas groundwater models can be useful tools, especially in more complex basins, we recommend that DWR provide more flexibility in some basins, as developing and maintaining complex groundwater models can be burdensome and not necessarily any more useful than a critical data analysis.

P. 23, Section 354.18 (d): Item 1 under this Item is not particularly useful and is most apropos to the Central Valley.

Item 2 under this Section is not clear: What current water budget information? At what resolution and frequency? What climate change information will be provided and how is it expected to be used? There are many climate-change emission scenarios and global climate models that project highly different future climate-change conditions. How are Agencies expected to use this information? It should be left up to the local Agencies to determine how the uncertainties of climate change will be addressed in their Plan.

- P. 24, Section 354.18 (g): Please provide the criteria DWR may use in rejecting data or information not provided by the Department that an Agency may use in their assessments. Please clarify that the Department is not intending to be the sole provider of data for use in preparing a Plan.
- P. 27, Section 354.28 (a) (3): This item presumes that sustainability goals have been established in adjacent basins, which may not be the case. In addition, if an adjacent basin is not a high- or medium-priority basin, then they are not necessarily likely to develop a Plan in the foreseeable future. In these cases, it would be speculative at best to discuss how minimum thresholds would affect the ability of those basins to attain sustainability goals. So, perhaps this Item should be revised to encourage high- and medium-priority basins to work together to minimize impacts on each basin's capability to achieve their goals. Is it DWR's intention to adjudicate disputes between basins that may not agree on the impacts of one basin's minimum thresholds on the adjacent basin, or simply disapprove the Plans of each basin and refer them to the State Board?
- P. 27, Section 354.28 (a) (4): It is not clear what DWR is expecting for this item. It is beyond the scope of an Agency to do a cost-benefit analysis for all potential users, including the environment, of groundwater. Perhaps DWR can provide some clarification on this Item, as well as some examples. If DWR simply expects that Agencies to be responsive to stakeholders' interest in groundwater in a basin, then please clarify.
- P. 28, Section 354.28 (b): There should be recognition for optimizing basin management in setting thresholds. For example, it should be acceptable to remove a temporary surplus of groundwater in storage to optimize groundwater recharge and/or reduce groundwater discharge. Examples of a temporary surplus are given in the San Fernando Adjudication in Los Angeles County and Cadiz Valley Conservation Recovery and Storage Project in San Bernardino County, which allows for more optimal groundwater management over the long term. In addition, provision should be made for Agencies to consider "maximum benefit objectives" in setting minimum thresholds relative to critical parameters. For example, maximum-benefit objectives were used in the Chino Basin to optimize use of this groundwater basin in the Santa Ana River Watershed. While it seems that this item provides for flexibility of the Agencies to set minimum thresholds, we think it is important to show examples of this flexibility from other basins.

There is a potential for conflict over the determination of what are potentially significant and adverse impacts resulting from establishment of minimum thresholds, especially for the threshold that may be set regarding the extent to which surface water depletions caused by groundwater are significant and unreasonable. Is it DWR's intent to adjudicate these conflicts, or simply declare a Plan noncompliant and refer it to the State Board? Please explain.

- P. 28, Section 354.28 (e): It would be useful if DWR would provide their expectations as to what type(s) of support they are expecting to demonstrate "clear and convincing evidence."

- P. 30, Section 354.30 (b): DWR should allow more flexibility in setting the measureable objective than provided by this item. For example, there may be multiple ways to avoid dropping below the minimum thresholds that may trigger an undesirable result. For example, it may be that a temporary reduction in pumping, a change in pumping patterns, temporary recharge, etc., might be sufficient to avoid dropping below a minimum threshold. The actions (and certainty of these possible mitigating actions) available to an Agency to control exceeding minimum thresholds should control the setting of measureable objectives, as opposed to just building safety factors into the measureable-objective levels. This concept should be incorporated into setting the measureable objective. Also, see comment on page 37, Section 354.44 (b) below.
- P. 30, Section 354.30 (e): This item presumes that a basin is not operating sustainably, which is not the case in many basins. There should be recognition that this Item is not required for those basins. Agencies will need to monitor to demonstrate *ongoing* sustainability, but will not need interim milestones to *achieve* sustainability.
- P. 32, Section 354.34 (a) (5): This is an overly onerous requirement, and it is overreach for an adjacent Agency to determine the ability of an adjacent basin to meet its sustainability goals. Also, see comments on Section 354.28 (a) (3) on page 27.
- P. 32, Section 354.30 (d) (3): See previous comment.
- P. 33, Section 354.34 (h) (2): We recommend that DWR remove the words “reasonably accurate and detailed,” as this is ambiguous.
- P. 35, Section 354.38 (a): Given that DWR is allowing Agencies to develop Best Management Practices, the Agency’s BMPs should be acknowledged as acceptable, as opposed to only DWR’s BMPs.
- P. 35, Section 354.38 (d): This Item is unnecessary and may trigger increased density and frequency of monitoring that may not be warranted. DWR has the flexibility to request such monitoring be amended into a Plan if it becomes necessary. At a minimum, perhaps change the word “shall” with the following “...will review the adequacy of and may...”
- P. 37, Section 354.44 (b): This section and Section 354.30 (b) (p 30) could be developed synergistically to provide more flexibility to Agencies and potentially eliminate some or all “safety factors” in setting their measureable objectives. For example, an Agency should be allowed to set measurable objectives at the minimum threshold if they have a certain contingency plan that would prevent or immediately mitigate an undesirable result. There we suggest that Section 354.30 (b) be coordinated with this Section 354.44 to allow the Agency flexibility to design a responsible plan that prevents or mitigates undesirable results for their local situation. This approach was used in the Cadiz Valley Conservation, Recovery and Storage Project Groundwater Management, Monitoring and Mitigation Plan in San Bernardino County.

P. 41, Section 355.4 (a) (3): This section states that the plan is inadequate unless it covers the entire basin. This is contradictory to allowing intrabasin plans.

P. 42, Section 355.4(b) (6): With adjacent basins having different timelines for plan development, this requirement for plan evaluation may be hard to determine.

P. 42, Section 355.4(b) (7): This should state “intrabasin coordination agreements,” as Section 357.2 states that two or more agencies “may” enter into interbasin agreements.

[END COMMENTS]