



CALIFORNIA DEPARTMENT OF WATER RESOURCES

# SUSTAINABLE GROUNDWATER MANAGEMENT OFFICE

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June 3, 2021

Mr. Taylor Blakslee  
Cuyama Basin GSA Project Coordinator  
4900 California Avenue, Tower B, 2nd Floor  
Bakersfield, CA. 93309

RE: Cuyama Valley - 2020 Groundwater Sustainability Plan

Dear Taylor Blakslee,

The Cuyama Basin Groundwater Sustainability Agency (GSA) submitted the Cuyama Valley Groundwater Basin (Basin) Groundwater Sustainability Plan (GSP) to the Department of Water Resources (Department) for evaluation and assessment as required by the Sustainable Groundwater Management Act (SGMA).<sup>1</sup> This letter is intended to initiate consultation between the Department and the GSA in advance of issuance of a determination described under the GSP Regulations.<sup>2</sup>

Department staff recognize the significant effort that went into development of the first GSP for the Basin and believe the aggressive approach toward demand management is a significant step toward achieving groundwater sustainability for the Basin.

Department staff have completed an initial review of the GSP and have identified deficiencies which may preclude the Department's approval.<sup>3</sup> Consistent with the GSP Regulations, Department staff are considering corrective actions<sup>4</sup> that the GSA should review to determine whether and how the deficiencies can be addressed. The deficiencies and corrective actions are generally related to the need to define sustainable management criteria in the manner required by SGMA and the GSP Regulations, further address water quality, and better explain how overdraft will be mitigated.

The Department has the authority to determine the GSP is incomplete and, if it does so, the deficiencies precluding approval will need to be addressed within a period of time not to exceed 180 days from the determination, which would be issued no later than January 28, 2022. Prior to making that determination, and after you review the contents of this letter, Department staff will contact you to discuss the deficiencies and consult

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<sup>1</sup> Water Code § 10720 *et seq.*

<sup>2</sup> 23 CCR Division 2, Chapter 1.5, Subchapter 2.

<sup>3</sup> 23 CCR § 355.2(e)(2).

<sup>4</sup> 23 CCR § 355.2(e)(2)(B).

with you regarding the amount of time needed by the GSA to address the potential corrective actions detailed in Attachment 1.

If you have any questions, please don't hesitate to contact the Sustainable Groundwater Management Office staff by emailing [sgmps@water.ca.gov](mailto:sgmps@water.ca.gov).

Thank you,

A handwritten signature in black ink, appearing to read "Craig Altare". The signature is fluid and cursive, with the first name "Craig" being more prominent than the last name "Altare".

Craig Altare, P.G.  
Supervising Engineering Geologist  
Groundwater Sustainability Plan Review Section Chief

Attachment:

1. Potential Corrective Actions

## Potential Corrective Actions

Department staff have identified deficiencies in the GSP which may preclude the Department's approval. Consistent with the GSP Regulations, Department staff are considering corrective actions that the GSA should review to determine how the deficiencies can be addressed. The deficiencies and corrective actions are explained below, including an explanation of the general regulatory background, the specific deficiency identified in the GSP, and the specific actions to address the deficiency. The specific actions identified are potential corrective actions until a final determination is made by the Department.

### **Potential Corrective Action 1. Provide justification for, and effects associated with, the sustainable management criteria**

The first potential corrective action relates to the GSP's lack of justification for the established sustainable management criteria and the effects of those criteria on the interests of beneficial uses and users in the Basin.

#### **Background**

The Department's GSP Regulations collect several required elements of a GSP under the heading of "Sustainable Management Criteria," including undesirable results along with the sustainability goal, minimum thresholds, and measurable objectives. Except for the sustainability goal, the components of sustainable management criteria must be quantified so that progress towards sustainability can be monitored and evaluated consistently and objectively.

A GSA relies on, among other factors, local experience, public outreach and involvement, and information about the basin it has described in its basin setting—the hydrogeologic conceptual model, the description of current and historical groundwater conditions, and the water budget—to develop criteria for defining undesirable results and setting minimum thresholds and measurable objectives.<sup>5</sup>

SGMA defines sustainable groundwater management as the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.<sup>6</sup> The avoidance of undesirable results is thus explicitly part of sustainable groundwater management as established by SGMA and critical to the success of a GSP. Accordingly, managing a basin solely to eliminate overdraft within 20 years does not necessarily mean that GSAs in the basin have done

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<sup>5</sup> Best Management Practices for the Sustainable Management of Groundwater: Sustainable Management Criteria (DRAFT). California Department of Water Resources, November 2017, [https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-6-Sustainable-Management-Criteria-DRAFT\\_ay\\_19.pdf](https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-6-Sustainable-Management-Criteria-DRAFT_ay_19.pdf).

<sup>6</sup> Water Code § 10721(v).

all that is required to achieve sustainable groundwater management. To achieve sustainable groundwater management under SGMA, the basin must experience no undesirable results by the end of the 20-year GSP implementation period and be able to demonstrate an ability to maintain those defined sustainable conditions over the 50-year planning and implementation horizon.

The definition of undesirable results is thus critical to the establishment of an objective method to define and measure sustainability for a basin. As an initial matter, SGMA provides a qualitative definition of undesirable results as “one or more” of six specific “effects caused by groundwater conditions occurring throughout the basin.”<sup>7</sup>

It is up to GSAs to define in their GSPs the specific significant and unreasonable effects that would constitute undesirable results and to define the groundwater conditions that would produce those results in their basins.<sup>8</sup> The GSA’s definition needs to include a description of the processes and criteria relied upon to define undesirable results and must describe the effect of undesirable results on the beneficial uses and users of groundwater. From this definition, the GSA establishes minimum thresholds, which are quantitative values that represent groundwater conditions at representative monitoring sites that, when exceeded individually or in combination with minimum thresholds at other monitoring sites, may cause the basin to experience undesirable results.<sup>9</sup>

SGMA leaves the task of establishing undesirable results and setting thresholds largely to the discretion of the GSA, subject to review by the Department. In its review, the Department requires a thorough and reasonable analysis of the groundwater conditions the GSA is trying to avoid, and the GSA’s stated rationale for setting objective and quantitative sustainable management criteria to prevent those conditions from occurring. If a Plan does not meet this requirement, the Department is unable to evaluate the likelihood of the Plan in achieving its sustainability goal. This does not necessarily mean that the GSP or its objectives are inherently unreasonable; however, it is unclear which conditions the GSA seeks to avoid, making it difficult for the Department to monitor whether the GSA will be successful in that effort when implementing its GSP.

### **GSP-Specific Deficiency**

Based on its initial review, Department staff are concerned that although the GSP appears to realistically quantify the water budget and identify the extent of overdraft in the Basin, and while the GSP proposes projects and management actions that appear likely to eventually eliminate overdraft in portions of the Basin, the GSP has not defined

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<sup>7</sup> Water Code § 10721(x).

<sup>8</sup> 23 CCR § 354.26.

<sup>9</sup> 23 CCR § 354.28, Best Management Practices for the Sustainable Management of Groundwater: Sustainable Management Criteria (DRAFT). California Department of Water Resources, November 2017, [https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-6-Sustainable-Management-Criteria-DRAFT\\_ay\\_19.pdf](https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-6-Sustainable-Management-Criteria-DRAFT_ay_19.pdf).

sustainable management criteria in the manner required by SGMA and the GSP Regulations.

### *Undesirable Results*

The GSP provides quantitative values for the minimum thresholds and includes a combination of those minimum threshold exceedances that the GSA considers causing an undesirable result. However, the GSP does not discuss, or appear to address, the critical first step of identifying the specific significant and unreasonable effects that would constitute undesirable results. The GSP provides general statements about undesirable results (e.g., “The Undesirable Result for the chronic lowering of groundwater levels is a result that causes significant and unreasonable reduction in the long-term viability of domestic, agricultural, municipal, or environmental uses over the planning and implementation horizon of this GSP.”<sup>10</sup>) and generic descriptions of the effects of undesirable results (e.g., “...the Undesirable Results could cause potential de-watering of existing groundwater infrastructure, starting with the shallowest wells...”<sup>11</sup>), but does not provide an explanation for the specific significant and unreasonable condition(s) that the GSA intends to avoid in the Basin through implementation of the GSP (e.g., a level of impact to well infrastructure or to environmental uses).

The GSP states undesirable results for chronic lowering of groundwater levels would occur when groundwater level minimum thresholds are exceeded in 30 percent of monitoring wells for two consecutive years. (The same 30 percent for two consecutive years criterion is used for reduction in storage, degradation of groundwater quality, land subsidence, and depletion of interconnected surface water.) However, the GSP does not provide any explanation for why the criterion is consistent with avoiding significant and unreasonable effects that constitute undesirable results.

### *Minimum Thresholds.*

The GSP lacks explanation of the justification for setting its minimum thresholds and also lacks explanation of the anticipated effects of groundwater conditions at those thresholds on the interests of the beneficial uses and users of groundwater in nearly all threshold regions. The GSP describes that each threshold region has its own formula to determine the quantitative minimum threshold (e.g., in the Central threshold region it is determined by subtracting 20 percent of the historical range in groundwater levels from the groundwater level observed in early 2015). While it is acceptable to set minimum thresholds differently in portions of a basin, all minimum thresholds must, by the definition of that term in the GSP Regulations, relate to the conditions that could cause undesirable results.

This lack of information is particularly notable in the Northwestern threshold region. The GSP states that the intention of the sustainable management criteria for the Northwestern

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<sup>10</sup> Cuyama Basin GSP, Section 3.2.1, p. 260.

<sup>11</sup> *Ibid.*

region is to “...protect the water levels from declining significantly, while allowing beneficial land surface uses (including domestic and agricultural uses) and using the storage capacity of this region.”<sup>12</sup> However, the Northwestern region is the only region in the Basin where the sustainable management criteria indicate a plan to substantially lower groundwater levels, relative to conditions at the time of GSP preparation (i.e., the minimum thresholds for groundwater levels are up to 140 to 160 feet lower<sup>13</sup>), in an area with the highest concentration of potential GDEs<sup>14</sup> in Cuyama Valley and with interconnected surface water, which is evidenced by a gaining reach of the river.<sup>15</sup> The GSP did not quantify the expected depletions of surface water over time or assess or disclose the anticipated effects of the established minimum thresholds on beneficial uses and users of groundwater, which, based on Department staff’s review, appear to include nearby domestic users, potential GDEs, and users of the interconnected surface water.

The absence of this information and related discussion precludes meaningful disclosure to, and participation by, interested parties and residents in the Basin. In addition, without this discussion it is difficult for Department staff to determine whether it is appropriate or reasonable for the GSA to conclude that undesirable results in the Basin would not occur unless nearly a third of representative monitoring points exceed their minimum thresholds for two consecutive years.

### **Addressing the Deficiency**

The GSA must provide more detailed information, as required in the GSP Regulations, regarding undesirable results and minimum thresholds for all applicable threshold regions.<sup>16</sup> The GSA should describe the anticipated effects of the established minimum thresholds and undesirable results on the interests of beneficial uses and users and how the GSA determined that those thresholds would avoid undesirable results in the Basin. Department staff suggest that the following issues be considered and addressed:

1. The GSA should describe the specific undesirable results they aim to avoid through implementing the GSP. For example, if the long-term viability of domestic, agricultural, municipal, or environmental uses is a concern with respect to lowering of groundwater levels, then the GSA should describe the specific effects on those users that the GSA considers significant and unreasonable and define groundwater conditions that would lead to those effects. Clarify how the criteria defining when undesirable results occur in the Basin (i.e., 30 percent exceedance of minimum thresholds for two consecutive years) was established, the rationale

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<sup>12</sup> Cuyama Basin GSP, Section 5.2.2, p. 352.

<sup>13</sup> Cuyama Basin GSP, Chapter 5 Appendix A, p. 1505-1509.

<sup>14</sup> Cuyama Basin GSP, Section 2.2.9, p. 227, Figures 2-63 and 2-64, p. 230-231, Chapter 2-Appendix D, p. 1258-1279.

<sup>15</sup> Cuyama Basin GSP, Section 2.2.8, p. 222, Figure 2-61, p. 223.

<sup>16</sup> 23 CCR §§ 354.26, 354.28.

behind the approach, and why it is consistent with avoiding the significant and unreasonable effects identified by the GSA.

2. The GSA should either explain how the existing minimum threshold groundwater levels are consistent with avoiding undesirable results or they should establish minimum thresholds at the representative monitoring wells that account for the specific undesirable results the GSA aims to avoid. For each threshold region, the GSA should evaluate and disclose the anticipated effects of the GSP's minimum thresholds and undesirable results on:

- a. Well infrastructure, including domestic wells, community and public water supply wells, and agricultural wells. The GSA may utilize the Department's well completion report dataset<sup>17</sup> or other similar data to estimate the number and kinds of wells expected to be impacted at the minimum thresholds identified in the GSP. Public water system well locations and water quality data can currently be obtained using the State Water Resource Control Board's (State Water Board) Geotracker website.<sup>18</sup> Administrative contact information for public water systems and well locations and contacts for state small water systems and domestic wells can be obtained by contacting the State Water Board's Needs Analysis staff.<sup>19</sup> The State Water Board is currently developing a database to allow for more streamlined access to this data in the future.

If the GSA identifies potential impacts to drinking water wells, including de minimis users and disadvantaged communities, those impacts should be described in the GSP. By the first five-year update, the GSA should inventory and better define the location of active wells in the Basin. The GSA should document known impacts to drinking water users caused by groundwater management, should they occur, in annual reports and subsequent periodic updates.

- b. Environmental uses and users of groundwater. If data are not available to support evaluation of the effects of established minimum thresholds on environmental uses and users, the GSA should clarify the strategy, mechanism, and timeline for acquiring that data and incorporating that data into management of the Basin.<sup>20</sup>

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<sup>17</sup> Well Completion Report Map Application. California Department of Water Resources, <https://www.arcgis.com/apps/webappviewer/index.html?id=181078580a214c0986e2da28f8623b37>.

<sup>18</sup> GeoTracker Application. California State Water Resources Control Board, <https://geotracker.waterboards.ca.gov/map/#>; select "Public Water Wells" under the "Other Sites" option and navigate to the area of interest.

<sup>19</sup> [DDW-SAFER-NAU@Waterboards.ca.gov](mailto:DDW-SAFER-NAU@Waterboards.ca.gov).

<sup>20</sup> 23 CCR §§ 355.4(b)(2), 355.4(b)(3).

## **Potential Corrective Action 2. Use of groundwater levels as a proxy for depletion of interconnected surface water**

The second potential corrective action relates to the GSP's lack of explanation and justification for the use of groundwater levels as a proxy for depletions of interconnected surface water.

### **Background**

The GSP Regulations allow for a GSP to establish representative groundwater level thresholds that serve as minimum thresholds for other sustainability indicators if the GSA can demonstrate the representative groundwater level value is a reasonable proxy, supported by adequate evidence.

### **GSP-Specific Deficiency**

The GSP lacks a demonstration, with supporting evidence, of the reasonableness of using groundwater level thresholds as a proxy for depletion of interconnected surface water. The GSP states that “[b]y setting minimum thresholds on shallow groundwater wells near surface water, the [GSA] can to (*sic*) monitor and manage [the hydraulic gradient between surface water and groundwater], and in turn, manage potential changes in depletions of interconnected surface [water].”<sup>21</sup> However, in defining the groundwater level proxies for depletion of interconnected surface water, the GSA appears to have used all the groundwater level thresholds it defined for chronic lowering of groundwater levels regardless of depth of the well or proximity to surface water. It is not obvious to Department staff why managing the Basin to the complete set of chronic lowering of groundwater level thresholds is sufficient to avoid undesirable results for depletion of interconnected surface water, especially since many of those groundwater level thresholds represent conditions that are lower than current conditions.

### **Addressing the Deficiency**

The GSA should provide a demonstration, with supporting evidence, for why using the basinwide groundwater level minimum thresholds is a reasonable proxy for thresholds for depletion of interconnected surface water.

## **Potential Corrective Action 3. Further address degraded water quality**

The third potential corrective action relates to the GSP's apparent lack of consideration of the best available information and data regarding water quality, and the resultant effects on the GSP's description of water quality conditions, water quality sustainable management criteria, and monitoring for certain water quality constituents.

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<sup>21</sup> Cuyama Basin GSP, Section 3.2.6, p. 263.

## Background

SGMA and the GSP Regulations do not require a GSP to address undesirable results associated with degraded water quality that occurred before, and have not been corrected by, January 1, 2015. However, management of a basin pursuant to an adopted GSP should not result in further water quality degradation that is significant and unreasonable, either due to routine groundwater use or as a result of implementing projects or management actions called for in the GSP.<sup>22</sup> SGMA provides GSAs with legal authority to regulate and affect pumping and groundwater levels, which have the potential to affect the concentration or migration of water quality constituents and result in degradation of water quality. Additionally, the GSP Regulations state that GSAs should consider local, state, and federal water quality standards when establishing sustainable management criteria,<sup>23</sup> and SGMA provides GSAs with the authority to manage and control polluted water and use authorities under existing laws to implement its GSP.<sup>24</sup> Thus, establishing sustainable management criteria and performing routine monitoring of water quality constituents known to affect beneficial uses and users is within the purview of a GSA.

## GSP-Specific Deficiency

Department staff believe the GSA's decision to not set sustainable management criteria for arsenic and nitrates may not be reasonable because the findings were not supported by the best available information.<sup>25</sup> The GSP focused on total dissolved solids (TDS), nitrates, and arsenic as a result of public comments received during GSP development.<sup>26</sup> The GSP includes sustainable management criteria for TDS but, despite acknowledging that nitrate and arsenic have exceeded maximum contaminant levels (MCL) prescribed by the State Water Board, the GSP did not establish sustainable management criteria for those constituents. Furthermore, the GSA does not intend to perform routine monitoring for nitrates and arsenic on the basis that they determined there is no "causal nexus" between the GSA's authority to implement projects and management actions and concentrations of arsenic or nitrate.<sup>27</sup>

In its justification for the lack of sustainable management criteria for nitrates and arsenic, the GSP explains that there were relatively few detections of those constituents above drinking water regulatory limits—two nitrate samples and three arsenic samples.<sup>28</sup> Regarding arsenic, the GSP states that the three arsenic detections above the MCL came

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<sup>22</sup> Water Code § 10721(x)(4); 23 CCR § 354.28(c)(4).

<sup>23</sup> 23 CCR § 354.28(c)(4).

<sup>24</sup> Water Code §§ 10726.2(e), 10726.8(a).

<sup>25</sup> While there is no definition of best available information, the GSP Regulations define best available science as the use of sufficient and credible information and data, specific to the decision being made and the time frame available for making that decision, that is consistent with scientific and engineering professional standards of practice.

<sup>26</sup> Cuyama Basin GSP, Section 2.2.7, p. 208.

<sup>27</sup> Cuyama Basin GSP, Section 4.8, p. 321.

<sup>28</sup> Cuyama Basin GSP, Section 5.5, p. 360-361.

from an inactive well and from groundwater deeper than 700 feet below ground surface, which the GSP states is below the range of pumping depths for drinking water.<sup>29</sup> In other words, the GSP states that arsenic was not detected above MCL in active wells shallower than 700 feet.<sup>30</sup> However, credible public comments submitted to the Department raised concerns about this claim and the data the GSA may or may not have considered, the GSA's interpretation of that data, and the decision of the GSA to not monitor or develop management criteria for those constituents. For example, a comment submitted to the Department indicates the State Water Board's Groundwater Ambient Monitoring and Assessment (GAMA) Program's Groundwater Information System contains records of arsenic concentrations exceeding the MCL in drinking water wells screened as shallow as 340 feet below ground surface.<sup>31</sup> Department staff confirmed that this claim appears to be true.

Regarding nitrates, a public comment submitted to the Department indicates that potentially 13 of 109 nitrate samples (12 percent) have exceeded the MCL in the past ten years,<sup>32</sup> which conflicts with the GSP's statement that only two samples during 2011 to 2018 exceeded the MCL.

### **Addressing the Deficiency**

Having identified them as constituents of concern, the GSA should reasonably and thoroughly address nitrate and arsenic in the GSP using best available information. Specifically, the GSA should consider the following:

1. Groundwater conditions. The Department received comments that raise credible technical issues regarding groundwater quality data that apparently were not considered when developing the GSP but are available to the public and likely, in the opinion of Department staff, to alter the GSA's assessment of the Basin conditions. The GSA should coordinate with interested parties that submitted comments, in particular with the Regional Water Quality Control Board, to obtain best available information regarding basinwide water quality. The GSA should evaluate this data, along with their existing data, and update the description of basinwide water quality in the GSP as appropriate.
2. Sustainable management criteria. After updating the information regarding existing groundwater quality conditions, the GSA should revise its discussion of groundwater quality sustainable management criteria to either include criteria for arsenic and nitrate or provide thorough, evidence-based descriptions for why

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<sup>29</sup> Cuyama Basin GSP, Section 2.2.7 and Section 4.8, p. 209 and 321.

<sup>30</sup> Cuyama Basin GSP, Section 2.2.7, p. 209.

<sup>31</sup> Central Coast Water Board Comments on Final Cuyama Valley Groundwater Sustainability Plan. Central Coast Regional Water Quality Control Board Comment Letter Submitted to the Department, 15 May 2020, <https://sgma.water.ca.gov/portal/service/gspdocument/download/4021>.

<sup>32</sup> *Ibid.*

groundwater management is not likely to cause significant and unreasonable degradation of groundwater by increasing concentrations of those constituents.

3. Monitoring networks. The GSA should appropriately revise its groundwater quality monitoring network based on updates to the GSP noted above. Department staff believe that, at a minimum, the GSA should include monitoring for arsenic and nitrates as they have been identified as constituents of concern and both appear to be relatively widespread. Monitoring will be important for the GSA to assess whether groundwater quality degradation for those constituents is occurring. The GSA may leverage existing programs that collect and disseminate water quality data and information. The GSA should address any data gaps in the groundwater quality monitoring network and provide specific schedules to address those data gaps.

#### **Potential Corrective Action 4. Provide explanation for how overdraft will be mitigated in the basin**

The fourth potential corrective action is related to the lack of a complete discussion of how overdraft will be mitigated in the entire basin through implementation of the GSP.

#### **Background**

GSP Regulations require that a GSP include a description of projects and management actions that the GSA has determined will achieve the sustainability goal for the basin, the timeline of implementation, and the sustainability indicators that are expected to benefit, including the circumstances in which they would be implemented.<sup>33</sup> For basins in overdraft, the description shall include a quantification of demand reduction or other methods for mitigating the overdraft.<sup>34</sup>

#### **GSP-Specific Deficiency**

The GSP identifies two management areas, Central Basin and Ventucopa, as the primary pumping areas in the Cuyama Valley that have the highest water demand. Groundwater levels in the Central Basin management area decline by a modeled 2 to 7.7 feet per year, whereas the Ventucopa management area decline by 2 to 3 feet per year.<sup>35</sup>

To meet the sustainability goal of the Basin, the GSA explains in detail throughout the GSP that a pumping reduction of 50 to 67 percent will be required.<sup>36</sup> Pumping reductions would begin in 2023 and become progressively larger each successive year, with full implementation of the total pumping reduction in 2038.<sup>37</sup>

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<sup>33</sup> 23 CCR § 354.44.

<sup>34</sup> 23 CCR § 354.44(b)(2).

<sup>35</sup> Cuyama Basin GSP, Figure 7-1, p. 387.

<sup>36</sup> Cuyama Basin GSP, Executive Summary and Table 2-7, p. 26 and 254.

<sup>37</sup> Cuyama Basin GSP, Figures ES-15 and 8-1, p. 32 and 419-420.

However, the GSP only intends to implement those pumping reductions in the Central Basin management area and does not explain why pumping reductions will not be implemented in the Ventucopa management area. The GSP executive summary states that “[p]umping reductions are not currently recommended for the Ventucopa Area” and instead recommends “to perform additional monitoring, incorporate new monitoring wells, and further evaluate groundwater conditions in the area over the next two to five years” and that “[o]nce additional data are obtained and evaluated, the need for any reductions in pumping will be determined.”<sup>38</sup> These cited details from the executive summary are the extent of the GSP’s description of the plans for possible demand management in the Ventucopa management area.<sup>39</sup> Lack of detail for this area is concerning because it appears to Department staff as though the GSA’s defined minimum thresholds, which should represent a point in the Basin that, if exceeded, may cause undesirable results<sup>40</sup>, in the Ventucopa management area could be exceeded in as soon as two years if two feet per year of groundwater level decline continues.<sup>41</sup> It is also concerning because the GSP explains that “[d]omestic water users in [the Ventucopa and Central Basin management areas] are experiencing water supply challenges, and in the 2012-2016 drought experienced well failures.”<sup>42</sup>

In addition to the Ventucopa Area, the GSP also does not discuss why projects and management actions were not considered in the Northwestern threshold region, where, as noted above in Potential Corrective Action 1, it appears that overdraft will occur for some time and the allowable groundwater-level decline is over 100 feet.

### **Addressing the Deficiency**

The GSA should explain the rationale for not implementing pumping reductions in the overdrafted Ventucopa management area or any other portion of the Basin where overdraft is expected to continue, and explain the timeline and criteria that may be used to determine whether future pumping reduction allocations are needed.<sup>43</sup> If the criteria to implement pumping reductions are related to the effects on beneficial uses and users, as mentioned in Potential Corrective Action 1, the GSP should clarify what those effects are that would necessitate pumping reductions.

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<sup>38</sup> Cuyama Basin GSP, Executive Summary, p. 32.

<sup>39</sup> Cuyama Basin GSP, Executive Summary and Section 7.3.2, p. 32 and 410.

<sup>40</sup> 23 CCR § 354.28(a).

<sup>41</sup> Maps in the GSP appear to indicate two representative monitoring wells are located in the Ventucopa Management Area, OPTI wells 62 and 101. The minimum threshold at OPTI Well 62 is 182 feet below ground surface and the water level as of December 2020 was 158.4 feet below ground surface; at two feet per year the minimum threshold will be exceeded in approximately 12 years. The minimum threshold at OPTI Well 101 is 111 feet below ground surface and the water level as of December 2020 was 108.6 feet below ground surface; at two feet per year the minimum threshold could be exceeded in approximately 2 years.

<sup>42</sup> Cuyama Basin GSP, Section 7.2.4, p. 405.

<sup>43</sup> 23 CCR §§ 355.4(b)(3), 355.4(b)(4), 355.4(b)(5), 355.4(b)(6).

The GSP states well failures occurred during the 2012-2016 drought. The GSP also projects a lowering of groundwater levels beyond those observed during the drought and below 2015 conditions. If, after considering this deficiency and the deficiency associated with Potential Corrective Action 1, the GSA retains minimum thresholds that allow for continued lowering of groundwater levels, then it is reasonable to assume that additional wells may be impacted during implementation of the Plan. While SGMA does not require all impacts to groundwater uses and users be mitigated, the GSA should consider including mitigation strategies describing how drinking water impacts that may occur due to continued overdraft during the period between the start of GSP implementation and achievement of the sustainability goal will be addressed. If mitigation strategies are not included, the GSP should contain a thorough discussion, with supporting facts and rationale, explaining how and why the GSA determined not to include specific actions to mitigate drinking water impacts from continued groundwater lowering below 2015 levels.