



CALIFORNIA DEPARTMENT OF WATER RESOURCES

# SUSTAINABLE GROUNDWATER MANAGEMENT OFFICE

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October 26, 2023

John Mundy  
Ojai Basin Groundwater Management Agency  
P.O. Box 1779  
Ojai, CA 93024  
[jm35inf@gmail.com](mailto:jm35inf@gmail.com)

RE: Ojai Valley Basin - 2022 Groundwater Sustainability Plan

Dear John Mundy,

The Department of Water Resources (Department) has evaluated the groundwater sustainability plan (GSP or Plan) submitted for the Ojai Valley Basin and has determined the GSP is approved. The approval is based on recommendations from the Staff Report, included as an exhibit to the attached Statement of Findings, which describes that the Ojai Valley Groundwater Basin GSP satisfies the objectives of the Sustainable Groundwater Management Act (SGMA) and substantially complies with the GSP Regulations. The Staff Report also proposes recommended corrective actions that the Department believes will enhance the GSP and facilitate future evaluation by the Department. The Department strongly encourages the recommended corrective actions be given due consideration and suggests incorporating all resulting changes to the GSP in future updates.

Recognizing SGMA sets a long-term horizon for groundwater sustainability agencies (GSAs) to achieve their basin sustainability goals, monitoring progress is fundamental for successful implementation. GSAs are required to evaluate their GSPs at least every five years and whenever the Plan is amended, and to provide a written assessment to the Department. Accordingly, the Department will evaluate approved GSPs and issue an assessment at least every five years. The Department will initiate the first periodic review of the Ojai Valley Groundwater Basin GSP no later than January 31, 2027.

Please contact Sustainable Groundwater Management staff by emailing [sgmps@water.ca.gov](mailto:sgmps@water.ca.gov) if you have any questions related to the Department's assessment or implementation of your GSP.

Thank You,

*Paul Gosselin*  
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Paul Gosselin  
Deputy Director  
Sustainable Groundwater Management

Attachment:

1. Statement of Findings Regarding the Approval of the Ojai Valley Basin Groundwater Sustainability Plan

**STATE OF CALIFORNIA  
DEPARTMENT OF WATER RESOURCES**

**STATEMENT OF FINDINGS REGARDING THE  
APPROVAL OF THE  
OJAI VALLEY BASIN GROUNDWATER SUSTAINABILITY PLAN**

The Department of Water Resources (Department) is required to evaluate whether a submitted groundwater sustainability plan (GSP or Plan) conforms to specific requirements of the Sustainable Groundwater Management Act (SGMA or Act), is likely to achieve the sustainability goal for the basin covered by the Plan, and whether the Plan adversely affects the ability of an adjacent basin to implement its GSP or impedes achievement of sustainability goals in an adjacent basin. (Water Code § 10733.) The Department is directed to issue an assessment of the Plan within two years of its submission. (Water Code § 10733.4.) This Statement of Findings explains the Department's decision regarding the Plan submitted by the Ojai Basin Groundwater Management Agency Groundwater Sustainability Agency (GSA or Agency) for the Ojai Valley Basin (Basin No. 4-002).

Department management has discussed the Plan with staff and has reviewed the Department Staff Report, entitled Sustainable Groundwater Management Program Groundwater Sustainability Plan Assessment Staff Report, attached as Exhibit A, recommending approval of the GSP and providing recommended corrective actions. Department management is satisfied that staff have conducted a thorough evaluation and assessment of the Plan and concurs with staff's recommendation and all the recommended corrective actions. The Department therefore **APPROVES** the Plan and makes the following findings:

- A. The Plan satisfies the required conditions as outlined in § 355.4(a) of the GSP Regulations (23 CCR § 350 et seq.):
  1. The Plan was submitted within the statutory deadline of January 31, 2022. (Water Code § 10720.7(a); 23 CCR § 355.4(a)(1).)
  2. The Plan was complete, meaning it generally appeared to include the information required by the Act and the GSP Regulations sufficient to warrant a thorough evaluation and issuance of an assessment by the Department. (23 CCR § 355.4(a)(2).)
  3. The Plan, either on its own or in coordination with other Plans, covers the entire Basin. (23 CCR § 355.4(a)(3).)
- B. The general standards the Department applied in its evaluation and assessment of the Plan are: (1) "conformance" with the specified statutory requirements, (2) "substantial compliance" with the GSP Regulations, (3) whether the Plan is likely

to achieve the sustainability goal for the Basin within 20 years of the implementation of the Plan, and (4) whether the Plan adversely affects the ability of an adjacent basin to implement its GSP or impedes achievement of sustainability goals in an adjacent basin. (Water Code § 10733.) Application of these standards requires exercise of the Department's expertise, judgment, and discretion when making its determination of whether a Plan should be deemed "approved," "incomplete," or "inadequate."

The statutes and GSP Regulations require Plans to include and address a multitude and wide range of informational and technical components. The Department has observed a diverse array of approaches to addressing these technical and informational components being used by GSAs in different basins throughout the state. The Department does not apply a set formula or criterion that would require a particular outcome based on how a Plan addresses any one of SGMA's numerous informational and technical components. The Department finds that affording flexibility and discretion to local GSAs is consistent with the standards identified above; the state policy that sustainable groundwater management is best achieved locally through the development, implementation, and updating of local plans and programs (Water Code § 113); and the Legislature's express intent under SGMA that groundwater basins be managed through the actions of local governmental agencies to the greatest extent feasible, while minimizing state intervention to only when necessary to ensure that local agencies manage groundwater in a sustainable manner. (Water Code § 10720.1(h)) The Department's final determination is made based on the entirety of the Plan's contents on a case-by-case basis, considering and weighing factors relevant to the particular Plan and Basin under review.

- C. In making these findings and Plan determination, the Department also recognized that: (1) the Department maintains continuing oversight and jurisdiction to ensure the Plan is adequately implemented; (2) the Legislature intended SGMA to be implemented over many years; (3) SGMA provides Plans 20 years of implementation to achieve the sustainability goal in a Basin (with the possibility that the Department may grant GSAs an additional five years upon request if the GSA has made satisfactory progress toward sustainability); and, (4) local agencies acting as GSAs are authorized, but not required, to address undesirable results that occurred prior to enactment of SGMA. (Water Code §§ 10721(r); 10727.2(b); 10733(a); 10733.8.)
- D. The Plan conforms with Water Code §§ 10727.2 and 10727.4, substantially complies with 23 CCR § 355.4, and appears likely to achieve the sustainability goal for the Basin. It does not appear at this time that the Plan will adversely affect the ability of adjacent basins to implement their GSPs or impede achievement of sustainability goals.

1. The sustainable management criteria, which are to maintain groundwater levels near historical lows are explained. The Plan relies on credible information and science to quantify groundwater conditions, discusses current limitations in understanding basin properties and dynamics, and identifies plans and projects to fill key data gaps to improve the Agency's understanding of the Basin's hydrogeologic conceptual model, groundwater conditions related to interconnected surface water, and groundwater dependent ecosystems. (23 CCR § 355.4(b)(1).)
2. The Plan demonstrates an understanding of where data gaps exist and commits to addressing them by the next GSP periodic evaluation. The Plan intends to monitor groundwater elevations and groundwater quality in depth-discrete monitoring wells, refine the hydrogeologic conceptual model, monitor stream discharge and stage in surface water bodies, prepare a groundwater dependent ecosystem assessment, as well as refine groundwater modeling by the next GSP periodic evaluation. (23 CCR § 355.4(b)(2).)
3. The projects and management actions proposed are designed to fill data gaps and limit pumping to the historical average level. The projects and management actions are reasonable and commensurate with the level of understanding of the Basin. (23 CCR § 355.4(b)(3).)
4. The Plan considered varied interests of groundwater uses and users in the Basin in developing the sustainable management criteria and how those interests would be impacted by the chosen minimum thresholds. (23 CCR § 355.4(b)(4).)
5. The Plan's projects and management actions appear feasible at this time and capable of preventing undesirable results and ensuring that the Subbasin is operated within its sustainable yield within 20 years. The Department will continue to monitor Plan implementation and reserves the right to change its determination if projects and management actions are not implemented or appear unlikely to prevent undesirable results or achieve sustainability within SGMA timeframes. (23 CCR § 355.4(b)(5).)
6. The Plan includes a reasonable assessment of overdraft conditions and includes reasonable means to mitigate overdraft, if present. (23 CCR § 355.4(b)(6).)
7. At this time, it does not appear that the Plan will adversely affect the ability of an adjacent basin to implement its GSP or impede achievement of sustainability goals in adjacent basins. The Plan identifies interconnected surface water as a data gap, and the GSA plans to fill the data gap in the next periodic evaluation to determine if connection exists between the

principal aquifer of the Ojai Basin and San Antonio Creek, which hydrologically links the Ojai Basin and the adjacent Upper Ventura River Subbasin. (23 CCR § 355.4(b)(7).)

8. Because a single plan was submitted for the Subbasin, a coordination agreement was not required. (23 CCR § 355.4(b)(8).)
9. At this time, it appears the GSA has the legal authority and financial resources necessary to implement the Plan. (23 CCR § 355.4(b)(9).)
10. Through review of the Plan and consideration of public comments, the Department determines that the GSA adequately responded to comments that raised credible technical or policy issues with the Plan, sufficient to warrant approval of the Plan at this time. The Department also notes that the recommended corrective actions included in the Staff Report are important to addressing certain technical or policy issues that were raised and, if not addressed before future, subsequent plan evaluations, may preclude approval of the Plan in those future evaluations. (23 CCR § 355.4(b)(10).)

E. The Department also finds:

1. The Department developed its GSP Regulations consistent with and intending to further the State's human right to water policy through implementation of SGMA and the Regulations, primarily by achieving sustainable groundwater management in a basin. By ensuring substantial compliance with the GSP Regulations, the Department has considered the state policy regarding the human right to water in its evaluation of the Plan. (Water Code § 106.3; 23 CCR § 350.4(g).)
2. The GSP describes the ongoing Ventura River Watershed Adjudication.<sup>1</sup> The GSP discusses an ongoing water rights litigation in the Ventura River Watershed that is unresolved at the time of GSP preparation. Accordingly, nothing in this staff report should or is intended to influence or be used as evidence in the pending adjudication.<sup>2</sup> Regardless of the ongoing adjudication, the GSA is responsible for fulfilling its role to protect beneficial uses and users and may need to take actions in compliance with SGMA.
3. The Plan reasonably acknowledges and identifies interconnected surface water within the Basin in light of current uncertainties and data gaps for an initial GSP. The GSA proposes measures to improve understanding and

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<sup>1</sup> Ojai Valley GSP, Section 2.1.5, pp. 87-89

<sup>2</sup> see also Water Code 10738.

management of interconnected surface water as GSP implementation proceeds. The GSA acknowledges, and the Department agrees, many data gaps related to interconnected surface water exist. The GSA should prioritize filling data gaps, collecting additional monitoring data, and coordinating with resources agencies and interested parties to understand beneficial uses and users that may be impacted by potential depletions of interconnected surface water that may be caused by groundwater pumping in the Basin. Future updates to the Plan should refine or revise the initial sustainable management criteria as more information and improved methodologies become available.

4. Projections of future Basin extractions are likely to stay within current and historic ranges, at least until the next periodic evaluation by the GSA and the Department. Basin groundwater levels and other SGMA sustainability indicators appear unlikely to substantially deteriorate while the GSA implements the Department's recommended corrective actions.
5. The California Environmental Quality Act (Public Resources Code § 21000 *et seq.*) does not apply to the Department's evaluation and assessment of the Plan.

Statement of Findings  
Ojai Valley Basin (No. 4-002)

October 26, 2023

Accordingly, the GSP submitted by the Agency for the Ojai Valley Basin is hereby **APPROVED**. The recommended corrective actions identified in the Staff Report will assist the Department's future review of the Plan's implementation for consistency with SGMA and the Department therefore recommends the Agency address them by the time of the Department's periodic review, which is set to begin on January 31, 2027, as required by Water Code § 10733.8. Failure to implement the recommended corrective actions may result in the Plan or its implementation being found "incomplete" or "inadequate" by the Department in its next periodic review.

Signed:


  
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Karla Nemeth, Director  
Date: October 26, 2023

Exhibit A: Groundwater Sustainability Plan Assessment Staff Report – Ojai Valley Basin



**State of California**  
**Department of Water Resources**  
**Sustainable Groundwater Management Program**  
**Groundwater Sustainability Plan Assessment**  
**Staff Report**

Groundwater Basin Name: Ojai Valley Basin (No. 4-002)  
Submitting Agency: Ojai Basin Groundwater Management Agency Groundwater Sustainability Agency  
Submittal Type: Initial GSP Submission  
Submittal Date: January 31, 2022  
Recommendation: Approved  
Date: October 26, 2023

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The Ojai Basin Groundwater Management Agency Groundwater Sustainability Agency (OBGMA, GSA or Agency) submitted the Ojai Valley Groundwater Basin Groundwater Sustainability Plan (GSP or Plan) for the Ojai Valley Basin (Basin) to the Department of Water Resources (Department) for evaluation and assessment as required by the Sustainable Groundwater Management Act (SGMA)<sup>1</sup> and GSP Regulations.<sup>2</sup> The GSP covers the entire Basin for the implementation of SGMA.

After evaluation and assessment, Department staff conclude that the Plan includes the required components of a GSP, demonstrates a thorough understanding of the Basin based on what appears to be the best available science and information when possible, or, alternatively, candidly identifies and proposes means to address uncertainties and data gaps in understanding of basin conditions and dynamics (e.g., interconnected surface water). The plan also sets well explained, supported, and reasonable sustainable management criteria to prevent undesirable results as defined in the Plan considering the current state of Basin understanding and uncertainty, and proposes a set of projects and management actions that may, if timely and adequately implemented, achieve the sustainability goal defined for the Basin within 20 years of plan implementation.<sup>3</sup> While staff are recommending Plan approval at this time, this report identifies and describes numerous recommended corrective actions that staff believe should be promptly addressed during Plan implementation. Department staff will continue to monitor and evaluate Plan implementation and the Basin's progress toward achieving the sustainability goal through annual reporting and future periodic evaluations of the GSP and its implementation.

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

<sup>2</sup> 23 CCR § 350 *et seq.*

<sup>3</sup> 23 CCR § 350 *et seq.*

- ***Based on the current evaluation of the Plan, Department staff recommend the GSP be approved with the recommended corrective actions described herein.***

This assessment includes five sections:

- **Section 1 – Summary**: Provides an overview of Department staff’s assessment and recommendations.
- **Section 2 – Evaluation Criteria**: Describes the legislative requirements and the Department’s evaluation criteria.
- **Section 3 – Required Conditions**: Describes the submission requirements, Plan completeness, and basin coverage required for a GSP to be evaluated by the Department.
- **Section 4 – Plan Evaluation**: Provides an assessment of the contents included in the GSP organized by each Subarticle outlined in the GSP Regulations.
- **Section 5 – Staff Recommendation**: Includes the staff recommendation for the Plan and any recommended or required corrective actions, as applicable.

## 1 SUMMARY

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Department staff recommend approval of the Ojai Valley Groundwater Basin Groundwater Sustainability Plan. The GSA has identified areas for improvement of its Plan such as measurement of groundwater levels by aquifer unit and the degree of stream-aquifer connectivity. Department staff concur that those items are important and recommend the GSA address them as soon as possible. Department staff have also identified additional recommended corrective actions within this assessment that the GSA should address by the first periodic evaluation of the Plan. The recommended corrective actions generally focus on the following:

1. Refining the hydrogeologic conceptual model, including clear identification of barriers to groundwater flow, and identification of basin boundaries,
2. Revising sustainable management criteria for groundwater levels and degraded water quality to protect beneficial uses and users,
3. Continuing to fill data gaps, collecting additional monitoring data, coordinating with resources agencies and interested parties to better characterize groundwater conditions related to interconnected surface water, and establishing sustainable management criteria protective of beneficial uses and users.

Addressing the recommended corrective actions identified in [Section 5](#) of this assessment will be important to demonstrate, on an ongoing basis, that implementation of the Plan is likely to achieve the sustainability goal.

## 2 EVALUATION CRITERIA

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The GSA submitted a single GSP to the Department to evaluate whether the Plan conforms to specified SGMA requirements<sup>4</sup> and is likely to achieve the sustainability goal for the Ojai Valley Basin.<sup>5</sup> To achieve the sustainability goal for the Basin, the GSP must demonstrate that implementation of the Plan will lead to sustainable groundwater management, which means 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> Undesirable results must be defined quantitatively by the GSA.<sup>7</sup> The Department is also required to evaluate whether the GSP will adversely affect the ability of an adjacent basin to implement its GSP or achieve its sustainability goal.<sup>8</sup>

For the GSP to be evaluated by the Department, it must first be determined that the Plan was submitted by the statutory deadline,<sup>9</sup> and that it is complete and covers the entire basin.<sup>10</sup> If these conditions are satisfied, the Department evaluates the Plan to determine whether it complies with specific SGMA requirements and substantially complies with the GSP Regulations.<sup>11</sup> Substantial compliance means that the supporting information is sufficiently detailed and the analyses sufficiently thorough and reasonable, in the judgment of the Department, to evaluate the Plan, and the Department determines that any discrepancy would not materially affect the ability of the Agency to achieve the sustainability goal for the basin, or the ability of the Department to evaluate the likelihood of the Plan to attain that goal.<sup>12</sup>

When evaluating whether the Plan is likely to achieve the sustainability goal for the Basin, Department staff reviewed the information provided and relied upon in the GSP for sufficiency, credibility, and consistency with scientific and engineering professional standards of practice.<sup>13</sup> The Department's review considers whether there is a reasonable relationship between the information provided and the assumptions and conclusions made by the GSA, including whether the interests of the beneficial uses and users of groundwater in the basin have been considered; whether sustainable management criteria and projects and management actions described in the Plan are commensurate with the level of understanding of the basin setting; and whether those projects and management actions are feasible and likely to prevent undesirable results.<sup>14</sup>

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<sup>4</sup> Water Code §§ 10727.2, 10727.4.

<sup>5</sup> Water Code § 10733(a).

<sup>6</sup> Water Code § 10721(v).

<sup>7</sup> 23 CCR § 354.26 *et seq.*

<sup>8</sup> Water Code § 10733(c).

<sup>9</sup> 23 CCR § 355.4(a)(1).

<sup>10</sup> 23 CCR §§ 355.4(a)(2), 355.4(a)(3).

<sup>11</sup> 23 CCR § 350 *et seq.*

<sup>12</sup> 23 CCR § 355.4(b).

<sup>13</sup> 23 CCR § 351(h).

<sup>14</sup> 23 CCR §§ 355.4(b)(1), (3), (4), and (5).

The Department also considers whether the GSA has the legal authority and financial resources necessary to implement the Plan.<sup>15</sup>

To the extent overdraft is present in a basin, the Department evaluates whether the Plan provides a reasonable assessment of the overdraft and includes reasonable means to mitigate the overdraft.<sup>16</sup> The Department also considers whether the Plan provides reasonable measures and schedules to eliminate identified data gaps.<sup>17</sup> Lastly, the Department's review considers the comments submitted on the Plan and evaluates whether the GSA adequately responded to the comments that raise credible technical or policy issues with the Plan.<sup>18</sup>

The Department is required to evaluate the Plan within two years of its submittal date and issue a written assessment of the Plan.<sup>19</sup> The assessment is required to include a determination of the Plan's status.<sup>20</sup> The GSP Regulations define the three options for determining the status of a Plan: Approved,<sup>21</sup> Incomplete,<sup>22</sup> or Inadequate.<sup>23</sup>

Even when review indicates that the GSP satisfies the requirements of SGMA and is in substantial compliance with the GSP Regulations, the Department may recommend corrective actions.<sup>24</sup> Recommended corrective actions are intended to facilitate progress in achieving the sustainability goal within the Basin and the Department's future evaluations, and to allow the Department to better evaluate whether the Plan adversely affects adjacent basins. While the issues addressed by the recommended corrective actions do not, at this time, preclude approval of the Plan, the Department recommends that the issues be addressed to ensure the Plan's implementation continues to be consistent with SGMA and the Department is able to assess progress in achieving the sustainability goal within the Basin.<sup>25</sup> Unless otherwise noted, the Department proposes that recommended corrective actions be addressed by the submission date for the first periodic assessment.<sup>26</sup>

The staff assessment of the GSP involves the review of information presented by the GSA, including models and assumptions, and an evaluation of that information based on scientific reasonableness, including standard or accepted professional and scientific methods and practices. The assessment does not require Department staff to recalculate or reevaluate technical information provided in the Plan or to perform its own geologic or

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<sup>15</sup> 23 CCR § 355.4(b)(9).

<sup>16</sup> 23 CCR § 355.4(b)(6).

<sup>17</sup> 23 CCR § 355.4(b)(2).

<sup>18</sup> 23 CCR § 355.4(b)(10).

<sup>19</sup> Water Code § 10733.4(d); 23 CCR § 355.2(e).

<sup>20</sup> Water Code § 10733.4(d); 23 CCR § 355.2(e).

<sup>21</sup> 23 CCR § 355.2(e)(1).

<sup>22</sup> 23 CCR § 355.2(e)(2).

<sup>23</sup> 23 CCR § 355.2(e)(3).

<sup>24</sup> Water Code § 10733.4(d).

<sup>25</sup> Water Code § 10733.8.

<sup>26</sup> 23 CCR § 356.4 *et seq.*

engineering analysis of that information. The staff recommendation to approve a Plan does not signify that Department staff, were they to exercise the professional judgment required to develop a GSP for the basin, would make the same assumptions and interpretations as those contained in the Plan, but simply that Department staff have determined that the assumptions and interpretations relied upon by the submitting GSA are supported by adequate, credible evidence, and are scientifically reasonable.

Lastly, the Department's review and approval of the Plan is a continual process. Both SGMA and the GSP Regulations provide the Department with the ongoing authority and duty to review the implementation of the Plan.<sup>27</sup> Also, GSAs have an ongoing duty to provide reports to the Department, periodically reassess their plans, and, when necessary, update or amend their plans.<sup>28</sup> The passage of time or new information may make what is reasonable and feasible at the time of this review to not be so in the future. The emphasis of the Department's periodic reviews will be to assess the progress toward achieving the sustainability goal for the Basin and whether Plan implementation adversely affects the ability of adjacent basins to achieve their sustainability goals.

### 3 REQUIRED CONDITIONS

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A GSP, to be evaluated by the Department, must be submitted within the applicable statutory deadline. The GSP must also be complete and must, either on its own or in coordination with other GSPs, cover the entire basin.

#### 3.1 SUBMISSION DEADLINE

SGMA required basins categorized as high- or medium-priority and not subject to critical conditions of overdraft to submit a GSP no later than January 31, 2022.<sup>29</sup>

The GSA submitted its Plan on January 31, 2022.

#### 3.2 COMPLETENESS

GSP Regulations specify that the Department shall evaluate a GSP if that GSP is complete and includes the information required by SGMA and the GSP Regulations.<sup>30</sup>

The GSA submitted an adopted GSP for the entire Basin. After an initial, preliminary review, Department staff found the GSP to be complete and appearing to include the

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<sup>27</sup> Water Code § 10733.8; 23 CCR § 355.6.

<sup>28</sup> Water Code §§ 10728 *et seq.*, 10728.2.

<sup>29</sup> Water Code § 10720.7(a)(2).

<sup>30</sup> 23 CCR § 355.4(a)(2).

required information, sufficient to warrant a thorough evaluation by the Department.<sup>31</sup> The Department posted the GSP to its website on February 14, 2022.<sup>32</sup>

### **3.3 BASIN COVERAGE**

A GSP, either on its own or in coordination with other GSPs, must cover the entire basin.<sup>33</sup> A GSP that is intended to cover the entire basin may be presumed to do so if the basin is fully contained within the jurisdictional boundaries of the submitting GSAs.

The GSP intends to manage the entire Ojai Valley Basin and the jurisdictional boundary of the submitting GSA does not include 143.7 acres of the Basin. The GSP explains that these areas are predominantly stream channels without groundwater extraction, and thus, the GSP effectively covers the Basin.<sup>34</sup>

## **4 PLAN EVALUATION**

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As stated in Section 355.4 of the GSP Regulations, a basin “shall be sustainably managed within 20 years of the applicable statutory deadline consistent with the objectives of the Act.” The Department’s assessment is based on a number of related factors including whether the elements of a GSP were developed in the manner required by the GSP Regulations, whether the GSP was developed using appropriate data and methodologies and whether its conclusions are scientifically reasonable, and whether the GSP, through the implementation of clearly defined and technically feasible projects and management actions, is likely to achieve a tenable sustainability goal for the basin. The Department staff’s evaluation of the likelihood of the Plan to attain the sustainability goal for the Basin is provided below.

### **4.1 ADMINISTRATIVE INFORMATION**

The GSP Regulations require each Plan to include administrative information identifying the submitting Agency, its decision-making process, and its legal authority;<sup>35</sup> a description of the Plan area and identification of beneficial uses and users in the Plan area;<sup>36</sup> and a description of the ability of the submitting Agency to develop and implement a Plan for that area.<sup>37</sup>

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<sup>31</sup> The Department undertakes a preliminary completeness review of a submitted Plan under section 355.4(a) of the GSP Regulations to determine whether the elements of a Plan required by SGMA and the Regulations have been provided, which is different from a determination, upon review, that a Plan is “incomplete” for purposes of section 355.2(e)(2) of the Regulations.

<sup>32</sup> <https://sgma.water.ca.gov/portal/gsp/preview/130>.

<sup>33</sup> Water Code § 10727(b); 23 CCR § 355.4(a)(3).

<sup>34</sup> Ojai Valley GSP, Section 2.1, p. 33.

<sup>35</sup> 23 CCR § 354.6 *et seq.*

<sup>36</sup> 23 CCR § 354.8 *et seq.*

<sup>37</sup> 23 CCR § 354.6(e).

The GSP describes the GSA's legal authority.<sup>38</sup> The GSP indicates that "As outlined in SB 1168, Chapter 4, Section 10723. (c), SGMA identifies the OBGMA as the "exclusive local agency" within its statutory boundaries for the purposes of implementing the SGMA. On December 2014, the Board of Directors of the OBGMA passed Resolution 2014-4 wherein the OBGMA elected to become a GSA as defined by SB 1168."<sup>39</sup> The GSP provides documentation used during the formation of the GSA.<sup>40</sup> The OBGMA Board meets on a monthly basis with additional special meetings as necessary and conforms with the Brown Act. The GSP identifies that the OBGMA board is comprised of five members appointed by respective governing bodies of local agencies, including:

- Ojai Water Conservation District,
- City of Ojai
- Casitas Municipal Water District,
- Small Water Companies, and
- Casitas–Ojai Community Facilities District (formerly Golden State Water Company).<sup>41</sup>

The OBGMA prepared a groundwater management plan in 1994 and updated the groundwater management plan in 2018. The OBGMA applied for and was granted a basin boundary modification to align the Basin's boundaries with Basin hydrogeology.<sup>42</sup> The OBGMA also initially submitted an Alternative Plan for the Basin, but the Department did not approve the Alternative Plan.<sup>43</sup> The OBGMA is mandated to monitor extractions and requires well operators in the Basin to report extractions using flow meters.<sup>44</sup>

The GSP describes the boundaries of the Basin. The Basin encompasses 5,913.4 acres, bounded by the Topatopa Mountains of California's Traverse Ranges to the north and east, the Upper Ojai Valley Groundwater Basin to the east, the Santa Ana Fault and Black Mountain to the south, and the Upper Ventura River Groundwater Subbasin to the west. The OBGMA has developed, adopted, and submitted a single plan covering the entire Basin and it will implement the Plan as the sole groundwater sustainability agency.<sup>45</sup> A vicinity map showing the Ojai Valley Basin, GSA boundaries, and adjacent basins is provided in Figure 2-1.<sup>46</sup>

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<sup>38</sup> Ojai Valley GSP, Section 1.3.2, p. 28.

<sup>39</sup> Ojai Valley GSP, Section 1.3.2, p. 28.

<sup>40</sup> Ojai Valley GSP, Appendix B, pp. 339-453.

<sup>41</sup> Ojai Valley GSP, Section 1.3.1, p. 27.

<sup>42</sup> Ojai Valley GSP, Section 2.1, p. 33.

<sup>43</sup> <https://sgma.water.ca.gov/portal/alternative/print/19>

<sup>44</sup> Ojai Valley GSP, Section 2.1.2.1, p. 49.

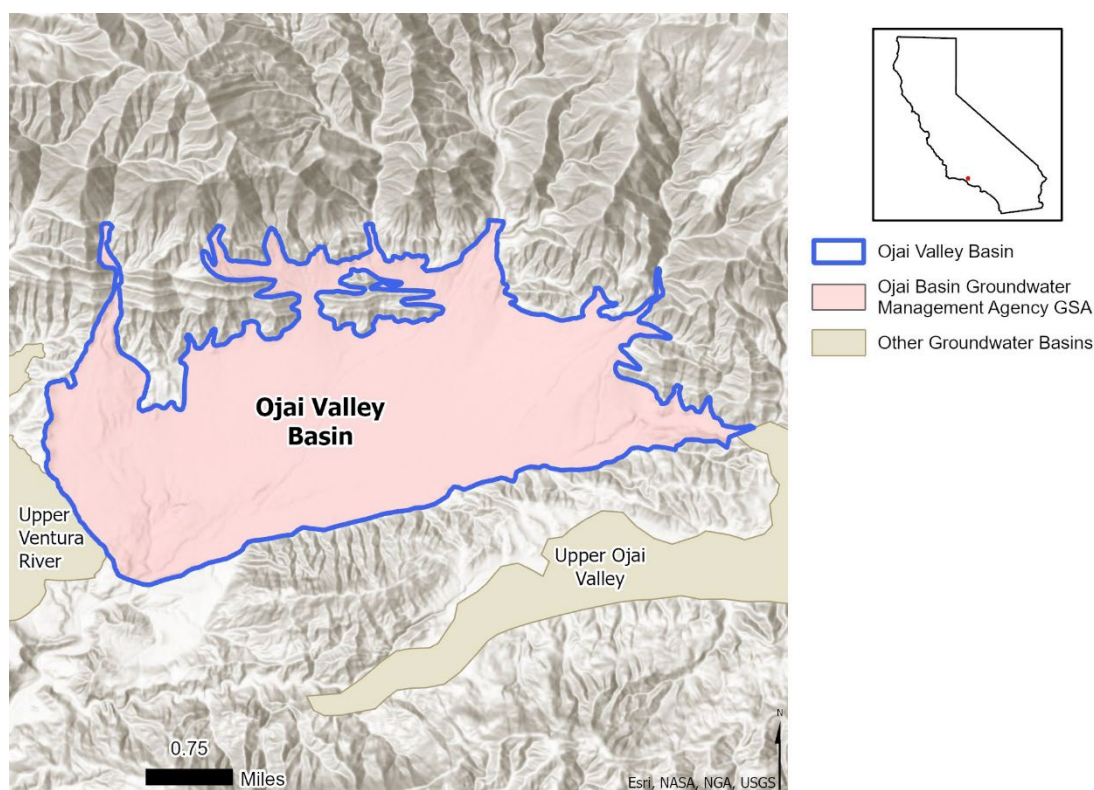
<sup>45</sup> Ojai Valley GSP, Section 2.1, p. 33.

<sup>46</sup> Ojai Valley GSP, Figure 2-1, p. 35.



The GSP describes the plan area. The GSP provides 2012 land use in Table 2-5 and Figure 2-8.<sup>47</sup> The Basin's largest land use categories include 2,672 acres (45% of the Basin) of agriculture, 1,562 acres (26% of the Basin) of single family residential, 546 acres (9% of the Basin) in facilities with other use categories comprising 20% of the Basin. The GSP provides a map in Figure 2-6<sup>48</sup> showing the locations of agricultural, domestic, industrial, municipal, and monitoring wells, and shows the well density per square mile. The highest density occurs in the central portion of the Basin with over 50 wells per square mile.

The GSP identifies beneficial uses and users<sup>49</sup> which include municipal, domestic, agricultural, and industrial uses.



**Figure 1: Ojai Valley Basin Location Map.**

The GSP describes existing water resources monitoring and management plans and programs including the California Statewide Groundwater Elevation Monitoring (CASGEM) Program, the Groundwater Ambient Monitoring and Assessment (GAMA) Program, precipitation and streamflow monitoring, Groundwater Management Plan, Integrated Regional Water Management Plan, Urban Water Management Plan, Agricultural Water Management Plan, Water Quality Control Plan, groundwater

<sup>47</sup> Ojai Valley GSP, Table 2-5, p. 68, Figure 2-8, p. 71.

<sup>48</sup> Ojai Valley GSP, Figure 2-6, p. 51.

<sup>49</sup> Ojai Valley GSP, Section 2.1.4, pp. 86-87.



permitting, Title 22 Drinking Water Program, and other water supply planning and water use efficiency efforts.<sup>50</sup>

The GSP describes the GSA's engagement process to support notice and communication with and for the Basin.<sup>51</sup> The GSA has prepared a Draft Public Outreach and Engagement Plan,<sup>52</sup> which explains the phases of GSP production and the different strategies employed at each phase.<sup>53</sup> Engagement with interested parties includes four phases.<sup>54</sup> Opportunities for public engagement include email communication,<sup>55</sup> direct outreach to key stakeholders (including tribal interests), public meetings, and engagement through the GSA website.<sup>56</sup> The GSA may also hold special meetings or workshops focused on obtaining feedback on components of the GSP.<sup>57</sup> The GSP lists the public meetings the GSA held.<sup>58</sup>

The GSA has the legal authority to implement the GSP.<sup>59</sup> The estimated GSP implementation cost is approximately \$8,114,000.<sup>60</sup>

The GSP describes the ongoing Ventura River Watershed Adjudication.<sup>61</sup> The GSP discusses an ongoing water rights litigation in the Ventura River Watershed that is unresolved at the time of GSP preparation. The settlement negotiations in the lawsuit include a proposed physical solution that is intended to protect Southern California Steelhead. The GSP indicates that the GSA anticipates this solution will also include sustainable management for the interconnected surface water sustainability indicator.<sup>62</sup> Department staff note that SGMA does not determine nor alter surface or groundwater rights,<sup>63</sup> and that suits for comprehensive groundwater adjudications and preparation and implementation of a GSP under SGMA are generally two separate processes or proceedings, although several statutory requirements create specific links between the two when applicable.<sup>64</sup> While the outcome of the adjudication may have the potential to affect groundwater uses and users in the Basin, issues raised in the pending adjudication and the effects of any future judgment on groundwater management in the Basin, were not considered by staff, who evaluated the Plan under SGMA and the Department's GSP Regulations. Accordingly, nothing in this staff report should or is intended to influence or

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<sup>50</sup> Ojai Valley GSP, Sections 2.1.2.1 to 2.1.2.4, pp. 45-66.

<sup>51</sup> Ojai Valley GSP, Section 1.3.3, pp. 28-29.

<sup>52</sup> Ojai Valley GSP, Appendix C, pp. 457-485

<sup>53</sup> Ojai Valley GSP, Appendix C, Appendix B, Section 1.1, pp. 464-466.

<sup>54</sup> Ojai Valley GSP, Appendix C, Appendix B, Section 1.1, pp. 463-466.

<sup>55</sup> Ojai Valley GSP, Appendix C, Section 3.1, p. 471.

<sup>56</sup> Ojai Valley GSP, Appendix C, Section 5.1, p. 475.

<sup>57</sup> Ojai Valley GSP, Appendix C, Section 5.2, p. 476.

<sup>58</sup> Ojai Valley GSP, Appendix C, Appendix B, p. 485.

<sup>59</sup> Ojai Valley GSP, Section 1.3.2, p. 28.

<sup>60</sup> Ojai Valley GSP, Section 1.3.3, pp. 27-28.

<sup>61</sup> Ojai Valley GSP, Section 2.1.5, pp. 87-89

<sup>62</sup> Ojai Valley GSP, Section 2.1.5, pp. 87-89

<sup>63</sup> CWC § 10720.5 (b).

<sup>64</sup> see e.g., WC 10737.2, 10737.8; Code of Civil Procedure 830(b)(4), 849(b).

be used as evidence in the pending adjudication.<sup>65</sup> Regardless of the ongoing adjudication, the GSA is responsible for fulfilling its role to protect beneficial uses and users and may need to take actions in compliance with SGMA.

Department staff conclude that the administrative information included in the Plan substantially complies with the requirements outlined in the GSP Regulations.

## 4.2 BASIN SETTING

GSP Regulations require information about the physical setting and characteristics of the basin and current conditions of the basin, including a hydrogeologic conceptual model; a description of historical and current groundwater conditions; and a water budget accounting for total annual volume of groundwater and surface water entering and leaving the basin, including historical, current, and projected water budget conditions.<sup>66</sup>

### 4.2.1 Hydrogeologic Conceptual Model

The hydrogeologic conceptual model is a non-numerical model of the physical setting, characteristics, and processes that govern groundwater occurrence within a basin, and represents a local agency's understanding of the geology and hydrology of the basin that support the geologic assumptions used in developing mathematical models, such as those that allow for quantification of the water budget.<sup>67</sup> The GSP Regulations require a descriptive hydrogeologic conceptual model that includes a written description of geologic conditions, supported by cross sections and maps,<sup>68</sup> and includes a description of basin boundaries and the bottom of the basin,<sup>69</sup> principal aquifers and aquitards,<sup>70</sup> and data gaps.<sup>71</sup>

The GSP provides a brief description of geology and includes cross sections and maps.<sup>72</sup> The GSP describes two geologic units in the Basin sorted by geologic time: Tertiary Age Consolidated Rocks, and Quaternary Age Deposits.<sup>73</sup> The GSP provides a geologic map<sup>74</sup> that identifies 23 geologic formations<sup>75</sup> in and around the Basin. The GSP provides three cross sections that indicate the location of aquifer and aquitard materials in the Basin.<sup>76</sup> However, the cross sections do not identify geologic units or formations in the

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<sup>65</sup> see also Water Code 10738.

<sup>66</sup> 23 CCR § 354.12.

<sup>67</sup> DWR Best Management Practices for the Sustainable Management of Groundwater: Hydrogeologic Conceptual Model, December 2016: [https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Sustainable-Groundwater-Management/Best-Management-Practices-and-Guidance-Documents/Files/BMP-3-Hydrogeologic-Conceptual-Model\\_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-3-Hydrogeologic-Conceptual-Model_ay_19.pdf).

<sup>68</sup> 23 CCR §§ 354.14 (a), 354.14 (c).

<sup>69</sup> 23 CCR §§ 354.14 (b)(2-3).

<sup>70</sup> 23 CCR § 354.14 (b)(4) *et seq.*

<sup>71</sup> 23 CCR § 354.14 (b)(5).

<sup>72</sup> Ojai Valley GSP, Section 2.3.1, pp. 100-109.

<sup>73</sup> Ojai Valley GSP, Section 2.3.1.1, pp. 103-104.

<sup>74</sup> Ojai Valley GSP, Figure 2-13A, p. 105.

<sup>75</sup> Ojai Valley GSP, Figure 2-13B, p. 107.

<sup>76</sup> Ojai Valley GSP, Figures 2-14 to 2-16, pp. 113-117.

Basin. Department staff note that the units described in the GSP text, the formations presented on the geologic map, and the materials shown in the cross sections are not consistent. These inconsistencies make it difficult to understand the hydrogeologic conceptual model. Department staff conclude that the GSA has not sufficiently described the geologic and structural setting of the Basin with enough detail to support achieving sustainable groundwater management by SGMA deadlines. In addition, Department staff conclude that the GSP does not provide sufficient hydrogeologic evidence that a perched aquifer is present. Staff encourage the GSA to supply adequate hydrogeologic evidence to support the presence of a perched aquifer. Staff are aware of additional studies occurring in the region and recommend that the GSA discuss and consider all available information to describe the hydrogeologic conceptual model in a manner consistent with GSP Regulations,<sup>77</sup> including providing sufficient information to characterize the physical components and interaction of surface water and groundwater systems in the Basin (see [Recommended Corrective Action 1a](#)).

In describing the lateral boundaries and the definable bottom of the Basin, the GSP reports that the Basin is located within the Transverse Ranges characterized by east–west-trending mountain ranges that are actively uplifting in response to compression along an east–west-trending section of the San Andreas Fault.<sup>78</sup> The GSP describes two of the Basin’s lateral boundaries: 1) the Sespe Formation forms most of the northern boundary of the Basin,<sup>79</sup> and 2) the Santa Ana Fault forms most of the southern boundary of the Basin.<sup>80</sup> The GSP qualitatively describes the bottom of the basin as the contact between Holocene deposits and Tertiary deposits.<sup>81</sup> The GSP does not describe the eastern or western lateral boundaries of the Basin.<sup>82</sup> The GSA needs to clearly identify the Basin boundaries and the movement of water across the Basin boundaries, so that it may fully understand Basin properties and dynamics and achieve sustainable groundwater management consistent with SGMA timelines. Department staff recommend the GSA update the GSP to include full descriptions of the Basin’s lateral boundaries and bottom of Basin as required by GSP regulations<sup>83</sup> using the best available information<sup>84</sup> (see [Recommended Corrective Action 1b](#)).

In describing geologic structures in the Basin, the GSP identifies the Santa Ana Fault and the San Cayetano Fault. It also states that no other major mapped faults are present within the Basin, and that the faults primarily align along the edges of the Basin with no influence on groundwater flows within the Basin.<sup>85</sup> The GSP mentions folds present in

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<sup>77</sup> 23 CCR § 354.14 *et seq.*

<sup>78</sup> Ojai Valley GSP, Section 2.3.1, p. 100.

<sup>79</sup> Ojai Valley GSP, Section 2.3.1.1, p. 103.

<sup>80</sup> Ojai Valley GSP, Section 2.3.1.3, p. 104.

<sup>81</sup> Ojai Valley GSP, Section 2.3.2, p. 109.

<sup>82</sup> Ojai Valley GSP, Section 2.3, pp. 100-188.

<sup>83</sup> 23 CCR § 354.14 (b)(2), 354.14 (b)(3).

<sup>84</sup> 23 CCR § 354.14 (b)(4)(B).

<sup>85</sup> Ojai Valley GSP, Section 2.3.1.3, p. 104.

basement rocks beneath and around the Basin including the Matilija overturn, Ojai Syncline, Reeves Syncline, and Lion Mountain Anticline.<sup>86</sup> The GSP indicates that the folds do not affect groundwater flow in the Basin either.

In describing the principal aquifers and aquitards, the GSP identifies alluvial deposits and fractures of underlying Tertiary rocks as the water bearing units that make up the principal aquifer in the Basin.<sup>87</sup> The principal aquifer includes four water bearing layers of alluvium. The coarse-grained deposits are in the northern and eastern portions of the Basin, and more fine-grained deposits are present in the southern and western portions of the Basin. Groundwater is predominately unconfined in the northern and eastern portions of the Basin, where alluvial fans are present, and mostly confined in the central, southern, and western portions of the Basin.<sup>88</sup> The GSP identifies some aquifer properties for the principal aquifer with references to the cross sections<sup>89</sup> for details of the structure of sediments in the Basin.

Department staff are unable to identify the extent and effects on groundwater flow from this shallow aquitard that creates the perched aquifer in the Basin. The GSP Regulations require the GSP provide, as part of the description of principal aquifers, significant geologic features that affect groundwater flows.<sup>90</sup> The GSP notes that limited data and a preliminary hydrogeological conceptual model suggest surface waters in San Antonio Creek are sustained by a perched upper aquifer that is disconnected from deep producing aquifers.<sup>91</sup> In describing the principal aquifer for the Basin, the GSP also states, “an uppermost confining clay unit, which generally extends from approximately 30 to 130 feet below ground surface, is the thickest and most extensive aquitard and separates the primary production aquifer from a shallow perched aquifer.”<sup>92</sup> Department staff note that this aquitard is not depicted on the GSP’s cross sections,<sup>93</sup> which show no aquitard within 150 feet of the ground surface on any of the three diagrams, and that the GSP’s geologic map shows the extent of the shallow aquitard is limited to the western portion of the Basin.<sup>94</sup> Department staff recommend the GSA update the hydrogeologic conceptual model’s text and figures to be internally consistent and show key geologic features that may affect sustainable management<sup>95</sup> (see [Recommended Corrective Action 1c](#)).

Department staff conclude the GSP provides the information required by the GSP Regulations regarding topography and soils,<sup>96</sup> surface water bodies,<sup>97</sup> and source and

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<sup>86</sup> Ojai Valley GSP, Section 2.3.1.4, p. 109.

<sup>87</sup> Ojai Valley GSP, Section 2.3.2, p. 109.

<sup>88</sup> Ojai Valley GSP, Section 2.3.2, p. 109.

<sup>89</sup> Ojai Valley GSP, Figures 2-14 to 2-16, pp. 113-117.

<sup>90</sup> 23 CCR § 354.14 (b)(4)(C).

<sup>91</sup> Ojai Valley GSP, Section 1.1, p. 24.

<sup>92</sup> Ojai Valley GSP, Section 2.3.2, p. 109.

<sup>93</sup> Ojai Valley GSP, Figures 2-14 to 2-16, pp. 113-117.

<sup>94</sup> Ojai Valley GSP, Figure 2-13A, p. 105.

<sup>95</sup> 23 CCR 354.14 (b)(4)(C).

<sup>96</sup> 23 CCR §§ 354.14 (1), 354.14 (3).

<sup>97</sup> 23 CCR § 354.14 (d)(5).

point of imported water supplies.<sup>98</sup> The GSP provides a map of soil saturated hydraulic conductivity,<sup>99</sup> which indicates that the areas with the highest conductivity are located in the northern, western, and near creek portions of the Basin, including several stream reaches in an area designated as a perched aquifer.<sup>100</sup> The GSP identifies creeks in the Basin in Figure 2-39.<sup>101</sup> The GSP provides a discussion of recharge and water deliveries<sup>102</sup>, including 2,404 – 5,272 acre-feet per year by Casitas Municipal Water District. The San Antonio Creek spreading grounds have a historic capacity of providing an average of 126 acre-feet per year of recharge. The GSP estimates 19 acre-feet per year in recharge from septic tanks, and 22 acre-feet per year in recharge from wastewater.<sup>103</sup>

In addressing identification of data gaps and uncertainty within the hydrogeologic conceptual model, the GSP does not identify data gaps, but it identifies data gaps in other areas such as vertical gradient in groundwater flow, groundwater quality, groundwater model, and groundwater-surface water interconnection.<sup>104</sup> While addressing these data gaps may reduce the uncertainty within the hydrogeologic conceptual model, Department staff recommend the GSA identify a separate data gap for the hydrogeologic conceptual model consistent with the GSP Regulations.<sup>105</sup> By filling the data gaps, the GSA can characterize the physical components and mechanics of interaction between the surface water and groundwater systems (see [Recommended Corrective Action 1d](#)).

#### 4.2.2 Groundwater Conditions

The GSP Regulations require a written description of historical and current groundwater conditions for each of the applicable sustainability indicators and groundwater dependent ecosystems that includes the following: groundwater elevation contour maps and hydrographs,<sup>106</sup> a graph depicting change in groundwater storage,<sup>107</sup> maps and cross-sections of the seawater intrusion front,<sup>108</sup> maps of groundwater contamination sites and plumes,<sup>109</sup> maps depicting total subsidence,<sup>110</sup> identification of interconnected surface water systems and an estimate of the quantity and timing of depletions of those systems,<sup>111</sup> and identification of groundwater dependent ecosystems.<sup>112</sup>

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<sup>98</sup> 23 CCR § 354.14 (d)(6).

<sup>99</sup> Ojai Valley GSP, Figure 2-18, p. 121.

<sup>100</sup> Ojai Valley GSP, Figure 2-18, p. 121.

<sup>101</sup> Ojai Valley GSP, Figure 2-39, p. 187.

<sup>102</sup> Ojai Valley GSP, Section 2.3.3, pp. 110-111.

<sup>103</sup> Ojai Valley GSP, Section 2.3.3, p. 111.

<sup>104</sup> Ojai Valley GSP, Section 2.3, pp. 100-188.

<sup>105</sup> 23 CCR § 354.14 (a).

<sup>106</sup> 23 CCR §§ 354.16 (a)(1-2).

<sup>107</sup> 23 CCR § 354.16 (b).

<sup>108</sup> 23 CCR § 354.16 (c).

<sup>109</sup> 23 CCR § 354.16 (d).

<sup>110</sup> 23 CCR § 354.16 (e).

<sup>111</sup> 23 CCR § 354.16 (f).

<sup>112</sup> 23 CCR § 354.16 (g).

In describing current and historical groundwater conditions in the Basin in terms of flow directions, lateral and vertical gradients, and regional pumping patterns, the GSP provides selected hydrographs in Figure 2-19.<sup>113</sup> The GSP states that groundwater levels tend to recover during wet periods and decline during below average precipitation years.<sup>114</sup> The GSP provides additional hydrographs in Appendix D.<sup>115</sup> Although not being able to identify the well locations associated with these hydrographs, staff note that there are 10 hydrographs showing over 75 feet of decline from 2004 to 2019. Staff recommend the GSA include a location map for Appendix D as part of the next periodic evaluation and update the description of groundwater conditions reflected by these hydrographs.

The GSP provides groundwater contour maps for Spring 1998, Fall 2015, Fall 2019, and Spring 2020.<sup>116</sup> The GSP describes that groundwater flow in Fall 2015 moves from northeast to southwest and locally into a pumping depression formed in the central part of the Basin.<sup>117</sup> The other contour maps indicate a similar groundwater flow gradient and direction and the presence of a pumping depression in the central portion of the Basin. The GSP does not provide information about vertical gradients in the Basin, but it does identify vertical gradients as a data gap and plans to address this data gap by the next periodic evaluation.<sup>118</sup> Department staff agree with the GSA that this data gap should be promptly addressed and resolved.

In describing the estimates of groundwater storage changes, the GSP provides figures showing the annual<sup>119</sup> and cumulative<sup>120</sup> changes in storage. The GSP also estimates the total amount of storage in the Basin, ranging from 41,310 to 83,785 acre-feet.<sup>121</sup>

In discussing seawater intrusion, the GSP reports that seawater intrusion has not occurred and will likely not occur in the Basin. The GSP states, "As an inland basin, the [Basin] has no hydraulic connection to the Pacific Ocean. The [Basin] OVGB is approximately 11 miles from the Pacific Ocean at an elevation of more than 630 feet [above mean sea level]."<sup>122</sup>

In describing groundwater quality, the GSP identifies Total Dissolved Solids (TDS), nitrate, chloride, sulfate, boron, odor, and metals (particularly iron and manganese) as potential groundwater quality concerns in the Basin.<sup>123</sup> The GSP also identifies nitrate as the primary groundwater quality constituent of concern,<sup>124</sup> listing typical sources of nitrate

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<sup>113</sup> Ojai Valley GSP, Figure 2-19, p. 125.

<sup>114</sup> Ojai Valley GSP, Section 2.3.4.1, p. 127.

<sup>115</sup> Ojai Valley GSP, Appendix D, pp. 487-527.

<sup>116</sup> Ojai Valley GSP, Figure 2-20 to 2-24, pp. 129-137.

<sup>117</sup> Ojai Valley GSP, Section 2.3.4.1, p. 124.

<sup>118</sup> Ojai Valley GSP, Section, 3.5.7.2, p. 272.

<sup>119</sup> Ojai Valley GSP, Figure 2-40, p. 205.

<sup>120</sup> Ojai Valley GSP, Figure 2-41, p. 207.

<sup>121</sup> Ojai Valley GSP, Section 2.3.4.2, p. 127.

<sup>122</sup> Ojai Valley GSP, Section 2.3.4.3, p. 127.

<sup>123</sup> Ojai Valley GSP, Section 2.3.4.4, p. 137.

<sup>124</sup> Ojai Valley GSP, Section 2.3.4.4, p. 138.



including fertilizer, wastewater, septic effluent, and naturally occurring. The GSP provides maps of measured concentrations for each constituent measured from 2010 to 2020.<sup>125</sup> The GSP identifies constituents with measured concentrations in various areas of the Basin exceeding regulatory standards such as TDS, nitrate, chloride, iron and manganese.

In describing land subsidence in the Basin, the GSP provides text and figures to support the discussion. Referring to the historical InSAR data for the Basin,<sup>126</sup> the GSP reports that the central portion of the Basin (approximately 60% of the Basin) experienced uplift and areas adjacent to Basin boundaries (approximately 40% of the Basin) experienced subsidence between 0 and 0.21 inches from 2015 to 2019.<sup>127</sup> The GSP notes that tectonic forces in the transverse range may affect vertical displacement due to uplift and faulting.

In describing the groundwater conditions related to interconnected surface water, the GSP generally discusses interconnected surface water in the Basin.<sup>128</sup> It states that available monitoring information is limited in resolution, and that additional data and analysis are needed to quantify the degree of interconnected surface water. The GSA plans to improve its understanding of interconnected surface water by filling data gaps identified in the GSP.<sup>129</sup>

The GSP discusses filling data gaps associated with interconnected surface water monitoring. The GSP concludes that additional wells with shallow screened intervals and stream gauges are needed to fill data gaps.<sup>130</sup> The GSA intends to use data loggers and pressure transducers in the wells to assist with assessment of depletions of interconnected surface water.<sup>131</sup> The GSP does not provide details about the number of wells and stream gauges to be installed, their locations, or when they would be installed. Department Staff recommend the GSA provide additional details on its plan to address data gaps related to interconnected surface water and fill these data gaps prior to the next periodic evaluation<sup>132</sup> (see [Recommended Corrective Action 2a](#)).

The GSP states that a shallow aquitard is present in the western portion of the Basin, creating a perched aquifer in the western portion of the Basin that affects the dynamics of interconnected surface water.<sup>133</sup> However, the cross-section diagrams provided in the GSP do not show this shallow aquitard. Staff recommend the GSP clearly depict the shallow aquitard in cross-section diagrams as part of the evaluation of interconnected surface water (see [Recommended Corrective Action 1a](#)).

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<sup>125</sup> Ojai Valley GSP, Figures 2-25 through 2-31, pp. 143-157, Section 2.3.4.4, p. 138.

<sup>126</sup> Ojai Valley GSP, Figure 2-34, p. 169.

<sup>127</sup> Ojai Valley GSP, Section 2.3.4.5, p. 167.

<sup>128</sup> Ojai Valley GSP, Section 2.3.4.6, pp. 173-174.

<sup>129</sup> Ojai Valley GSP, Section 2.3.4.6, p. 174

<sup>130</sup> Ojai Valley GSP, Section 3.5.7.2, p. 273.

<sup>131</sup> Ojai Valley GSP, Section 3.5.7.2, p. 273.

<sup>132</sup> 23 CCR § 354.38 (b)(2)(D).

<sup>133</sup> Ojai Valley GSP, Figure 2-13A, p. 105.

The Department has received comment letters about the model selected to evaluate interconnected surface water in the GSP, to which the GSA has provided responses. Staff recognize that there can be disagreement regarding which scientific studies, reports, information, and biological, physical, or ecological factors are best suited to use when developing sustainable management criteria for depletions of interconnected surface water in the Basin under SGMA. Additionally, there appear to be other state and federal agencies that have differing views than the GSA regarding interconnected surface water. They may act under other laws and authorities to address biological or ecological concerns regarding low instream flows in portions of San Antonio Creek or the Ventura River and its other tributaries, which appear to be caused by numerous factors including depletions of interconnected surface waters from groundwater extractions in the Basin. While interconnected surface water in the basin remains unresolved, it does not appear the GSA's choices or explanation are inappropriate for the purposes of SGMA implementation at this time. Department staff expect that this issue will be reconsidered and, if necessary, revisited or refined, with new information obtained from filling the data gaps, receiving regulatory decisions and implementing the Basin's monitoring efforts described in the GSP. Department staff are encouraged that there is ongoing planned coordination between the GSA and parties involved in the Ventura River watershed and the adjudication's management committee, with an express intent to craft a physical solution to improve conditions for the Southern California Steelhead in the watershed and to incorporate any such physical solution into the GSP as part of its planned projects and management actions.<sup>134</sup> At this time, however, there is no such physical solution and while it may be reasonable for the GSA to strive for such an agreement and then incorporate its provisions into a revised GSP, the GSA should also consider and be prepared to implement alternative measures to address SGMA issues related to depletions of interconnected surface water and its beneficial uses and users if no physical solution in the adjudication is timely agreed to by the next periodic evaluation. Staff recommend the GSA continue to coordinate with other agencies as required and update the GSP as necessary if new information becomes available (see [Recommended Corrective Action 2b](#)).

The GSP preliminarily identifies groundwater dependent ecosystems within the Basin.<sup>135</sup> The GSP provides a map of areas identified in the Natural Communities Commonly Associated with Groundwater dataset,<sup>136</sup> and a table of types of communities identified.<sup>137</sup> The GSA evaluated the Natural Communities Commonly Associated with Groundwater dataset by aggregating communities into larger evaluation units, and characterizing each unit using "Groundwater elevation measurements, aerial photographs, lithologic data, and [Normalized Difference Vegetation Index and Normalized Difference Moisture Index] indicators were reviewed following the general

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<sup>134</sup> Ojai Valley GSP, Section 4.5.1, p. 306.

<sup>135</sup> Ojai Valley GSP, Section 2.3.4.7, pp. 174-184.

<sup>136</sup> Ojai Valley GSP, Figure 2-36, p. 177.

<sup>137</sup> Ojai Valley GSP, Table 2-12, p. 175.



guidelines outlined by [The Nature Conservancy].”<sup>138</sup> The GSA plans to prepare a groundwater dependent ecosystems assessment to fill some data gaps related to interconnected surface water and groundwater dependent ecosystem by the next GSP periodic evaluation.<sup>139</sup>

#### 4.2.3 Water Budget

GSP Regulations require a water budget for the basin that provides an accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the basin, including historical; current; and projected water budget conditions,<sup>140</sup> and the sustainable yield.<sup>141</sup>

The GSP uses the Ojai Basin Groundwater Model (Model) to determine the Basin’s historical, current, and future water budgets. The Model simulates both surface water and groundwater systems entering and leaving the Basin.

The GSP estimates the Basin’s historical water budgets in the Model from 1971 to 2014. The GSP reports that the average groundwater extraction in this period is 4,154 acre-feet per year and the cumulative change storage is a loss of 8,951 acre-feet (or 203 acre-feet per year).<sup>142</sup> The GSP also reports that the average surface water imported by Casitas Municipal Water District is 3,750 acre-feet per year with more in dry years and less in wet years.<sup>143</sup> In addition, the GSP reports that groundwater discharge into San Antonio Creek is 4,584 acre-feet per year on average but the discharge volume can be much higher in wet years. For instance, the discharge is 11,448 acre-feet in 2005 and 15,465 acre-feet per year in 1998.<sup>144</sup> These data suggest that connectivity exists between surface water and groundwater in the Basin. The GSP acknowledges that surface water and groundwater are likely connected, but states that it may occur only between the perched aquifer and San Antonio Creek in the western portion of the Basin.<sup>145</sup> Given the limited western extent of the perched aquifer, staff note that the remainder of the Basin does not have perched conditions, especially in the northeastern portions of the Basin where alluvial fans are present.<sup>146</sup> The GSP acknowledges that data gaps and uncertainty exist in the Ojai Basin Groundwater Model and its water budget estimates.<sup>147</sup> Staff are encouraged that the GSA plans to fill these data gaps with additional monitoring data, including those collected from the new depth-discrete monitoring well (South Central

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<sup>138</sup> Ojai Valley GSP, Section 2.3.4.7, p.176.

<sup>139</sup> Ojai Valley GSP, Section 3.5.7.2, p. 273.

<sup>140</sup> 23 CCR §§ 354.18 (a), 354.18 (c) *et seq.*

<sup>141</sup> 23 CCR § 354.18 (b)(7).

<sup>142</sup> Ojai Valley GSP, Table 2-13, p. 191.

<sup>143</sup> Ojai Valley GSP, Section 2.4.4.1, p. 196, Figure 2-42, p. 209.

<sup>144</sup> Ojai Valley GSP, Table 2-13, p. 191.

<sup>145</sup> Ojai Valley GSP, Section 2.3.4.6, p. 173.

<sup>146</sup> Ojai Valley GSP, Section 2.3.2, p. 109.

<sup>147</sup> Ojai Valley GSP, Section 3.5.7.2, pp. 273-274.

DDMW), to refine the model estimates of groundwater-surface water interactions along San Antonio Creek.

The GSP estimates the Basin's current water budgets in the Model from 2015 to 2019. The GSP reports that the average groundwater extraction in this period is 3,509 acre-feet per year. The deficit in groundwater storage increases in both dry years in 2015 and 2016. Followed by two average years in 2017 and 2019, the Basin's groundwater storage has been restored with the cumulative storage change at a loss of only 755 acre-feet (or approximately 15 acre-feet per year).<sup>148</sup>

The GSP projects the Basin's future water budgets in the Model from 2020 to 2069. The future water budget modeling incorporates the most recent land use and population data, projected water demands and surface water availability, as well as climate change.<sup>149</sup> The GSP projects the future groundwater extraction to be approximately 4,000 acre-feet per year.<sup>150</sup>

- The GSP estimates the safe yield (defined in the GSP as “the maximum quantity of water which can be withdrawn annually from groundwater supply without causing a gradual lowering of groundwater levels resulting in the eventual depletion of supply”<sup>151</sup>) of the Basin to be 4,100 acre-feet per year based on projected water budgets and the development of sustainable management criteria.<sup>152</sup> The GSP indicates that the GSA is planning to fill data gaps in interconnected surface water monitoring so that the GSA may estimate the sustainable yield in the future. Department staff appreciate the GSA's short-term use of safe yield while filling the data gaps in interconnected surface water to finalize the sustainable yield estimate. Staff recommend the GSA determine the Basin's sustainable yield as the maximum quantity of water, calculated over a base period representative of long-term conditions in the Basin and including any temporary surplus, that can be withdrawn annually without causing undesirable results under SGMA.

Department staff conclude that the historical, current, and projected water budgets included in the Plan substantially comply with the requirements outlined in the GSP Regulations. The GSP provides the required historical, current, and future accounting and assessment of the total annual volume of groundwater and surface water entering and leaving the Basin including a plan to refine the estimate of the sustainable yield of the Basin.

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<sup>148</sup> Ojai Valley GSP, Table 2-16, p. 200, Figure 2-42, p. 209.

<sup>149</sup> Ojai Valley GSP, Section 2.4.4.3, p. 199.

<sup>150</sup> Ojai Valley GSP, Table 2-17, p. 203, Figure 2-43, p. 211.

<sup>151</sup> Ojai Valley GSP, Section 2.4.7, p. 218.

<sup>152</sup> Ojai Valley GSP, Section 2.4.7, p. 219.

#### 4.2.4 Management Areas

GSP Regulations provide the option for one or more management areas to be defined within a basin if the GSA has determined that the creation of the management areas will facilitate implementation of the Plan. Management areas may define different minimum thresholds and be operated to different measurable objectives, provided that undesirable results are defined consistently throughout the basin.<sup>153</sup>

This GSP does not utilize management areas.

### 4.3 SUSTAINABLE MANAGEMENT CRITERIA

GSP Regulations require each Plan to include a sustainability goal for the basin and to characterize and establish undesirable results, minimum thresholds, and measurable objectives for each applicable sustainability indicator, as appropriate. The GSP Regulations require each Plan to define conditions that constitute sustainable groundwater management for the basin including the process by which the GSA characterizes undesirable results and establishes minimum thresholds and measurable objectives for each applicable sustainability indicator.<sup>154</sup>

#### 4.3.1 Sustainability Goal

GSP Regulations require that GSAs establish a sustainability goal for the basin. The sustainability goal should be based on information provided in the GSP's basin setting and should include an explanation of how the sustainability goal is likely to be achieved within 20 years of Plan implementation.<sup>155</sup>

The GSP provides a sustainability goal which is “is to preserve the quantity and quality of groundwater in the Ojai Basin in order to protect and maintain the long-term water supply for the common benefit of the water users in the Basin. This GSP is intended to also meet the overarching sustainability goal of SGMA to ensure that the [Basin] continues to operate within its sustainable yield and does not exhibit undesirable results within the planning and implementation horizon of this GSP (50 years).”<sup>156</sup>

The GSP provides a sustainability strategy, which describes the GSA's plan to maintain sustainability in the Basin.<sup>157</sup> The GSP indicates that the GSA believes implementation of projects and management actions identified in the GSP will maintain sustainability in the Basin.

Department Staff conclude the GSP has sufficiently described the sustainability goal and provided a path to maintain sustainability.

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<sup>153</sup> 23 CCR § 354.20.

<sup>154</sup> 23 CCR § 354.22 *et seq.*

<sup>155</sup> 23 CCR § 354.24.

<sup>156</sup> Ojai Valley GSP, Section 3.1.3, p. 229.

<sup>157</sup> Ojai Valley GSP, Section 3.1.4, p. 229.

### 4.3.2 Sustainability Indicators

Sustainability indicators are defined as any of the effects caused by groundwater conditions occurring throughout the basin that, when significant and unreasonable, cause undesirable results.<sup>158</sup> Sustainability indicators thus correspond with the six undesirable results – chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon, significant and unreasonable reduction of groundwater storage, significant and unreasonable seawater intrusion, significant and unreasonable degraded water quality, including the migration of contaminant plumes that impair water supplies, land subsidence that substantially interferes with surface land uses, and depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water<sup>159</sup> – but refer to groundwater conditions that are not, in and of themselves, significant and unreasonable. Rather, sustainability indicators refer to the effects caused by changing groundwater conditions that are monitored, and for which criteria in the form of minimum thresholds are established by the agency to define when the effect becomes significant and unreasonable, producing an undesirable result.

GSP Regulations require that GSAs provide descriptions of undesirable results including defining what are significant and unreasonable potential effects to beneficial uses and users for each sustainability indicator.<sup>160</sup> GSP Regulations also require GSPs provide the criteria used to define when and where the effects of the groundwater conditions cause undesirable results for each applicable sustainability indicator. The criteria shall be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.<sup>161</sup>

GSP Regulations require that the description of minimum thresholds include the information and criteria relied upon to establish and justify the minimum threshold for each sustainability indicator.<sup>162</sup> GSAs are required to describe how conditions at minimum thresholds may affect beneficial uses and users,<sup>163</sup> and the relationship between the minimum thresholds for each sustainability indicator, including an explanation for how the GSA has determined conditions at each minimum threshold will avoid causing undesirable results for other sustainability indicators.<sup>164</sup>

GSP Regulations require that GSPs include a description of the criteria used to select measurable objectives, including interim milestones, to achieve the sustainability goal within 20 years.<sup>165</sup> GSP Regulations also require that the measurable objectives be

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<sup>158</sup> 23 CCR § 351(ah).

<sup>159</sup> Water Code § 10721(x).

<sup>160</sup> 23 CCR §§ 354.26 (a), 354.26 (b)(c).

<sup>161</sup> 23 CCR § 354.26 (b)(2).

<sup>162</sup> 23 CCR § 354.28 (b)(1).

<sup>163</sup> 23 CCR § 354.28 (b)(4).

<sup>164</sup> 23 CCR § 354.28 (b)(2).

<sup>165</sup> 23 CCR § 354.30 (a).

established based on the same metrics and monitoring sites as those used to define minimum thresholds.<sup>166</sup>

The following subsections thus consolidate three facets of sustainable management criteria: undesirable results, minimum thresholds, and measurable objectives. Information, as presented in the Plan, pertaining to the processes and criteria relied upon to define undesirable results applicable to the Basin, as quantified through the establishment of minimum thresholds, are addressed for each applicable sustainability indicator. A submitting agency is not required to establish criteria for undesirable results that the agency can demonstrate are not present and are not likely to occur in a basin.<sup>167</sup>

#### *4.3.2.1 Chronic Lowering of Groundwater Levels*

In addition to components identified in 23 CCR §§ 354.28 (a-b), for the chronic lowering of groundwater, the GSP Regulations require the minimum threshold for chronic lowering of groundwater levels to be the groundwater elevation indicating a depletion of supply at a given location that may lead to undesirable results that is supported by information about groundwater elevation conditions and potential effects on other sustainability indicators.<sup>168</sup>

The GSP describes significant and unreasonable undesirable results for the chronic lowering of groundwater as:

“Lowering of groundwater levels is significant and unreasonable if sufficient in magnitude to lower the rate of production of existing groundwater wells below that necessary to meet the minimum required to support the overlying beneficial uses, where alternative means of obtaining sufficient groundwater resources or local surface water resources from Lake Casitas are not technically or financially feasible for the well owner to absorb, either independently or with assistance from the [GSA], or other available assistance/grant program(s).”<sup>169</sup>

The GSP does not describe the relevant factors for evaluating and determining the feasibility of obtaining other groundwater resources or local surface water resources. Department staff note that undescribed determination processes in sustainable management criteria are not consistent with the GSP regulations and are likely to complicate GSP implementation and future Department evaluations of GSP implementation.<sup>170</sup> Staff recommend the GSA sufficiently describe the process to determine feasibility of alternative supplies.

The GSP describes the criteria used to define the potential occurrence of undesirable results related to chronic lowering groundwater levels. The GSP describes the criteria as

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<sup>166</sup> 23 CCR § 354.30 (b).

<sup>167</sup> 23 CCR § 354.26 (d).

<sup>168</sup> 23 CCR § 354.28(c)(1) *et seq.*

<sup>169</sup> Ojai Valley GSP, Section 3.2.1, p. 233.

<sup>170</sup> 23 CCR § 354.26 (b)(2).

“groundwater elevations [exceeding] the minimum thresholds at multiple wells for a duration of greater than one year.”<sup>171</sup> The GSP explains the one-year criterion is based on the rapid recovery of groundwater levels and storage in average and wet years. However, the GSP should provide some clarification on “multiple wells” (i.e., specific number of wells) and “a duration of more than one year” (i.e., two consecutive seasonal highs or seasonal lows). Staff recommend the GSA clarify the definition of undesirable results (see [Recommended Corrective Action 3a](#)).

The GSP describes the criteria used to establish the minimum thresholds for chronic lowering of groundwater levels.<sup>172</sup> The GSP indicates that the minimum thresholds are set to maintain groundwater levels above historical low static levels at representative monitoring points during multi-year drought conditions.<sup>173</sup> The GSP states that maintaining levels above historical lows would be protective of beneficial uses and users in the Basin.

The GSP establishes criteria to select minimum thresholds for the chronic lowering of groundwater levels. The GSP sets the minimum threshold at the lowest measurement measured at representative monitoring points during the 2012-2016 drought with a 10 percent adjustment,<sup>174</sup> except that the minimum threshold for the Elrod Well is approximated using the 1951 historical low at well 04N22W05L008S.<sup>175</sup>

The GSP provides the minimum threshold values in Table 3-2,<sup>176</sup> and shows the minimum thresholds with hydrographs in Figure 3-1.<sup>177</sup> Department staff note that the minimum thresholds shown in Figure 3-1 do not appear to follow the criteria established in the GSP’s text for four of the five wells shown. For instance, the minimum thresholds at Mutual Well 4, Topa Topa Ranch Well No. 5, and Hansen Well are higher than the 2012-2016 historical lows, but the minimum threshold at SACSGRP DDWM is lower than the 2012-2016 historical low.

Department staff note that the GSP describes setting a minimum threshold for the Elrod well using the historical low data for well 04N22W05L008S (i.e., 312 feet below ground surface in 1951).<sup>178</sup> The GSP does not show the comparison of measurements between the Elrod well and well 04N22W05L008S, so staff cannot evaluate the sufficiency of this approximation.

Department staff also note that groundwater levels at the Hansen well have increased approximately 200 feet since 2015, showing a different trend than all other hydrographs

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<sup>171</sup> Ojai Valley GSP, Section 3.3, p. 239.

<sup>172</sup> Ojai Valley GSP, Section 3.3.1, pp. 237-247.

<sup>173</sup> Ojai Valley GSP, Section 3.3.1.1, p. 238

<sup>174</sup> Ojai Valley GSP, Section 3.3.1.1, pp. 238-239.

<sup>175</sup> Ojai Valley GSP, Section 3.3.1.1, pp. 239-240.

<sup>176</sup> Ojai Valley GSP, Table 3-2, p. 239.

<sup>177</sup> Ojai Valley GSP, Figure 3-1, p. 241.

<sup>178</sup> Ojai Valley GSP, Section 3.3.1.1, p. 238.

provided in Appendix D.<sup>179</sup> Department staff are concerned that the Hansen well may not be a suitable representative monitoring well consistent with the GSP Regulations,<sup>180</sup> because its hydrograph is not reflective of the larger-scale basin conditions depicted by the hydrographs of the majority of the wells. Staff recommend the GSA reevaluate its representative monitoring network to include wells reflective of the larger-scale basin conditions.

In describing how the selection of minimum thresholds may affect the interests of beneficial uses and users, the GSP provides a discussion of how the beneficial uses and users of groundwater may be impacted if groundwater levels reach the minimum thresholds.<sup>181</sup> The GSP states, “Beneficial uses and users of groundwater in the [Basin] OVGB ...generally include three primary sets of pumpers: agriculture, municipal, and industrial. Other OVGB pumpers include small water systems and *de-minimis* users.”<sup>182</sup> Staff note that the discussion of potential effects on beneficial uses and users is qualitative only, and it appears that additional detailed analysis is needed. For instance, the GSA sets the minimum threshold at the 1951 historical low for Elrod well observed before the installation of many wells being used currently for beneficial uses. However, the GSP does not describe specific impacts on beneficial uses and users (e.g., how many domestic wells may go dry), should groundwater levels drop to that level again. Staff recommend the GSA conduct an analysis to evaluate the selection of the minimum thresholds of groundwater levels on beneficial uses and users, including domestic uses (see [Recommended Corrective Action 3b](#)).

In describing the relationship between the minimum thresholds for each sustainability indicator, the GSP provides a qualitative discussion of the effects of the minimum thresholds for groundwater levels on groundwater storage and groundwater quality, but does not discuss interconnected surface water.<sup>183</sup> The GSP also states that chronic lowering of groundwater levels may cause degradation of groundwater quality for chloride resulting in treatment for municipal and domestic uses.<sup>184</sup> In addition, staff note that elevated nitrate concentrations are present upgradient in the eastern part of the Basin, and chronic lowering of groundwater levels may result in migration of elevated nitrate concentrations into new areas. The GSP does not provide sufficient evidence that the selection of minimum thresholds for groundwater levels will avoid undesirable results for groundwater quality and interconnected surface water. Department staff recommend that the GSA sufficiently evaluate the effects of the selection of minimum thresholds for groundwater levels on other sustainability indicators (see [Recommended Corrective Action 3c](#)).

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<sup>179</sup> Ojai Valley GSP, Appendix D, pp. 487-527.

<sup>180</sup> 23 CCR § 354.36 (c).

<sup>181</sup> Ojai Valley GSP, Section 3.3.1.4, pp. 245-246.

<sup>182</sup> Ojai Valley GSP, Section 3.3.1.4, pp. 245-246.

<sup>183</sup> Ojai Valley GSP, Section 3.3.1.2, p. 245.

<sup>184</sup> Ojai Valley GSP, Section 3.3.1.2, p. 245.

In describing the measurable objectives for groundwater levels, the GSP provides a qualitative description of potential future measurable objectives, and states that the GSA will prepare numeric measurable objectives for groundwater levels as part of GSP implementation.<sup>185</sup> Department staff recommend the GSA establish measurable objectives and interim milestones as part of the next periodic evaluation.

#### *4.3.2.2 Reduction of Groundwater Storage*

In addition to components identified in 23 CCR §§ 354.28 (a-b), for the reduction of groundwater storage, the GSP Regulations require the minimum threshold for the reduction of groundwater storage to be a total volume of groundwater that can be withdrawn from the basin without causing conditions that may lead to undesirable results. Minimum thresholds for reduction of groundwater storage shall be supported by the sustainable yield of the basin, calculated based on historical trends, water year type, and projected water use in the basin.<sup>186</sup>

The GSP describes that the GSA has elected to use groundwater levels as a proxy for groundwater storage. The GSP states, “In essence, the undesirable results of reductions in groundwater in storage are the same as those previously described for chronic lowering of groundwater levels because these impacts go hand-in-hand.”<sup>187</sup> Department staff consider using groundwater levels as a proxy for storage in this Basin reasonable based on information provided in the GSP’s basin settings.

Department staff note that recommended corrective actions provided by the Department for groundwater levels sustainable management criteria also apply to reduction of groundwater storage because it is monitored and managed by proxy using groundwater levels.

#### *4.3.2.3 Seawater Intrusion*

In addition to components identified in 23 CCR §§ 354.28 (a-b), for seawater intrusion, the GSP Regulations require the minimum threshold for seawater intrusion to be defined by a chloride concentration isocontour for each principal aquifer where seawater intrusion may lead to undesirable results.<sup>188</sup>

The GSP identifies that the Basin is not subject to seawater intrusion, and states: “Undesirable results from seawater intrusion are not considered to be applicable to the [Basin] due to geographic isolation from the ocean. The [Basin] OVGB is more than 11 miles from the Pacific Ocean at an elevation of more than 630 feet above mean sea level. As a result, this GSP does not establish criteria for seawater intrusion.”<sup>189</sup> Department

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<sup>185</sup> Ojai Valley GSP, Section 3.4.1, p. 254.

<sup>186</sup> 23 CCR § 354.28(c)(2).

<sup>187</sup> Ojai Valley GSP, Section 3.2.2, p. 233.

<sup>188</sup> 23 CCR § 354.28(c)(3).

<sup>189</sup> Ojai Valley GSP, Section 3.2.3, p. 234.



staff concur with the GSA that the seawater intrusion sustainability indicator is not applicable to the Basin.

#### 4.3.2.4 Degraded Water Quality

In addition to requirements identified in 23 CCR §§ 354.28 (a-b), for degraded water quality, the GSP Regulations also require the minimum threshold for degraded water quality to be the degradation of water quality, including the migration of contaminant plumes that impair water supplies or other indicator of water quality as determined by the Agency that may lead to undesirable results. The minimum threshold shall be based on the number of supply wells, a volume of water, or a location of an isocontour that exceeds concentrations of constituents determined by the Agency to be of concern for the basin. In setting minimum thresholds for degraded water quality, the Agency shall consider local, state, and federal water quality standards applicable to the basin.<sup>190</sup>

The GSP describes significant and unreasonable effects that would constitute undesirable results for degraded water quality as:

“Degraded groundwater quality is significant and unreasonable if the magnitude of degradation precludes the use of groundwater for existing beneficial uses, including through migration of contaminant plumes that impair water supplies, where alternative means of treating or otherwise obtaining sufficient alternative water resources are not technically or financially feasible.”<sup>191</sup> The GSP also states that “At a minimum, for municipal and domestic wells, groundwater quality must meet potable drinking water standards specified in Title 22 of the CCR.”<sup>192</sup>

The GSP does not describe how to evaluate the feasibility of obtaining other groundwater resources or local surface water resources. Department staff note that undescribed determination processes in sustainable management criteria are not entirely consistent with the GSP regulations<sup>193</sup> and could create challenges or delays in Plan implementation or future evaluations by the Department. As described previously for groundwater levels, Staff recommend the GSA sufficiently describe the factors in determining the feasibility of obtaining alternative supplies.

The GSP Regulations require that GSAs provide criteria to define groundwater conditions that indicate undesirable results for each applicable sustainability indicator. The definition of undesirable results should be based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the basin.<sup>194</sup> The GSP does not define undesirable results related to degraded water quality consistent with this requirement.<sup>195</sup>

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<sup>190</sup> 23 CCR § 354.28(c)(4).

<sup>191</sup> Ojai Valley GSP, Section 3.2.4, p. 234.

<sup>192</sup> Ojai Valley GSP, Section 3.2.4, pp. 234-235.

<sup>193</sup> 23 CCR § 354.26 (b)(2).

<sup>194</sup> 23 CCR § 354.26 (b)(2)

<sup>195</sup> Ojai Valley GSP, Section 3.2.4, pp. 234-235.

According to the GSP Regulations, a GSA is not required to establish sustainable management criteria for one or more sustainability indicators if the GSA is able to demonstrate that undesirable results related to these sustainability indicators are not present and are not likely to occur in the basin.<sup>196</sup> The GSP states that degradation of water quality is not a sustainability indicator applicable to the Basin. It states,

“[D]egradation of groundwater quality is an undesirable result that is not occurring and will not occur within the framework of existing regulations and adherence to state and local [Ojai Valley Basin] plans,” “Significant and unreasonable impacts on groundwater quality are a potential outcome in the future if groundwater overdraft is to occur because previous studies have indicated poorer water quality with higher chloride concentrations in portions of the deeper aquifers of the [Ojai Valley Basin],” and “Therefore, adherence to existing regulations and to state and local [Ojai Valley Basin] plans (which are used as the minimum thresholds and measurable objectives for this sustainability indicator), as well as implementation of sustainability criteria for chronic lowering of groundwater levels and reduction of groundwater in storage, in combination, is sufficient to ensure adverse effects related to groundwater quality would continue to be neither significant nor unreasonable.”<sup>197</sup>

Department staff note that the GSA’s explanation above is not sufficient or consistent with the GSP Regulations. In fact, it supports that degradation of water quality is applicable to the Basin, and the GSA should establish sustainable management criteria. Additionally, the GSP indicates that concentrations for TDS, chloride, iron, and manganese occur in excess of suggested maximum contaminant levels and nitrate occurs above maximum contaminant levels in portions of the principal aquifer.<sup>198</sup> Staff are concerned that undesirable results could potentially occur in portions of the Basin that have not experienced elevated concentrations if groundwater pumping or management mobilizes the existing elevated concentrations for any constituent of concern. Stating that an undesirable result is unlikely to occur because the GSA will carefully manage the Basin is not a reasonable justification. Nonetheless, Department staff note that the GSP has already established minimum thresholds and measurable objectives for some of the constituents of concern, despite the GSP’s internal contradiction. Department staff recommend the GSA quantitatively define undesirable results for degradation of groundwater quality consistent with the GSP Regulations (see [Recommended Corrective Action 4a](#)).

The GSP provides the criteria used to establish minimum thresholds for degraded water quality.<sup>199</sup> The GSP selects minimum thresholds based on the drinking water standards for constituents of concern including TDS, sulfate, chloride, boron, nitrate (as N), iron,

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<sup>196</sup> 23 CCR § 354.26 (d).

<sup>197</sup> Ojai Valley GSP, Section 3.2.4, pp. 234-235.

<sup>198</sup> Ojai Valley GSP, Ojai Valley GSP, Figures 2-25 through 2-31, pp. 143-157.

<sup>199</sup> Ojai Valley GSP, Section 3.3.4, p. 250.

and manganese, as presented in Table 3-3.<sup>200</sup> The GSP states that using drinking water standards as the minimum thresholds only applies to areas where groundwater quality degradation is caused by groundwater pumping. It states, “The drinking water standards specified in Title 22 of the CCR are established as the minimum thresholds for degraded groundwater quality for potable supply wells, provided there is a nexus between groundwater extraction and groundwater quality impairment.”<sup>201</sup>

Department staff understand that the GSA is not responsible for improving the degraded water quality conditions that existed before SGMA was enacted. However, the GSA is required to manage the Basin to not exacerbate the existing degraded water quality conditions, whether it is caused by natural occurrence or human activities. Staff note that the GSA has also identified data gaps in groundwater quality because extraction wells in the Basin are generally screened in multiple aquifer units containing water of different quality.<sup>202</sup> Department staff recommend that the GSA coordinate with beneficial users in the Basin and appropriate regulatory agencies to determine if/where groundwater management may exacerbate the water quality degradation (see [Recommended Corrective Action 4b](#)).

The discussion above is further supported by the relationship between the minimum thresholds for groundwater quality and other sustainability indicators. The GSP states, that “as groundwater levels decline there exists the potential for increased concentration of [constituents of concern] as a result of poorer groundwater quality identified in deeper aquifers of the [Basin].”<sup>203</sup>

In describing measurable objectives for groundwater quality, the GSP provides the criteria used to establish measurable objectives for water quality,<sup>204</sup> and establishes measurable objectives by region to accommodate different land uses in the Basin (i.e., urban in the western portion and agricultural in the eastern portion).<sup>205</sup> The GSP lists the measurable objectives for TDS, sulfate, chloride, and boron in Table 3-4.<sup>206</sup> Staff note that the GSP does not establish measurable objectives for nitrate (as N), iron, and manganese.<sup>207</sup> Department staff recommend the GSA establish consistency for all constituents of concern in the development of sustainable management criteria (see [Recommended Corrective Action 4c](#)).

#### 4.3.2.5 Land Subsidence

In addition to components identified in 23 CCR §§ 354.28 (a-b), the GSP Regulations require the minimum threshold for land subsidence to be the rate and extent of

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<sup>200</sup> Ojai Valley GSP, Table 3-3, p. 250.

<sup>201</sup> Ojai Valley GSP, Section 3.3.4, p. 250.

<sup>202</sup> Ojai Valley GSP, Section 3.5.7.2, pp. 272-273.

<sup>203</sup> Ojai Valley GSP, Section 3.3.4.2, p. 251.

<sup>204</sup> Ojai Valley GSP, Section 3.4.4, p. 255.

<sup>205</sup> Ojai Valley GSP, Section 3.4.4, p. 255.

<sup>206</sup> Ojai Valley GSP, Table 3-4, p. 255.

<sup>207</sup> Ojai Valley GSP, Section 3.4.4, p. 255.

subsidence that substantially interferes with surface land uses and may lead to undesirable results.<sup>208</sup> Minimum thresholds for land subsidence shall be supported by identification of land uses and property interests that have been affected or are likely to be affected by land subsidence in the basin, including an explanation of how the Agency has determined and considered those uses and interests, and the Agency's rationale for establishing minimum thresholds in light of those effects and maps and graphs showing the extent and rate of land subsidence in the basin that defines the minimum thresholds and measurable objectives.<sup>209</sup>

The GSP states that land subsidence is not an applicable sustainability indicator for the Basin.<sup>210</sup> The GSP reports that the central portion of the Basin (approximately 60% of the Basin) experienced uplift and areas adjacent to Basin boundaries (approximately 40% of the Basin) experienced subsidence between 0 and 0.21 inches from 2015 to 2019.<sup>211</sup> In addition, the GSA sets the minimum thresholds for groundwater levels near historical lows.

At this time, Department staff concur with the GSA in that land subsidence is not an applicable sustainability indicator for the Basin, and staff are encouraged that the GSA will continue to monitor land subsidence through publicly available data (e.g., InSAR). Staff recommend the GSA revisit this issue and update the Plan as necessary in future periodic evaluations if future land subsidence exceeds that observed between 2015 and 2019.

#### 4.3.2.6 *Depletions of Interconnected Surface Water*

SGMA defines undesirable results for the depletion of interconnected surface water as those that have significant and unreasonable adverse impacts on beneficial uses of surface water and are caused by groundwater conditions occurring throughout the basin.<sup>212</sup> The GSP Regulations require that a Plan identify the presence of interconnected surface water systems in the basin and estimate the quantity and timing of depletions of those systems.<sup>213</sup> The GSP Regulations further require that minimum thresholds be set based on the rate or volume of surface water depletions caused by groundwater use, supported by information including the location, quantity, and timing of depletions, that adversely impact beneficial uses of the surface water and may lead to undesirable results.<sup>214</sup>

The GSA indicates that it does not have enough information to establish sustainable management criteria for interconnected surface water. It states,

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<sup>208</sup> 23 CCR § 354.28(c)(5).

<sup>209</sup> 23 CCR §§ 354.28(c)(5)(A-B).

<sup>210</sup> Ojai Valley GSP, Section 3.2.5, p. 235.

<sup>211</sup> Ojai Valley GSP, Section 2.3.4.5, p. 167.

<sup>212</sup> Water Code § 10721(x)(6).

<sup>213</sup> 23 CCR § 354.16 (f).

<sup>214</sup> 23 CCR § 354.28 (c)(6).

“The interaction between groundwater and surface water within the [Basin] is currently being studied... Available stream gauge and shallow monitoring well data are limited in temporal resolution (i.e., short length of record and/or coarse measurement interval) and additional data are needed to quantify the degree of stream-aquifer connectivity. Monitoring of groundwater levels and stream discharge and stage, as well as field investigations to assess the degree of interconnection between surface water and groundwater are warranted and ongoing.”<sup>215</sup>

The GSP does not quantify the rate or volume of surface water depletions due to groundwater pumping in developing sustainable management criteria for interconnected surface water.<sup>216</sup> Instead, it proposes to collect more data to fill the data gaps and prepare sustainable management criteria as part of the next periodic evaluation. Other areas (refining hydrogeologic conceptual model and groundwater model) discussed earlier in this staff report are also related to this issue of identifying and characterizing interconnected surface water in the Basin.

In describing groundwater dependent ecosystems, the GSP identifies a nexus between the health of mapped potential groundwater dependent ecosystems and groundwater levels.<sup>217</sup> The GSP states that field studies to verify dependence on groundwater are warranted,<sup>218</sup> and states that effects of depletions of interconnected surface water would be considered significant and unreasonable if such depletions cause a decline or permanent loss of groundwater dependent ecosystems.<sup>219</sup>

Department staff understand that quantifying depletions of surface water from groundwater extractions is a complex task that likely requires developing new, specialized tools, models, and methods to understand local hydrogeologic conditions, interactions, and responses. During the initial review of GSPs, Department staff have observed that most GSAs have struggled with this new requirement of SGMA. However, staff believe that most GSAs will more fully comply with regulatory requirements after several years of Plan implementation that includes projects and management actions to address the data gaps and other issues necessary to understand, quantify, and manage depletions of interconnected surface waters. Accordingly, Department staff believes that affording GSAs adequate time to refine their Plans to address interconnected surface waters is appropriate and remains consistent with SGMA’s timelines and local control preferences.

The Department will continue to support GSAs in this regard by providing, as appropriate, financial and technical assistance to GSAs, including the development of guidance describing appropriate methods and approaches to evaluate the rate, timing, and volume

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<sup>215</sup> Ojai Valley GSP, Section 3.2.6, p. 236.

<sup>216</sup> 23 CCR § 354.28 (c)(6).

<sup>217</sup> Ojai Valley GSP, Section 3.2.6, p. 236.

<sup>218</sup> Ojai Valley GSP, Section 3.2.6, p. 236.

<sup>219</sup> Ojai Valley GSP, Section 3.2.6, p. 236.

of depletions of interconnected surface water caused by groundwater extractions. Once the Department's guidance related to depletions of interconnected surface water is publicly available, the GSA, where applicable, should consider incorporating appropriate guidance approaches into their future periodic evaluations to the GSP (see [Recommended Corrective Action 5a](#)). GSAs should consider availing themselves of the Department's financial or technical assistance, but in any event must continue to fill data gaps, collect additional monitoring data, and implement strategies to better understand and manage depletions of interconnected surface water caused by groundwater extractions and define segments of interconnectivity and timing within their jurisdictional area (see [Recommended Corrective Action 5b](#)). Furthermore, GSAs should coordinate with local, state, and federal resources agencies as well as interested parties to better understand the full suite of beneficial uses and users that may be impacted by pumping induced surface water depletion (see [Recommended Corrective Action 5c](#)). Additionally, the GSA should actively work with federal and state agencies to resolve ongoing disagreements surrounding interconnected surface water in the Basin (see [Recommended Corrective Action 5d](#)).

#### 4.4 MONITORING NETWORK

The GSP Regulations describe the monitoring network that must be developed for each sustainability indicator including monitoring objectives, monitoring protocols, and data reporting requirements. Collecting monitoring data of sufficient quality and quantity is necessary for the successful implementation of a groundwater sustainability plan. The GSP Regulations require a monitoring network of sufficient quality, frequency, and distribution to characterize groundwater and related surface water conditions in the basin and evaluate changing conditions that occur through implementation of the Plan.<sup>220</sup> Specifically, a monitoring network must be able to monitor impacts to beneficial uses and users,<sup>221</sup> monitor changes in groundwater conditions relative to measurable objectives and minimum thresholds,<sup>222</sup> capture seasonal low and high conditions,<sup>223</sup> include required information such as location and well construction and include maps and tables clearly showing the monitoring site type, location, and frequency.<sup>224</sup> Department staff encourage GSAs to collect monitoring data as specified in the GSP, follow SGMA data and reporting standards,<sup>225</sup> fill data gaps identified in the GSP prior to the first periodic evaluation,<sup>226</sup> update monitoring network information as needed, follow monitoring best management practices,<sup>227</sup> and submit all monitoring data to the Department's Monitoring Network Module immediately after collection including any additional groundwater

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<sup>220</sup> 23 CCR § 354.32.

<sup>221</sup> 23 CCR § 354.34(b)(2).

<sup>222</sup> 23 CCR § 354.34(b)(3).

<sup>223</sup> 23 CCR § 354.34(c)(1)(B).

<sup>224</sup> 23 CCR §§ 354.34(g-h).

<sup>225</sup> 23 CCR § 352.4 *et seq.*

<sup>226</sup> 23 CCR § 354.38(d).

<sup>227</sup> Department of Water Resources, 2016, [Best Management Practices and Guidance Documents](#).

monitoring data that is collected within the Plan area that is used for groundwater management decisions. Department staff note that if GSAs do not fill their identified data gaps, the GSA's basin understanding may not represent the best available science for use to monitor basin conditions.

The GSP has developed a monitoring network for chronic lowering of groundwater levels, reduction of groundwater in storage, degraded water quality, and depletions of interconnected surface water. The GSP uses the groundwater level monitoring network as a proxy for the reduction of groundwater in storage and depletions of interconnected surface water sustainability indicators. The GSP does not establish a dedicated monitoring network for seawater intrusion and land subsidence because the GSA has determined these sustainability indicators are not applicable to the Basin.

In describing the groundwater level monitoring network, the GSP identifies 23 wells<sup>228</sup> and selects six of these 23 wells as Representative Monitoring Wells.<sup>229</sup> The monitoring well density is sufficient for the Basin as the groundwater level monitoring network is approximately [one] (1) well per 0.4 square miles.<sup>230</sup> The proposed frequency of groundwater level monitoring is two times per year. The GSP states, "Groundwater level measurements used in the evaluation of seasonal high and seasonal low groundwater conditions will be collected in a two-week window in the spring and fall of any given calendar year. Pressure transducers and data loggers at [representative monitoring points] will continue to be used to monitor short-term and seasonal trends, and data will be downloaded, semi-annually, at a minimum."<sup>231</sup>

In describing the groundwater quality monitoring network, the GSP identifies 24 sites to be monitored by the Ojai Basin Groundwater Management Agency, the Ventura County Watershed Protection District, and the State Water Resources Control Board.<sup>232</sup> Monitoring has occurred for constituents of concern including TDS, chloride, and nitrate.<sup>233</sup> The GSP states that groundwater quality monitoring will be completed at least semi-annually.<sup>234</sup> The well density is sufficient as the groundwater quality monitoring network is approximately one well per 0.4 square miles.<sup>235</sup>

In describing the monitoring network for interconnected surface water, the GSP identifies that there is a data gap in interconnected surface water monitoring, that prevents the GSA from estimating depletions of surface water.<sup>236</sup> The GSP identifies the gaps are the short length of record and/or an infrequent measurement intervals at existing measurement sites, and that collecting additional measurements at these existing sites will fill this data

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<sup>228</sup> Ojai Valley GSP, Section 3.5.2.1 and Table 3-5, pp. 258, 259-260.

<sup>229</sup> Ojai Valley GSP, Table 3-6, p. 270.

<sup>230</sup> Ojai Valley GSP, Section 3.5.3.1, p. 265.

<sup>231</sup> Ojai Valley GSP, Section 3.5.4.1, p. 268.

<sup>232</sup> Ojai Valley GSP, Table 3-5, pp. 259-260.

<sup>233</sup> Ojai Valley GSP, Section 3.5.3.3, p. 266.

<sup>234</sup> Ojai Valley GSP, Section 3.5.4.3, p. 268.

<sup>235</sup> Ojai Valley GSP, Section 3.5.3.3, p. 266.

<sup>236</sup> Ojai Valley GSP, Section 3.5.7.2, p. 273.

gap.<sup>237</sup> Surface flows are monitored by five stream gages (three within the GSP area and two located outside of the basin).<sup>238</sup> Department staff recommend the GSA fill data gaps by the next periodic evaluation.

The GSP does not identify monitoring wells specific to groundwater dependent ecosystems. The GSP proposes to prepare a groundwater dependent ecosystems assessment (in Chapter 4 - Projects and Management Actions) to evaluate/identify the need for additional studies and monitoring as part of the implementation process.<sup>239</sup>

Overall, the GSP's discussion of monitoring networks is comprehensive and includes adequate support, justification, and information to understand the GSA's process, analysis, and rationale. Staff will evaluate progress on improving monitoring of Basin conditions in its next periodic evaluation.

#### **4.5 PROJECTS AND MANAGEMENT ACTIONS**

The GSP Regulations require a description of the projects and management actions the submitting Agency has determined will achieve the sustainability goal for the basin, including projects and management actions to respond to changing conditions in the basin.<sup>240</sup> Each Plan's description of projects and management actions must include details such as: how projects and management actions in the GSP will achieve sustainability, the implementation process and expected benefits, and prioritization and criteria used to initiate projects and management actions.<sup>241</sup>

The GSP describes 18 projects grouped into five management actions. The management actions themselves are not projects or actions but represent the grouping of various projects. These five management actions include:

1. Understand the Basin – six projects focusing on monitoring, reporting, and refining sustainable management criteria.
2. Protect and Manage the Basin – four projects focusing on reducing groundwater pumping through conjunctive management, groundwater allocations, water conservation, and voluntary pumping reductions.
3. Encourage Supporting Activities – four projects focusing on potential water supply opportunities such as recycled water, stormwater recharge, and State Water Project (SWP) water.
4. Communicate Effectively – three projects focusing on implementation of public outreach and engagement plan, annual reports and GSP 5-year updates, and evaluating the settlement management plan for the proposed physical solution that is intended to protect Southern California Steelhead.

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<sup>237</sup> Ojai Valley GSP, Section 3.5.7.2, p. 273.

<sup>238</sup> Ojai Valley GSP, Section 3.5.2.2, p. 263.

<sup>239</sup> Ojai Valley GSP, Section 3.5.7.2, p. 273.

<sup>240</sup> 23 CCR § 354.44 (a).

<sup>241</sup> 23 CCR § 354.44 (b) *et seq.*



5. Administrate Efficiently – one project focusing on exploring grant funding opportunities.<sup>242</sup>

Overall, the GSP describes for each project the sustainability indicators the project is expected to address, the expected benefits, circumstances or triggers for implementation, the process to notify the public and other agencies, and anticipated permitting and regulatory processes. The GSP provides a table listing each project's name, relevant sustainability indicators, circumstances for implementation, and schedule.<sup>243</sup> Department staff believe that these projects, if implemented promptly and appropriately, could achieve the Basin's sustainability goal. Staff encourage the GSA to prioritize these projects and management actions to 1) fill the data gaps before the next periodic evaluation, and 2) develop a strategy to respond to minimum threshold exceedances.

#### **4.6 CONSIDERATION OF ADJACENT BASINS/SUBBASINS**

SGMA requires the Department to "...evaluate whether a groundwater sustainability plan adversely affects the ability of an adjacent basin to implement their groundwater sustainability plan or impedes achievement of sustainability goals in an adjacent basin."<sup>244</sup> Furthermore, the GSP Regulations state that minimum thresholds defined in each GSP be designed to avoid causing undesirable results in adjacent basins or affecting the ability of adjacent basins to achieve sustainability goals.<sup>245</sup>

The Basin has two adjacent basins: Upper Ojai Valley Basin and Upper Ventura River Subbasin. The Upper Ojai Valley Basin is a low-priority basin, which is not currently required to be managed under a GSP. The Upper Ventura River Subbasin is a medium-priority basin with a GSP that was submitted to the Department and is being reviewed by staff.

The GSP states that the selected minimum thresholds are not expected to cause undesirable results in adjacent basins or adversely affect the adjacent basins' ability to achieve sustainability goals. The GSP explains that the eastern and western boundaries of the Basin coincide with the recognized bedrock highs limiting groundwater exchange flow with adjacent basins.<sup>246</sup> However, the Basin is hydrologically connected to the adjacent Upper Ventura River Subbasin through San Antonio Creek. Depletions of interconnected surface water from groundwater extractions within the Basin could potentially reduce the streamflow in San Antonio Creek that enters the Upper Ventura River Subbasin. As the GSA fills the data gaps related to interconnected surface water, it should explain how the selection of minimum thresholds for interconnected surface water for the Basin will not adversely impact the Upper Ventura River Subbasin.

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<sup>242</sup> Ojai Valley GSP, Section 4.2, pp. 279-280.

<sup>243</sup> Ojai Valley GSP, Table 4-1, pp. 280-281.

<sup>244</sup> CWC § 10733(c).

<sup>245</sup> 23 CCR § 354.28(b)(3).

<sup>246</sup> Ojai Valley GSP, Section 3.3.1.3, p. 245.

#### **4.7 CONSIDERATION OF CLIMATE CHANGE AND FUTURE CONDITIONS**

The GSP Regulations require a GSA to consider future conditions and project how future water use may change due to multiple factors including climate change.<sup>247</sup>

Since the GSP was adopted and submitted, climate change conditions have advanced faster and more dramatically. It is anticipated that the hotter, drier conditions will result in a loss of 10% of California's water supply. As California adapts to a hotter, drier climate, GSAs should be preparing for these changing conditions as they work to sustainably manage groundwater within their jurisdictional areas. Specifically, the Department encourages GSAs to:

1. Explore how their proposed groundwater level thresholds have been established in consideration of groundwater level conditions in the basin based on current and future drought conditions;
2. Explore how groundwater level data from the existing monitoring network will be used to make progress towards sustainable management of the basin given increasing aridification and effects of climate change, such as prolonged drought;
3. Take into consideration changes to surface water reliability and that impact on groundwater conditions;
4. Evaluate updated watershed studies that may modify assumed frequency and magnitude of recharge projects, if applicable, and

Continually coordinate with the appropriate groundwater users, including but not limited to domestic well owners and state small water systems, and the appropriate overlying county jurisdictions developing drought plans and establishing local drought task forces<sup>248</sup> to evaluate how their Plan's groundwater management strategy aligns with drought planning, response, and mitigation efforts within the basin.

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<sup>247</sup> 23 CCR § 354.18.

<sup>248</sup> Water Code § 10609.50.

## 5 STAFF RECOMMENDATION

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Department staff recommend approval of the GSP with the recommended corrective actions listed below. The Ojai Valley GSP conforms with Water Code Sections 10727.2 and 10727.4 of SGMA and substantially complies with the GSP Regulations. The GSA has identified several areas for improvement of its Plan and Department staff concur that those items are important and should be addressed as soon as possible. Department staff have also identified recommended corrective actions related to the hydrogeologic conceptual model, groundwater conditions, and sustainable management criteria for chronic lowering of groundwater levels, degradation of groundwater quality, and depletions of interconnected surface water. However, these recommended corrective actions do not preclude GSP approval at this time as they do not appear to prevent the GSA from implementing important elements of the current Plan, but it provides the GSA sufficient time to update or revise the Plan (or management under the Plan) as appropriate with new information before the next periodic evaluation so that to the GSA can adjust the Basin management as needed to achieve sustainability within 20 years of the Plan implementation.<sup>249</sup> Staff also note that the OBGMA is a legislatively designated special district identified in SGMA as an exclusive GSA for the Basin,<sup>250</sup> and that it has been actively engaged in groundwater management actions prior to SGMA and GSP submittal. These factors make it reasonable to anticipate that the GSA will promptly and adequately address staff's recommended corrective actions and manage the Basin to achieve sustainability.

The recommended corrective actions include:

### RECOMMENDED CORRECTIVE ACTION 1

The GSA should update the hydrogeologic conceptual model section of the GSP to better describe the Basin's geologic conditions as part of the next periodic evaluation, including:

- a. Provide additional information to the descriptive hydrogeologic conceptual model of the Basin that characterizes the physical components and interaction of the surface water and groundwater systems in the basin.<sup>251</sup> This description should include the regional geologic and structural setting of the Basin including the immediate surrounding area.<sup>252</sup> Department staff additionally recommend describing geologic units consistently across text and figures in the GSP, and providing hydrogeologic evidence in the GSP that supports the presence of a perched aquifer.

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<sup>249</sup> Water Code 10727.2(b)(1); 23 CCR 354.30(a), (e).

<sup>250</sup> CWC § 10723 (c)(1)(L).

<sup>251</sup> 23 CCR § 354.14 (a).

<sup>252</sup> 23 CCR § 354.14 (b)(1).

- b. Provide more information about the description of lateral basin boundaries, including major geologic features that significantly affect groundwater flow,<sup>253</sup> and the definable bottom of the basin,<sup>254</sup> using the best available information.<sup>255</sup>
- c. Provide more information about significant geologic features that affect groundwater flows as part of the description of principal aquifers.<sup>256</sup>
- d. Identify and develop a plan including an implementation schedule to fill data gaps to reduce uncertainty within the hydrogeologic conceptual model.<sup>257</sup>

## **RECOMMENDED CORRECTIVE ACTION 2**

The GSA should update the groundwater conditions section of the GSP to more fully describe the Basin's groundwater conditions and dynamics as part of the next periodic evaluation, including:

- a. Fill data gaps, identify interconnected surface water systems within the basin, and provide an estimate of the quantity and timing of depletions of those systems.<sup>258</sup>
- b. Coordinate with beneficial users of interconnected surface water and other state and federal agencies that are or may act under other laws and authorities to address biological or ecological concerns regarding low instream flows in portions of the Ventura River and its tributaries, and to improve understanding of interconnected surface water and groundwater conditions across the Basin.

## **RECOMMENDED CORRECTIVE ACTION 3**

The GSA should update the sustainable management criteria for the chronic lowering of groundwater as part of the next periodic evaluation, including:

- a. Provide the criteria used to define when and where the effects of groundwater conditions cause undesirable results based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the Basin.<sup>259</sup>
- b. Provide an evaluation of how minimum thresholds may affect the interests of beneficial uses and users of groundwater or land uses and property interests.<sup>260</sup> Specifically, consider the impact of the selected minimum threshold levels on supply wells. The consideration should identify the degree/extent of potential

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<sup>253</sup> 23 CCR § 354.14 (b)(2).

<sup>254</sup> 23 CCR § 354.14 (b)(3).

<sup>255</sup> 23 CCR § 354.14 (b)(4)(B).

<sup>256</sup> 23 CCR § 354.14 (b)(4)(C).

<sup>257</sup> 23 CCR § 354.14 (b)(5).

<sup>258</sup> 23 CCR § 354.16 (f).

<sup>259</sup> 23 CCR § 354.26 (b)(2).

<sup>260</sup> 23 CCR § 354.28 (b)(4).

impact including the percentage, number and location of potentially impacted wells at the proposed minimum thresholds for chronic lowering of groundwater levels.

- c. Provide an evaluation of the relationship between the minimum thresholds for each sustainability indicator, including an explanation of how the Agency has determined that basin conditions at each minimum threshold will avoid undesirable results for each of the sustainability indicators.<sup>261</sup>

#### **RECOMMENDED CORRECTIVE ACTION 4**

The GSA should update the sustainable management criteria for degraded water quality as part of the next periodic evaluation, including:

- a. Provide the criteria used to define when and where the effects of groundwater conditions cause undesirable results based on a quantitative description of the combination of minimum threshold exceedances that cause significant and unreasonable effects in the Basin.<sup>262</sup>
- b. Coordinate with the appropriate groundwater users, including drinking water, environmental, and irrigation users as identified in the Plan, and water quality regulatory agencies and programs in the Basin to understand and develop a process for monitoring and determining if groundwater management and extraction could cause migration of constituents of concern or degraded water quality in the Basin.<sup>263</sup>
- c. Establish consistency in sustainable management criteria for degraded water quality for all constituents of concern, based on quantitative values using the same metrics and monitoring sites as used for establishing minimum thresholds.<sup>264</sup>

#### **RECOMMENDED CORRECTIVE ACTION 5**

Department staff understand that estimating the location, quantity, and timing of stream depletion due to ongoing, Basin-wide pumping is a complex task and that developing suitable tools may take additional time; however, it is critical for the Department's ongoing and future evaluations of whether GSP implementation is on track to achieve sustainable groundwater management. The Department plans to provide guidance on methods and approaches to evaluate the rate, timing, and volume of depletions of interconnected surface water and support for establishing specific sustainable management criteria in the near future. This guidance is intended to assist GSAs in understanding and sustainably managing depletions of interconnected surface water.

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<sup>261</sup> 23 CCR § 354.28 (b)(2).

<sup>262</sup> 23 CCR § 354.26 (b)(2).

<sup>263</sup> 23 CCR § 354.28(c)(4).

<sup>264</sup> 23 CCR § 354.30 (b).

In addition, the GSA should work to address the following items by the first periodic evaluation:

- a) Continue to fill data gaps, collect additional monitoring data, and implement the current strategy to understand and manage depletions of interconnected surface water and define segments of interconnectivity and timing.
- b) Prioritize collaborating and coordinating with local, state, and federal regulatory agencies as well as interested parties to better understand the full suite of beneficial uses and users that may be impacted by pumping induced surface water depletion within the GSA's jurisdictional area.
- c) Consider utilizing the interconnected surface water guidance, as appropriate, when issued by the Department to establish quantifiable minimum thresholds, measurable objectives, and management actions.
- d) Continue to work to resolve the disagreements with state and federal agencies regarding interconnected surface waters.