Paso Basin Cooperative Committee
Notice of Meeting

NOTICE IS HEREBY GIVEN that the Paso Basin Cooperative Committee will hold a Regular Meeting at **4:00 P.M. on Wednesday, July 21, 2021**. Based on the threat of COVID-19 as reflected in the Proclamations of Emergency issued by both the Governor of the State of California and the San Luis Obispo County Emergency Services Director, as well as the Governor's Executive Order N-29-20 issued on March 17, 2020 relating to the convening of public meetings in response to the COVID-19 pandemic, this meeting will be conducted as a phone in/web-based meeting only. There will be no physical meeting location for this Cooperative Committee Meeting. Members of the public can participate via phone or by logging into the web-based meeting.

TO JOIN THE MEETING FROM YOUR COMPUTER, TABLET OR SMARTPHONE, PLEASE GO TO:
https://us06web.zoom.us/j/96956413683?pwd=RVRVOW5JbklWbmRyQ09Dd1FhSG85UT09
(This link will help connect both your browser and telephone to the call)
Passcode: 689623

YOU CAN ALSO DIAL IN USING YOUR PHONE:

- United States: +1 669 900 6833
- Webinar ID: 969 5641 3683
- Passcode: 689623

All persons desiring to speak during any Public Comment can submit a comment by:

- Email at arford@co.slo.ca.us by 5:00 PM on the day prior to the Cooperative Committee meeting
- Teleconference meeting at link and/or phone number above
- Mail (*must be received by 5:00 PM on the day prior to the Committee meeting*) to:
  County of San Luis Obispo Department of Public Works
  Attn: Angela Ford
  County Government Center, Room 206
  San Luis Obispo, CA 93408
- Additional information on how to submit Public Comment is on page 3 of this Agenda

NOTE: The Paso Basin Cooperative Committee reserves the right to limit each speaker to three (3) minutes per subject or topic. In compliance with the Americans with Disabilities Act, all possible accommodations will be made for individuals with disabilities so they may attend and participate in meetings.

John Hamon, Treasurer, City of Paso Robles
Kelly Dodds, Secretary, San Miguel CSD
Debbie Arnold, Chair, County of SLO
Matt Turrentine, Vice Chair, Shandon-San Juan WD

Steve Martin, Alternate, City of Paso Robles
Vacant, Alternate, San Miguel CSD
John Peschong, Alternate, County of SLO
Kevin Peck, Alternate, Shandon-San Juan WD

Agenda
July 21, 2021

1. **Call to Order**
2. **Pledge of Allegiance**
3. **Roll Call**
4. **Public Comment – Items not on Agenda**
5. **Approval of April 28, 2021, Meeting Minutes**
6. **Receive update on DWR's Initial Assessment of Paso Basin GSP and approve approach and budget for addressing deficiencies**
7. **Approve Water Year 2021 Annual Report Consultant procurement process**
8. **Receive informational update on Prop 68 Round 2 Implementation Grant Pursuit**
9. **Receive update on status of SSJWD's SWRCB applications to appropriate water**
10. **Committee Member Comments –** Committee members may make brief comments, provide status updates, or communicate with other members, staff, or the public regarding non-agenda topics
11. **Upcoming meeting(s)**
    a. Consider scheduling Special Meeting
    b. Next Regular PBCC Meeting (October 27)
    c. Consider format for future PBCC meetings
12. **Future Items**
    a. Adopt 2022 Regular Meeting Schedule
13. **Adjourn**

CONFERENCE CALL/WEBINAR ONLY

Wednesday, July 21, 2021, at 4:00 p.m.

Important Notice Regarding COVID-19 based on guidance from the California Department of Public Health and the California Governor's Officer, to minimize the spread of the COVID-19 virus, please note the following:

1. The meeting will only be held telephonically and via internet via the number and website link information provided on the agenda. After each item is presented, Committee Members will have the opportunity to ask questions. Participants on the phone will then be provided an opportunity to speak for 3 minutes as public comment prior to Committee deliberations and/or actions or moving on to the next item. If a participant wants to provide public comment on an item, they should select the "Raise Hand" icon on the Zoom Online Meeting platform or press *9 if on the phone. The meeting host will then unmute the participant when it is their turn to speak and allow them to provide public comment.

2. The Committee's agenda and staff reports are available at the following website: www.slocounty.ca.gov/pasobasin

3. If you choose not to participate in the meeting and wish to make a written comment on any matter within the Committee's subject matter jurisdiction, regardless of whether it is on the agenda for the Committee's consideration or action, please submit your comment via email or U.S. Mail to ensure it is received by 5:00 p.m. on the day prior to the Committee meeting. Please submit your comment to Angela Ford at arford@co.slo.ca.us. Your comment will be placed into the administrative record of the meeting.

   Mailing Address:
   County of San Luis Obispo Department of Public Works
   Attn: Angela Ford
   County Government Center, Room 206
   San Luis Obispo, CA 93408

4. If you choose not to participate in the meeting and wish to submit verbal comment, please call (805) 781-5139 and ask for Angela Ford. If leaving a message, state and spell your name, note the agenda item number you are calling about and leave your comment. The verbal comments must be received by no later than 9:00 a.m. on the morning of the noticed meeting and will be limited to 3 minutes. Every effort will be made to include your comment into the record, but some comments may not be included due to time limitations.

NOTE: The Paso Basin Cooperative Committee reserves the right to limit each speaker to three (3) minutes per subject or topic. In compliance with the Americans with Disabilities Act and Executive Order N-29-20, all possible accommodations will be made for individuals with disabilities, so they may participate in the meeting. Persons who require accommodation for any audio, visual or other disability in order to participate in the meeting of the Paso Basin Cooperative Committee are encouraged to request such accommodation 48 hours in advance of the meeting from Joey Steil at (805) 781-5252.

Paso Basin Cooperative Committee
Minutes (Draft) – April 28th, 2021

The following members or alternates were present:
Debbie Arnold, Chair, County of San Luis Obispo
Matt Turrentine, Vice Chair, Shandon-San Juan WD
John Hamon, Treasurer, City of Paso Robles

1. Call to Order **2. Pledge of Allegiance** **3. Roll call**	Chair Arnold: calls the meeting to order at 4:00 p.m. Chair Arnold: leads the Pledge of Allegiance. County Staff, Angela Ford: calls roll.
4. Public Comment – items not on Agenda	*Meeting Audio: Item start ~ 00:01:53* Chair Arnold: opens the floor for public comment. Greg Grewal: comments on potential conflict of interest of consultant staff working independently for both the Cooperative Committee and SSJWD, and the time provided for public review of the Annual Reports. Mike Mullen: comments that the goal of the GSP is to protect the basin and that there should be more discussion on the CEQA report regarding water banking. Chair Arnold: closes the public comment period
5. Approval of March 17, 2021 Meeting Minutes	*Meeting Audio: Item start ~ 00:06:20* Audio from the March 17, 2021 Paso Basin Cooperative Committee meeting is available at: www.slocounty.ca.gov/pasobasin Chair Arnold: opens discussion for Agenda Item 5 – Approval of March 17, 2021 Cooperative Committee Meeting Minutes; opens the floor for public comment. Greg Grewal: speaks. Treasurer Hamon: asks if PBCC meetings are recorded, staff responds that they are recorded and posted online. Chair Arnold: closes the public comment period. **Motion by:** John Hamon **Second by:** Matt Turrentine **Motion:** Committee moves to approve the March 17, 2021 Meeting Minutes.

Members	Ayes	Noes	Abstain	Recuse
Debbie Arnold (Chair)	X			
Matt Turrentine (Vice Chair)	X			
John Hamon (Treasurer)	X			

6. Receive overview of Prop 1 IRWM Implementation Grant Program	*Meeting Audio: Item start ~ 00:09:28* Meeting materials for Agenda Item #6 are available at: www.slocounty.ca.gov/pasobasin County Staff, Brendan Clark: presents on Integrated Regional Water Management (IRWM) Implementation Grant Program, including program structure and current funding opportunities, project needs to qualify for grant such as CEQA, property acquisitions and easements, permitting, and other funding within the next 12-18 months; comments that groundwater projects will have additional approval process to verify that it is in alignment with the GSP and GSA structure. Treasurer Hamon: asks if the project needs to be shovel ready, staff confirms that this specific opportunity is for shovel-ready projects; asks how it connects to Central Coast Regional Water Quality Control Board (CCRWQCB), staff responds that it is separate and distinct, however any permits/approval from CCRWQCB need to be in place to be awarded grant. Chair Arnold: opens the floor for public comment. Greg Grewal: speaks. Chair Arnold: closes public comment; receives and files presentation.
7. Receive presentation on Paso Basin Aerial Groundwater Mapping Pilot Study	*Meeting Audio: Item start ~ 00:21:10* Meeting materials for Agenda Item #7 are available at: www.slocounty.ca.gov/pasobasin County Staff, Angela Ford: presents on Paso Basin Aerial Groundwater Mapping Study which identified potential groundwater recharge areas and created a hydrogeologic conceptual model. Treasurer Hamon: asks about elevations on the cross sections, staff confirms that the cross sections are based on elevation from sea level. Vice Chair Turrentine: asks if there any other further steps, staff responds that this study is essentially finished but DWR is planning more statewide AEM surveys. Chair Arnold: asks if the favorable recharge areas that were identified would be good areas for stormwater capture, staff responds that the areas would require further investigation to determine other characteristics needed for recharge. Chair Arnold: asks if the Board of Supervisors (BOS) would need to direct staff to look at how to use the study, staff responds that BOS would need to direct staff to pursue further investigations in potential recharge areas. Chair Arnold: opens the floor for public comment.

	Greg Grewal and Ann Myhre: speak. Chair Arnold: closes public comment.
8. Receive presentation on Shandon-San Juan Water District Applications to State Water Resources Control Board to Appropriate Water for Nacimiento and Santa Margarita Lakes	*Meeting Audio: Item start ~ 00:50:00* Meeting materials for Agenda Item #8 are available at: www.slocounty.ca.gov/pasobasin Shandon-San Juan Water District Staff, Randy Diffenbaugh: presents on SSJWD's applications for appropriating 14,000 acre-feet from Nacimiento Lake and 14,000 acre-feet from Santa Margarita Lake that were submitted to SWRCB on February 4th, 2021; SSJWD intends to construct conveyance facilities to convey water from the reservoirs to the basin for recharge, where it will later be pumped for use. Treasurer Hamon: asks if water will be conveyed into the basin and then be extracted in another location within the basin. Shandon-San Juan Water District Staff, Randy Diffenbaugh: responds that the plan is to put the water where it can then be extracted and used within the district's boundaries Treasurer Hamon: asks where the 14,000 acre-feet calculation came from. Shandon-San Juan Water District Staff, Randy Diffenbaugh: responds that quantities for each lake were derived independently of each other and that it was a coincidence that they both happen to be 14,000 acre-feet. Chair Arnold: opens the floor for public comment. Greg Grewal, Ann Meyer, Dennis Loucks, Nancy Issacson, Patricia Wilmore, and Cody Ferguson: speak. Chair Arnold: closes public comment. Chair Arnold: speaks about surprise to see the two applications for water appropriations from two infrastructure projects that are important to the health of the Salinas River; expresses that as a representative for county residents she does not believe county residents would want water from the watershed used for groundwater recharge in the SSJWD; motions to write to the SWRCB from the PBCC expressing opposition to the SSJWD's two applications. The motion does not pass. Treasurer Hamon: expresses that the City of Paso Robles would like to see more information and the applications for the water appropriations.

	Vice Chair Turrentine: expresses that SSJWD sees the applications as the first steps towards achieving basin sustainability. Treasurer Hamon: applauds SSJWD on finding possible supplemental water supply, expresses concerns on conveyance and lack of information. Vice Chair Turrentine: SSJWD welcomes input and partnership with other GSAs and stakeholders. Treasurer Hamon: reiterates that he is not sure about taking a position yet and that the Cooperative Committee needs to continue working together to find solutions. Chair Arnold: does not see these applications as "finding water", sees it as water that is citizen-owned that are part of the county's future water plans; expresses concerns of large agricultural entities utilizing the water to their benefit; expresses need for more discussion on SSJWD applications for water appropriations. Vice Chair Turrentine: reiterates SSJWD's intention is to help bring basin into balance, hopes for collaboration with other GSAs moving forward. Chair Arnold: expresses that the appropriations were not what the Naci partners or County had in mind. Treasurer Hamon: reiterates that he would have preferred if the project was from the PBCC as a whole and not just one of the GSAs. Vice Chair Turrentine: reiterates need to collaborate as a committee, need to seize the opportunity to capture flood flows
9. Committee Member Comments	No comments.
10. Upcoming meeting(s)	Committee Meeting Schedule for 2021: • Wednesday, July 21, 2021 @ 4:00 p.m. • Wednesday, October 27, 2021 @ 4:00 p.m.
11. Future Items	• Committee agrees to continue the discussion on Item 8 at the PBCC meeting on July 21, 2021.
12. Adjourn	Chair Arnold moves to adjourn the meeting at 5:41 p.m.

April 28, 2021 Paso Basin Cooperative Committee Meeting Minutes were Drafted by: County of San Luis Obispo Water Resources Staff

PASO BASIN COOPERATIVE COMMITTEE
July 21, 2021

Agenda Item #6 – Receive update on DWR's Initial Assessment of Paso Basin GSP and approve approach and budget for addressing deficiencies

Recommendation

Receive update on DWR's Initial Assessment of Paso Basin GSP and approve approach and budget for addressing deficiencies

Prepared By

Angela Ford and Courtney Howard, County of San Luis Obispo

Discussion

Background

The CA Department of Water Resources (Department or DWR) has completed an initial review of the Paso Basin GSP and provided a letter outlining "deficiencies which may preclude the Department's approval" (see Attachment 1). This item provides a summary of the deficiencies, the proposed scope of work to address them, recommendations for the procurement of a consultant with regard to the regulatory timeline and consequences, and associated budget approvals.

Summary of Deficiencies and Approach to Addressing Them

Staff from the four GSAs reviewed the deficiencies noted in DWR's letter as well as the two approved plans in the Santa Cruz and Monterey County areas in order to develop an initial approach to addressing the deficiencies. Staff then met remotely with DWR staff[1] on July 8, 2021, to get initial input on the proposed approach. The deficiencies identified in DWR's initial assessment of the Paso Basin GSP and the recommended approach to addressing them based on these discussions are as follows[2]:

Groundwater Levels: Justification for, and impacts of, Sustainable Management Criteria

Deficiency: DWR finds the GSP lacks explanation / justification for selecting sustainable management criteria (e.g., undesirable results, minimum thresholds) for groundwater levels and a discussion of how those criteria may impact beneficial uses/users of groundwater. The GSP should describe specific undesirable results that aim to be avoided through implementing the GSP, why they were selected and how they were determined. Additionally, the GSP should clearly discuss the anticipated impact of operating the basin at the level protective against those conditions on the basin's beneficial uses/users. GSP should either explain how existing minimum thresholds protect against undesirable results or should establish new minimum thresholds that account for the undesirable results.

Scope of Work for addressing the deficiency (approximately $20,000):

- Provide redline clarifications of appropriate sections of the GSP and explanations of the hydrographs to explain/justify the Undesirable Results and Minimum Thresholds.

[1] DWR staff included the acting Deputy Director of the SGMA program, those charged with determining regulatory compliance with SGMA and those charged with providing technical support to help GSAs be compliant with the regulations.

[2] Confirmation with DWR that the scope of work is adequate for addressing deficiencies will be a part of the consultant's scope. It is assumed that consultant deliverables would be compiled in the form of an addendum to the GSP for DWR approval until informed otherwise by DWR.

- Provide a quantitative analysis of the potential impacts of operating the Basin at minimum thresholds, similar to the approved GSP in Monterey County (see Attachment 2 for an excerpt from one of the approved GSPs) and an exhibit/narrative to show the outcome of the analysis.
- Document how beneficial users/uses, if impacted, will be tracked and considered when updating the GSP, and opportunities for assistance.

Interconnected Surface Water: Develop, or justify absence of, Sustainable Management Criteria

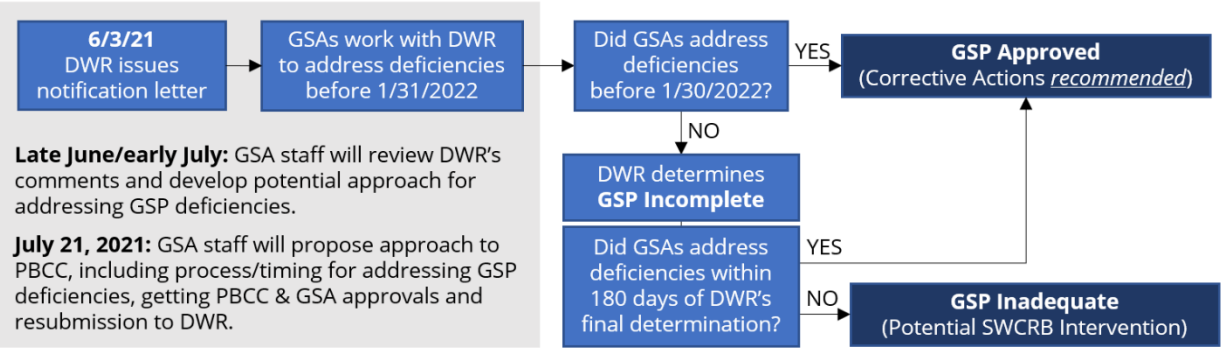
Deficiency: DWR believes the GSP fails to show interconnected surface water is not present or likely to occur in the basin and, therefore, is missing the required sustainable management criteria for depletion of interconnected surface water. The GSP should either provide sufficient, evidence-based justification for the absence of interconnected surface water or it should develop sustainable management criteria for it and discuss the potential impacts such criteria may have on beneficial uses/users of groundwater.

Scope of Work for addressing the deficiency (approximately $35,000):

- Because evidence that pumping has no effect on surface water during times that groundwater in the alluvial aquifer and surface water are interconnected is not publicly available, DWR assumes that it is connected and requires sustainable management criteria to be established. The consultant will need to evaluate what data and wells are publicly available, review the approved GSPs (see Attachment 3 for an excerpt from one of the approved GSPs) and determine the best method for establishing SMCs that will satisfy DWR. Once determined, the consultant will proceed with the method and establish an SMC with the public information available (e.g., wells in the alluvial formation whose water levels are publicly available and modeled surface water behavior).
- A plan for developing publicly available analyses of any interconnection, effects of pumping on surface water at those locations, and coordination with beneficial uses/users of groundwater (e.g., those that commented, see https://sgma.water.ca.gov/portal/gsp/comments/35) will need to be included.

Consultant procurement options and the regulatory timeline

By January 30, 2022, DWR will finalize their assessments and GSAs will have 180 days to address any remaining deficiencies or risk triggering state intervention. Therefore, starting as soon as possible is very important for achieving approval of the GSP and avoiding State intervention. The sooner the GSP is approved, the sooner focus can shift to GSP implementation which includes making the improvements outlined for the 5-year GSP update, and more importantly, moving forward on management actions.



The two options for procuring a consultant are illustrated in Attachment 4 and the following tables provide relevant considerations.

Considerations for Procurement Method Options

Option 1 – Sole Source	- Faster process; leaves more time for addressing GSP deficiencies - No opportunity to review multiple proposals for competitiveness
Option 2 – Solicit Proposals	- Opportunity to review multiple proposals for competitiveness - Slower process; leaves less time for addressing GSP deficiencies

Considerations for Consultant Selection

Montgomery & Associates	- Recent Paso Basin experience from developing Paso Basin GSP - GSP developed has deficiencies
GSI Water Solutions	- Recent Paso Basin experience from developing Paso Basin Annual Reports - Works for individual GSA(s), potential real and/or perceived conflicts
Other Consultant (TBD)	- No real or perceived conflicts if not working for individual GSA(s) - Other consultants have worked in the Paso Basin and are qualified to do the work - Likely require additional support, time, budget to get up to speed

Budget approvals

In addition to the technical work associated with addressing the deficiencies (approximately $55,000), another $20,000 will be necessary for coordination with DWR and the PBCC (and associated public comment), and to cover the potential for refinements based on feedback from DWR. While staff intends to advocate for clear input from DWR as the deficiencies are addressed, there are formal submittals, review periods and approval deadlines that will be necessary. Because this is a new process, the detailed directions regarding these steps (e.g., does the addendum to the GSP need to be approved by the individual GSAs within a certain timeframe?) have yet to be determined. Due to this, staff recommends including optional tasks and the additional $20,000 for multiple consultations with DWR, iterations of the work to resolve the deficiencies and approval process steps in the consultant contract.

In summary, it is recommended that PBCC approve at least a $75,000 budget for this effort and recommend GSAs appropriate their proportionate amounts. To cover the situation where a consultant that has not been engaged in the most recent Paso Basin efforts is selected, and therefore needs time to learn about the situation, an additional 10% is recommended to be added to the budget, for a total of $82,500. Please note that, in order to move quickly, staff developed this initial estimate based on previous experience with consultants and similar efforts. Since the number of iterations to get to GSP approval is uncertain, staff may return to the PBCC in the future with budget adjustments as may be necessary.

GSAs' Staff Cost Estimate

	Contributions based on MOA %*				**Total**
Tasks	City GSA (15.15%)	County GSA (61.62%)	SSJWD GSA (20.20%)	SMCSD GSA (3.03%)	100%
Technical work to address GSP Deficiencies	$8,333	$33,889	$11,111	$1,667	**$55,000**
Coordination with DWR and the PBCC	$3,030	$12,323	$4,040	$606	**$20,000**
*10% Contingency***	*$1,136*	*$4,621*	*$1,515*	*$227*	***$7,500***
Total	***$12,500***	***$50,833***	***$16,667***	***$2,500***	***$82,500***

** GSA contribution percentages are consistent with MOA Section 4.6 and pro rata redistribution of HRCSD GSA's previous 1% contribution.*
***Recommended for consultant not familiar with most recent efforts (e.g., GSP or Annual Report development)*

Attachments

1. DWR Initial Assessment Letter regarding Paso Robles Area Subbasin – 2020 Groundwater Sustainability Plan
2. Excerpt from an Approved GSP: Quantitative Analysis of Potential Impact
3. Excerpt from an Approved GSP : Interconnected Surface Water
4. Flowchart for Consultant Procurement Options & Process for Addressing GSP Deficiencies

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CALIFORNIA DEPARTMENT OF WATER RESOURCES
SUSTAINABLE GROUNDWATER MANAGEMENT OFFICE
901 P Street, Room 313-B | Sacramento, CA 95814 | P.O. Box 942836 | Sacramento, CA 94236-0001

June 3, 2021

Mr. John Diodati, Interim Director
County of San Luis Obispo
Department of Public Works
976 Osos Street, Room 206
San Luis Obispo, CA 93408

RE: Paso Robles Area Subbasin - 2020 Groundwater Sustainability Plan

Dear John Diodati,

The City of Paso Robles Groundwater Sustainability Agency (GSA), the Paso Basin - County of San Luis Obispo GSA, the San Miguel Community Services District GSA, and the Shandon - San Juan GSA (collectively, the GSAs) jointly submitted the Salinas Valley Groundwater Basin Paso Robles Area Subbasin (Paso Robles Subbasin or Subbasin) Groundwater Sustainability Plan (GSP or Plan) to the Department of Water Resources (Department) for evaluation and assessment as required by the Sustainable Groundwater Management Act (SGMA).[1] This letter is intended to initiate consultation between the Department and the Paso Robles Subbasin GSAs in advance of issuance of a determination described under the GSP Regulations.[2]

Department staff recognize the significant effort that went into development of the first GSP for the Subbasin. Staff also encourage the GSAs to continue implementing aspects of the GSP, particularly increasing understanding of, and developing sustainable management criteria for, the principal Alluvial Aquifer and implementing projects and management actions to address overdraft, which will be necessary to achieve the Subbasin's sustainability goal.

Department staff have completed an initial review of the GSP and have identified deficiencies which may preclude the Department's approval.[3] Consistent with the GSP Regulations, Department staff are considering corrective actions[4] that the GSAs should review to determine whether and how the deficiencies can be addressed. The deficiencies and corrective actions are explained in greater detail in Attachment 1, but in general are related to the need to define sustainable management criteria in the

[1] Water Code § 10720 *et seq*.
[2] 23 CCR Division 2, Chapter 1.5, Subchapter 2.
[3] 23 CCR §355.2(e)(2).
[4] 23 CCR §355.2(e)(2)(B).

manner required by SGMA and the GSP Regulations, and to the development of sustainable management criteria for depletions of interconnected surface water.

The Department has the authority to determine the GSP is incomplete and, if it does so, the deficiencies precluding approval will need to be addressed within a period of time not to exceed 180 days from the determination, which would be issued no later than January 31, 2022. Prior to making that determination, and after you review the contents of this letter, Department staff will contact you to discuss the deficiencies and consult with you regarding the amount of time needed by the GSAs to address the potential corrective actions.

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

Thank you,

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

Attachment:

1. Potential Corrective Actions

Potential Corrective Actions

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

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

The first potential corrective action relates to the GSP's lack of explanation and justification for selecting sustainable management criteria for groundwater levels, particularly the minimum thresholds and undesirable results, and the effects of those criteria on the interests of beneficial uses and users of groundwater.

Background

SGMA defines sustainable groundwater management as the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results.[5] The avoidance of undesirable results is thus explicitly part of sustainable groundwater management, as established by SGMA, and critical to the success of a GSP. Accordingly, managing a basin solely to eliminate overdraft within 20 years does not necessarily mean that the basin has done all that is required to achieve sustainable groundwater management. To achieve sustainable groundwater management under SGMA, the basin must experience no undesirable results by the end of the 20-year GSP implementation period and be able to demonstrate an ability to maintain those defined sustainable conditions over the 50-year planning and implementation horizon.

The definition of undesirable results is thus critical to the establishment of an objective method to define and measure sustainability for a basin. As an initial matter, SGMA provides a qualitative definition of undesirable results as "one or more" of six specific "effects caused by groundwater conditions occurring throughout the basin."[6] SGMA identifies the effects related to chronic lowering of groundwater levels as those "…indicating a significant and unreasonable depletion of supply if continued over the planning and implementation horizon."

It is up to GSAs to define, in their GSPs, the specific significant and unreasonable effects that would constitute undesirable results and to define the groundwater conditions that would produce those results in their basins.[7] The GSA's definition needs to include a

[5] Water Code § 10721(v).
[6] Water Code § 10721(x).
[7] 23 CCR § 354.26.

description of the processes and criteria relied upon to define undesirable results and must describe the effect of undesirable results on the beneficial uses and users of groundwater. From this definition, the GSA establishes minimum thresholds, which are quantitative values that represent groundwater conditions at representative monitoring sites that, when exceeded individually or in combination with minimum thresholds at other monitoring sites, may cause the basin to experience undesirable results.[8]

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

GSP-Specific Deficiency

Based on its initial review, Department staff are concerned that although the GSP appears to realistically quantify the water budget and identify the extent of overdraft in the Subbasin, and while the GSP proposes projects and management actions that appear likely to eventually eliminate overdraft in the Subbasin, the GSP has not defined sustainable management criteria in the manner required by SGMA and the GSP Regulations.

1. Regarding the GSA's description of the criteria relied upon to define undesirable results[9] and the potential effects of undesirable results on beneficial uses and users of groundwater, on land uses and property interests, and other potential effects:[10] The GSP states that an undesirable result for chronic lowering of groundwater levels is one that significantly and unreasonably impacts the ability of existing domestic wells of average depth to produce adequate water for domestic purposes, causes significant financial burden to those who rely on the groundwater basin, or interferes with other SGMA sustainability indicators.[11] However, the GSP does not explain why those effects were selected or how the GSAs determined that they will be avoided by managing to the established criteria for chronic lowering of groundwater levels. As written, the GSP implies that some unspecified level of impacts to domestic wells of average depth would be acceptable and

[8] 23 CCR § 354.28, DWR Best Management Practices for the Sustainable Management of Groundwater: Sustainable Management Criteria (DRAFT), November 2017.
[9] 23 CCR § 354.26(a).
[10] 23 CCR § 354.26(b)(3).
[11] Paso Robles GSP, Section 8.4.2, p. 222.

provides no detail of expected impacts to domestic wells of less-than-average depth or to other groundwater users in the Subbasin.

2. Regarding the GSP's definition of minimum thresholds:[12] The GSP provides insufficient detail for how it determined that the selected minimum thresholds (which are set to 30-feet below observed conditions in 2017[13] for all representative monitoring sites) are consistent with avoiding the undesirable results stated above. The Plan states that "[s]pecific conditions such as well depths at each [representative monitoring site] were considered when establishing the groundwater level for the initial minimum threshold."[14] However, no supporting information was provided and, in the absence of specific details regarding how that information was considered (e.g., the GSA's best estimate of the location and number of impacted domestic wells), the Department cannot evaluate whether the criteria are reasonable or whether operating the Subbasin to avoid those thresholds is consistent with avoiding undesirable results. The Department's expectation that impacts to domestic wells, a key component of the GSP's stated undesirable result for chronic lowering of groundwater levels, would be evaluated in the GSP is reasonable as other GSAs and interested parties in California have evaluated the effects of sustainable management criteria on well infrastructure using best available information.

Addressing the Deficiency

The GSAs must provide more detailed explanation and justification regarding the selection of the sustainable management criteria for groundwater levels, particularly the undesirable results and minimum thresholds, and the effects of those criteria on the interests of beneficial uses and users of groundwater. Department staff recommend the GSAs consider and address the following:

1. The GSAs should describe the specific undesirable results they aim to avoid through implementing the GSP. If, for example, significant and unreasonable impacts to domestic wells of average depth are a primary management concern for the Subbasin, then the GSAs should sufficiently explain why that effect was selected and what they consider to be a significant and unreasonable level of impact for those average wells. In support of its explanation, the GSP should also clearly discuss and disclose the anticipated impact of operating the Subbasin at conditions protective against those effects on users of domestic wells with less-than-average depth and all other beneficial uses and users of groundwater in the Subbasin. The discussion should be supported using best available information such as using State or county information on well completion reports to analyze

[12] 23 CCR §§ 354.28(b)(1), 354.28(b)(2), 354.28(b)(4), 354.28(c)(1).
[13] Paso Robles GSP, ES-7, p. 35.
[14] Paso Robles GSP, Section 8.4.4, p. 224.

the locations and quantities of domestic wells and other types of well infrastructure that could be impacted by groundwater management when implementing the GSP.

2. The GSAs should either explain how the existing minimum threshold groundwater levels are consistent with avoiding undesirable results or they should establish minimum thresholds at the representative monitoring wells that account for the specific undesirable results the GSAs aim to avoid.

   Information from DWR's Household Water Supply Shortage Reporting System[15] indicates some domestic groundwater wells in the Subbasin have reported impacts from lowering of groundwater levels. If, after considering the deficiency described above, the GSAs retain minimum thresholds that allow for continued lowering of groundwater levels, then it is reasonable to assume that additional wells may be impacted during implementation of the Plan. While SGMA does not require all impacts to groundwater uses and users be mitigated, the GSAs should consider including mitigation strategies describing how drinking water impacts that may occur due to continued overdraft during the period between the start of Plan implementation and achievement of the Subbasin's sustainability goal will be addressed. If mitigation strategies are not included, the GSP should contain a thorough discussion, with supporting facts and rationale, explaining how and why the GSAs determined not to include specific actions or programs to monitor and mitigate drinking water impacts from continued groundwater lowering below 2015 levels.

Information is available to the GSAs to support their explanation and justification for the criteria established in their Plan. For example, the Department's well completion report dataset,[16] or other similar data, can be used to estimate the number and kinds of wells expected to be impacted at the proposed minimum thresholds. Additionally, public water system well locations and water quality data can currently be obtained using the State Water Board's Geotracker website.[17] Administrative contact information for public water systems, and well locations and contacts for state small water systems and domestic wells, can be obtained by contacting the State Water Board's Needs Analysis staff. The State Water Board is currently developing a database to allow for more streamlined access to this data in the future.

Based on the above information and other local information, and by the first five-year update, the GSAs should continue to better define the location of active wells in the Subbasin. The GSAs should document known impacts to drinking water users caused by

[15] Department of Water Resources, *California Household Water Shortage Data* [website], https://mydrywatersupply.water.ca.gov/report/publicpage, (accessed 21 May 2021).
[16] Department of Water Resources, *Well Completion Reports* [website], https://water.ca.gov/Programs/Groundwater-Management/Wells/Well-Completion-Reports, (accessed 21 May 2021).
[17] State Water Resources Control Board, *GeoTracker* [website], https://geotracker.waterboards.ca.gov/, (accessed 21 May 2021).

groundwater management, should they occur, in annual reports and subsequent periodic updates.

Potential Corrective Action 2. Develop Sustainable Management Criteria for the Depletions of Interconnected Surface Water Based on Best Available Information and Science.

The second potential corrective action relates to the GSP's justification for not developing sustainable management criteria for the depletion of interconnected surface water.

Background

SGMA identifies six effects of groundwater conditions occurring throughout the basin that GSAs must evaluate to achieve sustainable groundwater management. The GSP Regulations refer to these effects as sustainability indicators and they are chronic lowering of groundwater levels, reduction of groundwater storage, seawater intrusion, degraded water quality, land subsidence, and depletions of interconnected surface water.[18] Generally, when any of these effects are significant and unreasonable, as defined in SGMA, they are referred to as undesirable results.[19] SGMA requires GSAs to sustainably manage groundwater, which is defined as avoiding undesirable results for any sustainability indicator during the planning and implementation horizon.[20] Specifically, for each applicable indicator a GSA must develop sustainable management criteria, describe the process used to develop those criteria, and establish a monitoring network to adequately monitor conditions.[21]

A GSA that is able to demonstrate one or more sustainability indicators are not present and are not likely to occur in the basin is not required to develop sustainable management criteria for those indicators.[22] Absent an explanation of why a sustainability indicator is not applicable, the Department assumes all sustainability indicators apply.[23] Demonstration of applicability (or non-applicability) of sustainability indicators must be supported by best available information and science and should be provided in descriptions throughout the GSP (e.g. information describing basin setting, discussion of the interests of beneficial users and uses of groundwater).

The Department's assessment of a Plan's likelihood to achieve its sustainability goal for its basin is based, in part, on whether a GSP provides sufficiently detailed and reasonable supporting information and analysis for all applicable indicators. The GSP Regulations

[18] 23 CCR § 351(ah).
[19] Water Code § 10721(x).
[20] Water Code §§ 10721(v), 10721(r).
[21] 23 CCR §§ 354.22, 354.32.
[22] 23 CCR §§ 354.22, 354.26(d), 354.28(e).
[23] DWR Best Management Practices for the Sustainable Management of Groundwater: Sustainable Management Criteria (DRAFT), November 2017.

require the Department to evaluate whether establishment of sustainable management criteria is commensurate with the level of understanding of the basin setting.[24]

The GSP Regulations require a GSP to identify interconnected surface water systems in the basin and evaluate the quantity and timing of depletions of those systems using the best available information.[25] As noted above, absent a demonstration of the inapplicability of the depletion of interconnected surface water sustainability indicator, GSAs in basins with interconnected surface waters must develop sustainable management criteria for those depletions as described in the GSP Regulations.

GSP-Specific Deficiency

Department staff find, based on conflicting information contained in the GSP, that the GSAs do not sufficiently demonstrate that interconnected surface water or undesirable results related to depletions of interconnected surface water are not present and are not likely to occur in the Subbasin. Therefore, in the absence of a clear demonstration, the GSAs must develop initial sustainable management criteria for depletions of interconnected surface water as required by the GSP Regulations.[26]

The GSP states the surface water flows in the Subbasin over the period of record are "[e]phemeral" and "[t]here are no available data that establish whether or not the groundwater and surface water are connected through a continuous saturated zone" when describing current and historical groundwater conditions.[27] Citing such "insufficient data to determine whether surface water and groundwater are interconnected," the GSAs accordingly do not develop sustainable management criteria.[28] The GSAs state "[d]efinitive data delineating any connections between surface water and groundwater or a lack of interconnected surface waters is a data gap" and provide a general schedule for surface and groundwater investigations in areas of potential interconnectivity planned over the next four years, with a $400,000 budget.[29]

However, descriptions for the hydrogeological conceptual model and water budgets provided in the GSP appear to clearly indicate that interconnectivity between groundwater and surface water exists. For example, the GSP states "[n]atural groundwater discharge areas within the Plan area include … groundwater discharge to surface water bodies."[30] Additionally, groundwater model results from a study conducted by Fugro West Inc. in the Subbasin, which is a primary source for material in the GSP describing the hydrogeologic conceptual model, "indicate that stream discharge accounted for 9,700 AFY [acre-feet

[24] 23 CCR § 355.4(b)(3).
[25] 23 CCR §§ 354.28(c)(6)(A), 354.28(c)(6)(B).
[26] 23 CCR §§ 354.22, 354.26(d), 354.28(e).
[27] Paso Robles GSP, Section 5.5, p. 144.
[28] Paso Robles GSP, Section 8.9, p. 255-256.
[29] Paso Robles GSP, Section 5.5 and Figure 10-1, p. 144 and 309.
[30] Paso Robles GSP, Section 4.7.2, p. 113.

per year] of outflow over the 17-year base period [from 1981 to 1997]".[31] These areas have not been mapped to date; however, the GSP presents groundwater model results identifying potential areas where groundwater discharge to streams is at least 10 acre-feet per year – these areas occur primarily on the Salinas River and Estrella River that overlay the Alluvial Aquifer.[32] Moreover, water budgets developed using the GSP model specifically quantify groundwater discharge to rivers and streams from the Alluvial Aquifer.[33] For instance, during the historical period (from 1981 to 2011) rates of groundwater discharge to streams are estimated to be 7,300 acre-feet per year. Overlapping some areas of potential groundwater discharge are areas of potential groundwater dependent ecosystems (GDEs) that are yet to be verified.[34] The availability of such data in the GSP (i.e. hydrogeological studies and water budgets), therefore, seems to contradict the GSPs own statement that there is "no available data…". Department staff believe the GSP model results and available historical information can serve as the basis to develop initial sustainable management criteria (as defined by the GSP and discussed below). Consequently, Department staff find that the sustainable management criteria currently presented in the GSP (i.e., not defining and establishing criteria) is not commensurate with the level of understanding of the basin setting.

The method for developing sustainable management criteria, as described in the GSP, involved setting initial minimum thresholds and measurable objectives by "[c]ombining survey results, outreach efforts, and hydrogeologic data."[35] A review of the referenced survey indicates 21 percent of respondents (mostly users of domestic wells, agricultural wells, municipal water supply, and community water supply) report being negatively impacted by reduced stream flows.[36] Furthermore, respondents believe the health of the Salinas River (which drains the Subbasin and overlays the Alluvial Aquifer) is negatively impacted by groundwater pumping to a higher degree than direct diversions and limited releases.[37] Additionally, the GSP caveats the sustainable management criteria developed for other applicable indicators by stating that "[d]ue to uncertainty in the hydrogeologic conceptual model, these Sustainable Management Criteria are considered initial criteria and will be reevaluated and potentially modified in the future as new data become available."[38] Nevertheless, despite survey results indicating impacts to beneficial users, available hydrogeologic data (as discussed above), and a declaration that the Plan's initial sustainable management criteria for other applicable indicators is based on

[31] Fugro West, Inc., ETIC Engineering, Inc., Cleath and Associates, Paso Robles Groundwater Basin Study Phase II-Numerical Model Development, Calibration and Application, February 2005.
[32] Paso Robles GSP, Figure 4-17, p. 114.
[33] Paso Robles GSP, Tables 6-1, 6-4, 6-6, 6-9, 6-11, and 6-13, p. 162, 166, 172, 176, 185, and 187. The same information is summarized in the Executive Summary, Table ES-1, p. 31.
[34] Paso Robles GSP, Figure 4-18 and Appendix C, p. 115 and 406
[35] Paso Robles GSP, Section 8.3, p. 221.
[36] Paso Robles GSP, Appendix G, p. 553.
[37] Paso Robles GSP, Appendix G, p. 563, p. 564 and 565.
[38] Paso Robles GSP, Section 8, p. 216.

known uncertainty, the GSAs do not develop sustainable management criteria for depletions of interconnected surface water.

The GSAs have provided, throughout the GSP, data and information that indicate historical, current, and future groundwater discharge to streams and rivers in the Subbasin; therefore, Department staff disagree with the GSP statement that there is "no available data…" Department staff understand that uncertainty may exist in understanding the basin setting and recognize efforts by the GSAs to fill data gaps by planning to conduct investigations and expand the monitoring network.[39] The information and science included in the GSP related to interconnected surface water represents, at this time, the best available to the GSAs even if the available data may be imperfect or the analysis incomplete. Therefore, Department staff believe there is sufficient data to indicate the potential of interconnected surface water in the Subbasin that warrants and requires setting initial sustainable management criteria that may be reevaluated and potentially modified as new data become available. Not developing criteria limits the ability of Department staff to assess whether the Subbasin is being, or will be, sustainability managed within 20 years.

Addressing the Deficiency

The GSAs must provide more detailed information, as required in the GSP Regulations, regarding interconnected surface waters and depletions associated with groundwater use. Department staff recommend the GSAs consider and address the following:

1. Clarify and address the currently conflicting information in the GSP regarding what is known, qualified by the level of associated uncertainty, about the existence of interconnected surface water and, if applicable, the depletion of that interconnected surface water by groundwater use, including quantities, timing, and locations.[40]

2. If the GSAs cannot provide a sufficient, evidence-based justification for the absence of interconnected surface water, then they should develop sustainable management criteria, as required in the GSP Regulations,[41] based on best available information and science. Evaluate and disclose, sufficiently and thoroughly, the potential effects of the GSP's sustainable management criteria for depletion of interconnected surface water on beneficial uses of the interconnected surface water and on groundwater uses and users.

[39] Paso Robles GSP, Section 10, p. 309.
[40] 23 CCR §§ 354.28(c)(6)(A), 354.28(c)(6)(B).
[41] 23 CCR §§ 354.26, 354.28, 354.30.

Table 8-2. Chronic Lowering of Groundwater Elevations Minimum Thresholds and Measurable Objectives

Monitoring Site	Aquifer	Minimum Threshold (ft)	Measurable Objective (ft)
13S/02E-21Q01	180-ft Aquifer	3	8
14S/02E-03F04	180-ft Aquifer	-12	-7.1
14S/02E-12B02	180-ft Aquifer	-19	-11.9
14S/02E-26H01	180-ft Aquifer	-25	-18
14S/02E-27A01	180-ft Aquifer	-18.7	-10.7
14S/03E-18C01	180-ft Aquifer	5	10
14S/03E-30G08	180-ft Aquifer	-29	-3.5
15S/03E-16M01	180-ft Aquifer	-16	-4.1
15S/03E-17M01	180-ft Aquifer	-17.2	2.9
16S/04E-08H04	180-ft Aquifer	30	54.8
16S/04E-15D01	180-ft Aquifer	26	55
17S/05E-06C02	180-ft Aquifer	73.5	94.1
13S/02E-21N01	400-ft Aquifer	-15	-7.6
13S/02E-32A02	400-ft Aquifer	-9.9	-5
14S/02E-03F03	400-ft Aquifer	-40	-19.4
14S/02E-08M02	400-ft Aquifer	-12	-5.9
14S/02E-12B03	400-ft Aquifer	-54	-43
14S/02E-12Q01	400-ft Aquifer	-26.3	-13.5
14S/03E-18C02	400-ft Aquifer	-38	-17.4
15S/03E-16F02	400-ft Aquifer	-20	1.2
16S/04E-08H03	400-ft Aquifer	19	48
17S/05E-06C01	400-ft Aquifer	77	89.6
13S/02E-19Q03	Deep Aquifers	-10	5

8.6.2.2 Minimum Thresholds Impact on Domestic Wells

Minimum thresholds for groundwater elevations are compared to the range of domestic well depths in the Subbasin using DWR's Online System for Well Completion Reports (OSWCR) database. This check was done to assure that the minimum thresholds maintain operability in a reasonable percentage of domestic wells. The proposed minimum thresholds for groundwater elevation do not necessarily protect all domestic wells because it is impractical to manage a groundwater basin in a manner that fully protects the shallowest wells. The average computed depth of domestic wells in the Subbasin is 316.6 feet for the domestic wells in the OSWCR database.

The comparison showed the following:

- In the 180-Foot Aquifer, 89% of all domestic wells will have at least 25 feet of water in them as long as groundwater elevations remain above minimum thresholds; and 91% of all domestic wells will have at least 25 feet of water in them when measurable objectives are achieved.

- In the 400-Foot Aquifer, 79% of all domestic wells will have at least 25 feet of water in them provided groundwater elevations remain above minimum thresholds; and 82% of all domestic wells will have at least 25 feet of water in them when measurable objectives are achieved.

8.6.2.3 Relationship between Individual Minimum Thresholds and Relationship to Other Sustainability Indicators

Section 354.28 of the GSP Regulations requires that the description of all minimum thresholds include a discussion about the relationship between the minimum thresholds for each sustainability indicator. In the SMC BMP (DWR, 2017), DWR has clarified this requirement. First, the GSP must describe the relationship between each sustainability indicator's minimum threshold (i.e., describe why or how a water level minimum threshold set at a particular representative monitoring site is similar to or different from water level thresholds in nearby representative monitoring sites). Second, the GSP must describe the relationship between the selected minimum threshold and minimum thresholds for other sustainability indicators (e.g., describe how a water level minimum threshold would not trigger an undesirable result for land subsidence).

The groundwater elevation minimum thresholds are derived from smoothly interpolated groundwater elevations in the Subbasin. Therefore, the minimum thresholds are unique at every well, but when combined represent a reasonable and potentially realistic groundwater elevation map. Because the underlying groundwater elevation map is a reasonably achievable condition, the individual minimum thresholds at RMSs do not conflict with each other.

Groundwater elevation minimum thresholds can influence other sustainability indicators. The groundwater elevation minimum thresholds are selected to avoid undesirable results for other sustainability indicators.

- **Change in groundwater storage**. A significant and unreasonable condition for change in groundwater storage is pumping in excess of the sustainable yield for an extended period of years. Pumping at or less than the sustainable yield will maintain or raise average groundwater elevations in the Subbasin. The groundwater elevation minimum thresholds are set at or above recent groundwater elevations, consistent with the practice of pumping at or less than the sustainable yield. Therefore, the groundwater elevation minimum

3.8 Land Subsidence Sustainable Management Criteria

3.8.1 Undesirable Results - Land Subsidence

The sustainability indicator is not applicable in the Santa Cruz Mid-County Basin as an indicator of groundwater sustainability and therefore no SMC are set. Section 2.2.2.5: Land Subsidence provides the evidence for subsidence's inapplicability as an indicator of groundwater sustainability. Even though the indicator is not applicable, a statement of significant and unreasonable subsidence caused by lowering of groundwater levels was discussed by the GSP Advisory Committee and is included below:

> *Any land subsidence caused by lowering of groundwater levels occurring in the basin would be considered significant and unreasonable.*

3.8.2 Minimum Thresholds - Land Subsidence

Subsidence is not applicable in the Santa Cruz Mid-County Basin as an indicator of groundwater sustainability and therefore no minimum thresholds are set.

3.8.3 Measurable Objectives - Land Subsidence

Land subsidence is not applicable in the Santa Cruz Mid-County Basin as an indicator of groundwater sustainability and therefore no measurable objectives or interim milestones are set.

3.9 Depletion of Interconnected Surface Water Sustainable Management Criteria

Development of sustainable management criteria for depletion of interconnected surface water is based on the only shallow well and associated streamflow data available in the Basin. Figure 3-3 shows the monitoring features concentrated along the lower Soquel Creek where the closest municipal pumping center occurs to surface water. From these data and other studies, it is understood that late summer streamflow in the mainstem of Soquel Creek between its forks and the USGS streamflow gauge is influenced by many other factors in addition to contributions by groundwater. Annual rainfall, flows from the upper Soquel Creek watershed outside of the Basin, temperature and evapotranspiration individually have a much greater measurable influence on streamflow than groundwater pumping. For this reach of Soquel Creek, it has been concluded over several years of monitoring that there is not a direct measurable depletion of surface water flow correlated with municipal pumping. There are, however, indications that there is an indirect influence where shallow groundwater levels mimic deeper regional groundwater level trends, which have been influenced by municipal pumping. As these observations are made from a few wells on the lower Soquel Creek only, further study as part of GSP implementation will revise the current understanding. This might necessitate a future change in the sustainable management criteria for this sustainability indicator.

3.9.1 Undesirable Results - Depletion of Interconnected Surface Water

Significant and unreasonable depletion of surface water due to groundwater extraction, in interconnected streams supporting priority species, would be undesirable if there is more depletion than experienced since the start of shallow groundwater level monitoring through 2015.

3.9.1.1 Groundwater Elevations as a Proxy for Depletion of Interconnected Surface Water Minimum Thresholds

The metric for depletion of interconnected surface water is a volume or rate of surface water depletion. This is a very difficult metric to quantify in the Basin since the depletion of interconnected surface water by municipal groundwater extraction is so small that it is not possible to directly measure through changes in streamflow. The SGMA regulations allow for the use of groundwater elevations as a proxy for volume or rate of surface water depletion. To use a groundwater elevation proxy there must be significant correlation between groundwater elevations and the sustainability indicator for which groundwater elevation measurements are to serve as a proxy. Significant correlation is difficult to prove because depletion of surface water by groundwater extractions is so small compared to the other streamflow factors mentioned in Section 3.9 above, and is not directly measurable in the streamflow. Even though changes in streamflow from groundwater extractions cannot be directly measured, those changes can be simulated by a model.

An example of the complexities of showing significant correlation can be seen at the Main Street SW 1 shallow well. Data collected at the well site show precipitation and creek stage to have much greater impact on shallow groundwater levels than nearby municipal pumping. Since undesirable results are related to significant and unreasonable depletion of surface water due to groundwater extraction, future monitoring and analysis efforts need to specifically identify groundwater level changes resulting from groundwater extractions. If groundwater levels are responding to factors other than groundwater extractions, it will be challenging to determine whether minimum thresholds are not being met due to just groundwater extractions or because of these other factors.

If groundwater elevations connected to streams are kept at or above current elevations, which are close to record high levels, there will be no more depletion in surface water than experienced over the past 18 years. Essentially, the minimum thresholds seek to maintain a groundwater gradient toward the stream by controlling groundwater levels near the stream. Lower minimum thresholds than those included in this GSP may also prevent increased surface water depletion. However, as there is uncertainty around this relationship, higher minimum thresholds have initially been selected to be more conservative for habitat and sensitive species.

In an effort to show correlation between volume or rate of streamflow and groundwater level proxies for minimum thresholds, groundwater model output is used to estimate the relationship. The groundwater model is used to estimate streamflow depletion from pumping during the 2001-2015 period, which is the period where shallow groundwater level data are available and

from which minimum thresholds are derived. The streamflow depletion estimate is derived by testing the sensitivity of simulated groundwater contribution of streamflow to pumping within the Basin. It is important to acknowledge that data quantifying flows between the stream and shallow groundwater are not available for calibration so there is high uncertainty of the magnitude of simulated flows between stream and aquifer calculated by the model. Adding to the uncertainty of the estimate, this sensitivity test is outside the bounds of real world conditions (i.e., removing all Basin pumping) under which the model is calibrated to shallow groundwater elevation and streamflow data. Due to this uncertainty, the model results represent an estimate of historical streamflow depletion, but the model result value should not be used as quantitative criteria.

Figure 3-15 shows the sensitivity results of groundwater contribution to streamflow from changes in Basin pumping. This analysis is for the entire Soquel Creek watershed during minimum flow months. Removing all modeled private domestic, agricultural, and municipal pumping within the Basin, while continuing pumping outside of the Basin, results in an increased groundwater contribution to Soquel Creek of up to 1.4 cubic-feet per second (cfs) for the 2001-2015 modeled period. This is an estimate of the relationship between the groundwater level proxies for minimum thresholds and streamflow depletion, but it is too uncertain to represent a value to specify as a minimum threshold. For this reason and due to the difficulty measuring streamflow depletion from pumping, it is appropriate to use a groundwater level proxy to prevent the undesirable result of increases in streamflow depletion above what occurred from 2001-2015.

The estimate of historical streamflow depletion may be revised in the future as more information becomes available as a result of more refined modeling, collection of additional monitoring data, or future testing of aquifer and stream properties. In addition, future methods or use of new information may be able to better quantify current depletion from pumping. In order to assess whether undesirable results have occurred, values estimated by different methods or new estimates should be compared to streamflow depletion for 2001-2015 estimated in a consistent manner as opposed to the 1.4 cfs estimated above.

Sections 3.3.4.1 and 3.3.4.2 discuss data gaps associated with establishment of minimum thresholds for depletion of interconnected surface water and the plan to address them.

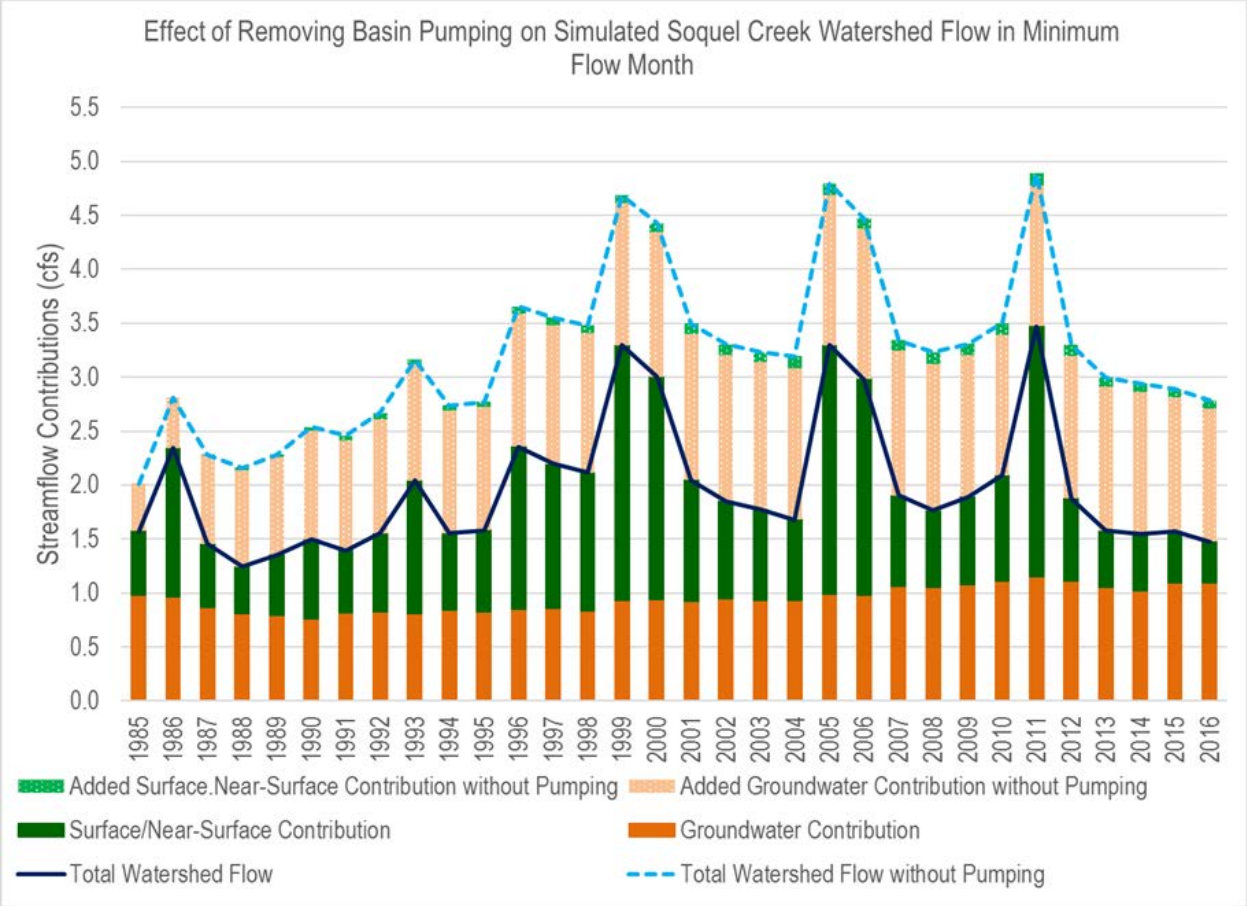


Figure 3-15. Simulated Contributions to Streamflow for Soquel Creek Watershed with and without Historical Pumping

3.9.1.2 Criteria for Defining Depletion of Interconnected Surface Water Undesirable Results

There was support in the Surface Water Working Group to move towards managing shallow groundwater so that interconnected streams have gaining flow from groundwater and are not losing flow to groundwater. Additionally, ensuring that streams do not experience more depletion than has occurred since the start of shallow groundwater level monitoring was another key condition. The Surface Water Working Group elected to take a conservative approach to defining undesirable results where any shallow RMP's groundwater elevation falling below its minimum threshold would be an undesirable result.

It should be noted that since the direct relationship between impacts on sensitive species or habitat and shallow groundwater levels has not been established, current observations do not indicate shallow well groundwater levels below minimum thresholds have a significant and unreasonable impact on sensitive species or habitat. Separate from the GSP, MGA member agencies are monitoring streams within the Basin for fish abundance and habitat conditions. Where feasible, these observations will be compared to groundwater levels and streamflow to attempt to establish a better understanding of the relationships between them.

3.9.1.3 Potential Causes of Undesirable Results

As mentioned previously, there are many factors aside from groundwater that effect streamflow in Soquel Creek and likely other streams in the Basin. Undesirable results for depletion of interconnected surface water in the context of the GSP are related purely to the extraction of groundwater from the Basin. Increased pumping is a potential cause of undesirable results that may manifest itself in reduced groundwater levels in both the shallow and deeper underlying Purisima aquifers. Shallow groundwater data show a relationship with long-term trends in groundwater levels of deeper underlying Purisima aquifers resulting from changes in pumping. However, deep aquifer pumping by municipal wells near Soquel Creek has not found any direct measurable impact on creek flows in studies done to date (HydroMetrics, 2015; HydroMetrics, 2016; HydroMetrics, 2017). Long-term impacts from this pumping on streamflow are being studied as part of the monitoring program outlined in Section 3,4,1,1 of this GSP.

From well permit records it is known there are private domestic wells screened in shallow alluvial sediments and upper Purisima units that are directly connected to surface water. It is possible these wells may have a larger impact on shallow groundwater levels than municipal pumping from the deeper Purisima aquifers. A sensitivity run documented in the model calibration report in Appendix 2-F assumes that non-municipal pumping occurs in the stream alluvium as opposed to the underlying aquifer unit and shows there would be impacts on shallow groundwater levels of pumping the shallow aquifer as opposed to the deeper aquifer.

3.9.1.4 Effects on Beneficial Users and Land Use

Undesirable results for the depletion of interconnected surface water from groundwater extraction will affect aquatic systems mainly during the late summer. Under low flow conditions, there is a direct linear relationship between streamflow and the amount of suitable habitat. Reduction of flow directly reduces the amount of suitable rearing habitat for steelhead, by reducing the amount of wetted area, stream depth, flow velocity, cover, and dissolved oxygen. Reduced flow can also result in increased temperature. In extreme conditions, dewatering of channel segments eliminates the ability of the fish to move to more suitable areas and can cause outright mortality. In even more extreme conditions lowering of groundwater levels below the root zone of riparian vegetation can result in the loss of that vegetation.

3.9.2 Minimum Thresholds - Depletion of Interconnected Surface Water

Using shallow groundwater levels adjacent to streams as a proxy for surface water depletion, undesirable results will occur if the average monthly groundwater levels fall below the minimum threshold, which is established as the highest seasonal low elevation during below- average rainfall years from the start of monitoring through 2015.

3.9.2.1 Information and Methodology Used to Establish Minimum Thresholds and Measurable Objectives

Information used to establish the depletion of interconnected surface water minimum thresholds and measurable objectives include:

- Definitions of significant and unreasonable conditions and desired groundwater elevations discussed during Surface Water Working Group and GSP Advisory Committee meetings.
- Depths, locations, and logged lithology of existing wells used to monitor shallow groundwater levels near creeks.
- Historical groundwater elevation data from shallow wells monitored by SqCWD.
- Streamflow and stream stage data collected by the USGS, SqCWD, County of Santa Cruz, and Trout Unlimited.
- Past hydrologic reports, including annual reports for SqCWD's Soquel Creek Monitoring and Adaptive Management Plan.

The approach for developing minimum thresholds for the depletion of interconnected surface water sustainability indicator is to select groundwater elevations in shallow RMPs below which significant and unreasonable depletion of surface water due to groundwater extractions would occur.

Initially, minimum thresholds were proposed as the lowest groundwater level measured in the shallow wells over the period of record since those years did not appear to have significant or unreasonable conditions. The Surface Water Working Group, however, selected a more conservative minimum threshold due to uncertainty in the relationship between shallow groundwater levels and groundwater contributions to creek flow. It should be noted that there was not consensus around use of specific minimum thresholds, and that these thresholds may need to be adjusted in future updates to the GSP as better monitoring data or more refined modeling results become available.

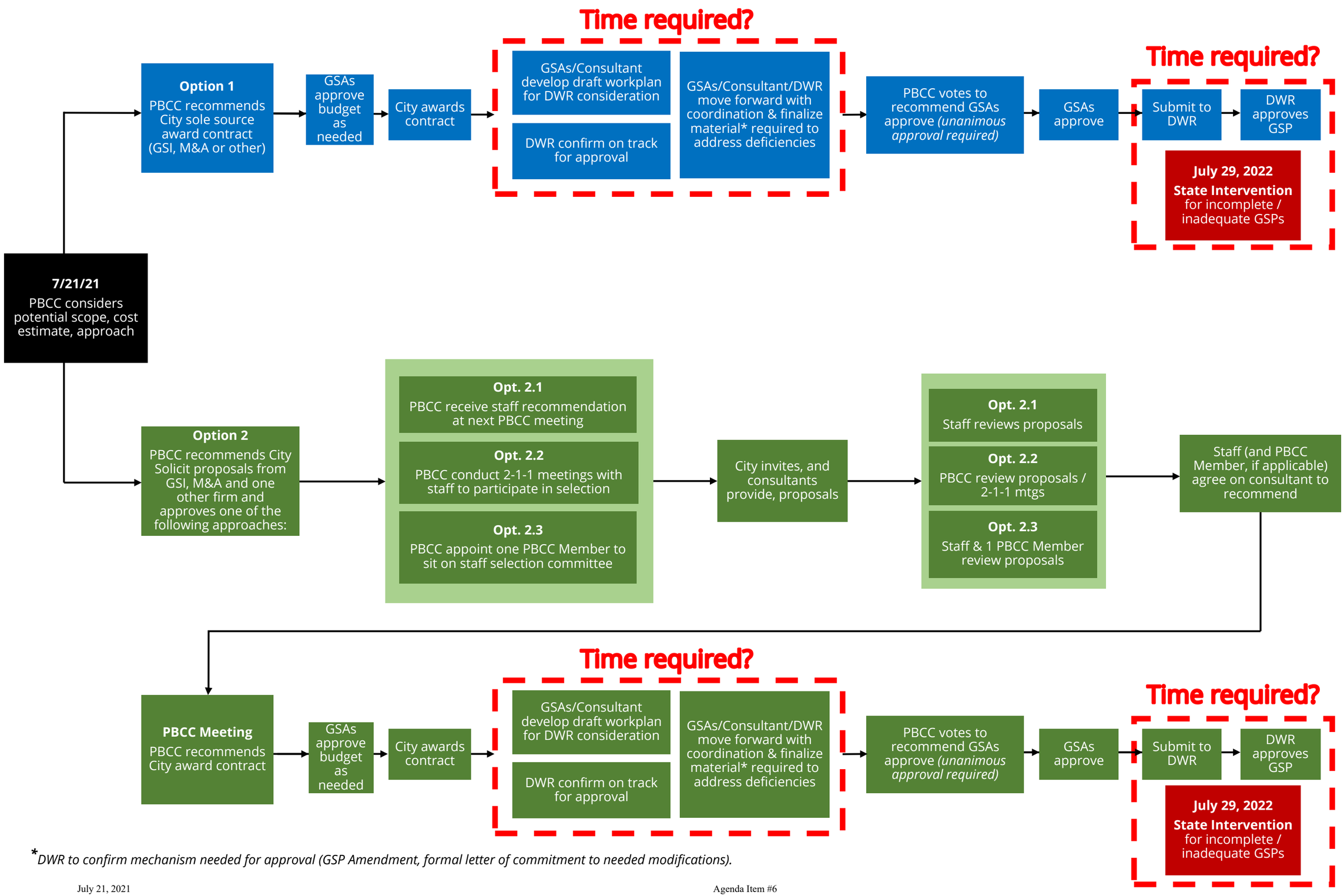
Based on Surface Water Working Group input, minimum thresholds for shallow groundwater elevations in the vicinity of interconnected streams are the highest seasonal-low groundwater elevation during below-average rainfall years, over the period from the start of shallow groundwater level monitoring through 2015. The years after 2015 are not included because 2016 was an average rainfall year and 2017 was extremely wet, which increased overall Basin shallow groundwater elevations above all previous levels.

3.9.2.2 Depletion of Interconnected Surface Water Minimum Thresholds

Table 3-21 lists the minimum thresholds for RMPs currently available to monitor depletion of interconnected surface water. Hydrographs showing historical groundwater elevation data compared to the minimum threshold are provided in Appendix 3-D. An example of one of the RMP hydrographs with its minimum threshold is shown on Figure 3-16.

Table 3-21. Minimum Thresholds and Measurable Objectives for Representative Monitoring Points for Depletion of Interconnected Surface Water

Aquifer Unit	Well Name	Minimum Threshold	Measurable Objective
		Groundwater Elevation, feet above mean sea level	
Shallow Groundwater	Balogh	29.1	30.6
	Main St. SW 1	22.4	25.3
	Wharf Road SW	11.9	12.1
	Nob Hill SW 2	8.6	10.3
Purisima A	SC-10RA	68	70



*****DWR to confirm mechanism needed for approval (GSP Amendment, formal letter of commitment to needed modifications).*

PASO BASIN COOPERATIVE COMMITTEE
July 21, 2021

Agenda Item #7 – Approve Water Year 2021 Annual Report Consultant procurement process

Recommendation
Consider options and approve Water Year 2021 Annual Report Consultant procurement process

Prepared By
Angela Ford, County of San Luis Obispo
Christopher Alakel, City of Paso Robles

Background
The GSP Annual Reports are intended to provide technical information on groundwater conditions and effects of implementation of the GSP over the prior water year. SGMA regulations require GSAs to submit an Annual Report to DWR by April 1 following adoption of a GSP and annually thereafter. The next Annual Report for the Paso Basin is due to the California Department of Water Resources (DWR) by April 1, 2022.

Discussion
GSA staff has a draft scope of work (Attachment 1) from the initial Annual Report that may be used to develop the Request for Proposals (RFP) for the preparation of the Water Year 2021 Annual Report. The draft scope of work is subject to change based on Committee input and further staff review.

Options for the consultant selection and potential Water Year 2021 Annual Report development Process are shown on Attachment 2. GSA staff recommends the Committee consider and approve an approach for selecting a consultant and/or provide direction as needed.

Attachments
1. Draft Scope of Work for Annual Report
2. Consultant Selection Options

* * *

DRAFT SCOPE OF WORK (To be updated & finalized)

PASO ROBLES SUB-BASIN GSP ANNUAL REPORT

Section 356.2 of the Sustainable Groundwater Management Act (SGMA) Emergency Regulations outlines the requirements of the Groundwater Sustainability Plan (GSP) Annual Report, which must be submitted to DWR by April 1 of each year following the adoption of the GSP. The subject GSP will be completed and submitted to the DWR by January 31, 2020 and the Draft Paso Basin Annul Report will need to be public by January 20, 2020 to meet the GSA review process. The groundwater level and aquifer storage data that is reported in the GSP is current through 2016. It is important to note that the regulations require that the components of the report be based on the preceding water year, which covers the period of October 1 to September 30. Because this will be the first GSP Annual Report for the Paso Robles Sub-Basin, the 2020 Annual Report will report on data from October 1, 2017 through September 30, 2019.

The annual report must meet SGMA GSP regulatory requirements, including but not limited to SGMA GSP Article 5 - Plan Content and Article 7- Annual Reports and Periodic Evaluations related to plan implementation, as well as the reporting standards as discussed in the SGMA GSP regulations, Article 3 -Technical and Reporting Standards.

The annual report must include the following components (numbering system follows the format and convention of the regulations):

a. General information, including an executive summary, a location map of the basin, introduction, background, basin setting, methodology of data collection with QA/QC, data results, data analysis/interpretation with a discussion on how this data shows progress towards a sustainable groundwater basin and meets the measurable objectives and minimum thresholds for each undesirable results as discussed in the GSP, and a supporting conclusion with recommendations.

b. A detailed description and graphical representation of:

    1. Groundwater elevation data from monitoring wells in the Plan network analyzed and displayed as follows:

        A. Groundwater elevation contour maps for each principal aquifer (the principal aquifers in the Paso Basin are the Alluvial Aquifer and the Paso Robles Formation Aquifer). The maps must illustrate the seasonal high and seasonal low groundwater conditions. NOTE: Although the report is intended to cover the water year from October 1 through September 30, the fall water level readings by the County are typically performed in October of each year, so the 2020 Paso Robles Basin annual report (and subsequent reports) should include water level data from October 1 2017 through October 30 2019.

        B. Hydrographs of groundwater elevations. It is assumed that this task would update the existing hydrographs presented in the GSP with data through October 2019. (Note: The GSP contains 30 well hydrographs that will need to be updated).

    2. Groundwater extraction for the preceding water year, including use by water sector, method of measurement, accuracy of measurements, and a map showing the general location and volume of extractions.

3. Surface water supply used or available for use, for groundwater recharge or in-lieu use, based on quantitative data that describes the annual volume and sources for the preceding water year.
4. Total water use, by water sector, water source type, method of measurement, and accuracy of measurements.
5. Change in groundwater in storage, including:
    A. Change in groundwater in storage maps for each principal aquifer.
    B. A graph showing water year type, groundwater use, annual change in storage, and cumulative change in storage. NOTE: Although it is understood that the best means of calculating change in groundwater for the basin is based on historical data to the greatest extent available, including from January 1, 2015, to the current reporting year. Although the storage use of in storage is through use of the existing model, the Paso Robles Sub-Basin GSA's have determined that such an update cannot be performed for the annual report without updating the model with current data, which will not be performed until the first 5-year interim report. Thus, the Consultants should utilize a methodology whereby the change in groundwater in storage would be calculated through GIS calculation of volume change based on the water elevation contour maps, factored by the average storage coefficient (S) value assumed by the existing GSP groundwater model. The average storage coefficient (S) values will be provided to the Consultant.
6. The report appendices shall include the following data , but not limited to, the Groundwater Monitoring Program Well Information, Field Logs; Field Methods; Hydrographs, Precipitation and Streamflow Data; Groundwater Storage Calculation Example and Specific Yield Estimates; and data used to prepare for the groundwater storage and water budget (i.e., Agricultural Water Use Estimate, Land Use, Water Use Areas, and etc.).
7. The Consultant will prepare a Groundwater Storage Sensitivity Analysis which will potential sources of error, data gaps and other issues which should be considered when assessing the information contained in the Annual Report. The Groundwater Storage Sensitivity Analysis shall be included in the Annual Report and provided as an appendix.

c. A discussion describing the progress towards a sustainable groundwater basin by implementing the GSP Plan, including achieving interim milestones, and implementation of projects or management actions.

d. Perform general project management and coordination activities including progress reports; cost, budget, and schedule tracking; and status updates.

e. The Consultant shall be responsible for submitting the FINAL Annual Report to the DWR in accordance with the agency's requirements. It is anticipated that this work item will require that the Consultant upload the FINAL Annual Report to the DWR SGMA Portal.

f. Deliverables and Meetings will include the following:

1. Attend up to five (5) GSA staff meetings (not public), including one (1) kick-off meeting to be held a week after the contract is signed. Consultant to prepare all Annual Report meeting materials and provide meeting minutes on the Annual Report.

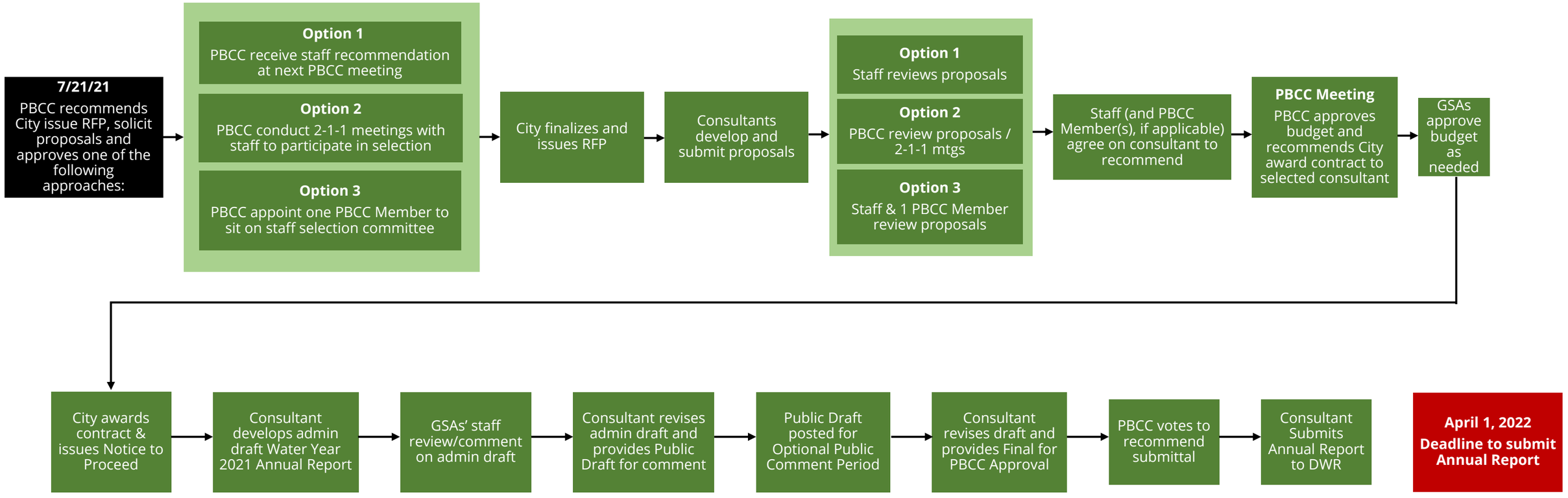
2. Submit an Administrative Draft Report for review and approval by the GSA staff members and the four (4) GSA's overlying the Paso Basin. Address comments received on the administrative draft.
3. Prepare Draft Report with GSA's Project Manager's written approval. Submit the Draft Report for review by the Paso Basin Cooperative Committee and public. Consultant to document and address all comments received on the Draft Report to be published, including all comments received from the GSAs webpages, emails, meetings, and workshops during this process.
4. Facilitate and lead a public workshop on the Draft Report, prepare meeting materials and presentation, and presents the Draft Report. Consultant to document and address all comments received. The workshop should follow a Paso Basin Cooperative Committee meeting located at the City of Paso Robles Council Chambers. Consultant will coordinate meeting details with GSA staff. Meeting outreach will be performed by GSA(s) staff.
5. Attend up to two (2) meetings, prepare and present meeting material on the Draft Annual Report (one meeting will be a summary of the published Draft Report before the workshop and the other meeting will be an introduction/status update), and receive all comments on at the Paso Basin Cooperative Committee. Consultant to document and address all comments received.
6. Prepare the Final Report with GSA's Project Manager's written approval. Final Report to include Consultant's professional stamp and signature and signature blocks for each GSA signature/date.
7. During DWR's Annual Report review process, the Consultant will attend up to two (2) meetings, address questions, and perform revisions to the Final Report to address DWR's questions.

Optional Task: Consultant to prepare optional cost to be included in the proposal.

f. Upon written approval from the GSA's Project Manager, the Consultant shall prepare additional material for the annual report to address DWR's questions. This includes one (1) round of revisions and attending up to two (2) GSA CC staff meetings. If required, this work shall be paid for in accordance with the Consultant's schedule of fees, which shall be included in the Proposal.

Timeline - To meet SGMA requirements and submit the Annual Report to the Department of Water Resources (DWR) by March 31, 2020. Please provide a timeline of the proposed Annual Report to be completed by March 31, 2020 and incorporate necessary time for review and four GSAs to approve the Annual Report for submittal to DWR. Key milestone to include is the Draft Annual Report must be completed and published by January 20, 2020.

Attachment 2 - Consultant Selection Options



PASO BASIN COOPERATIVE COMMITTEE
July 21, 2021

Agenda Item #8 – Receive informational update on Prop 68 Round 2 Implementation Grant Pursuit

Recommendation

It is recommended that the Paso Basin Cooperative Committee (Committee) receive an informational update on the California Department of Water Resources 2019 Sustainable Groundwater Management (SGM) Grant Program Prop 68 Round 2 Implementation Grant Pursuit.

Prepared By

Blaine Reely, San Miguel CSD GSA

Background

The California Department of Water Resources (DWR) has issued a Proposal Solicitation Package (PSP) for the implementation of Groundwater Sustainability Plans (GSPs). Funding for the program will be from the Sustainable Groundwater Management (SGM) Grant Program (https://water.ca.gov/Work-With-Us/Grants-And-Loans/Sustainable-Groundwater) Implementation Grants using funds authorized by the California Drought, Water, Parks, Climate, Coastal Protection, and Outdoor Access For All Act of 2018 (Proposition 68). These funds can be used for eligible projects that address drought and groundwater challenges to achieve regional sustainability for investments in groundwater recharge projects with surface water, stormwater, recycled water, and other conjunctive use projects. Eligible projects include those activities associated with the implementation of an adopted GSP or approved Alternative and must also be listed within an adopted GSP or approved Alternative. The Round 2 grant solicitation will provide approximately $77 million for medium- and high-priority (including Critically Overdrafted) basins.

- At least $62 million for medium and high priority basins that meet the eligibility requirements outlined in the 2019 Guidelines and those in Section III of the PSP.
- At least $15 million for projects that solely benefit and are located within an Underrepresented Community, address the needs of those communities as outlined in the 2020 Disadvantaged Community Initiative Statewide Needs Assessment Report, have a minimum of five letters of support from the community, and meet the requirements outlined within the Public Resources Code section 80146(a).

Only one application will be accepted per basin. Applicants who apply on behalf of a GSA(s) are required to obtain and submit a letter of support from each GSA they represent. The tentative schedule is for the Round 2 Grants Solicitation to open in the **spring 2022** with grant awards to be announced in fall 2022. The minimum grant amount is $2M per basin and the maximum grant amount is $5M per basin. A minimum match of 25 percent (%) of the project cost as local cost share is required. Eligible project expenses must be incurred after January 31, 2022.

Potentially eligible management actions and projects that are included in the Paso Robles GW Basin GSP include the following:

- Development and Implementation of a Non-De Minimis Metering and Reporting Program
- Development and Implementation of a Voluntary Fallowing of Agricultural Land Program
- Development and Implementation of a Mandatory Pumping Limitations Program
- City of Paso Robles Recycled Water Delivery Project

- San Miguel Recycled Water Delivery Project
- Nacimiento Water Pipeline (NWP) Delivery at Salinas and Estrella River Confluence Project
- NWP Delivery North of City of Paso Robles Project
- NWP Delivery East of City of Paso Robles Project
- Expansion of Salinas Dam Project

A requirement of the Proposal Solicitation Package (PSP) is that the applicant must provide an adopted resolution that has been adopted by the applicant's governing body designating an authorized representative to submit the application and execute an agreement with the State of California for the SGM Implementation – Round 2 grant application. The PSP includes an example of the resolution that must be submitted to fulfill this requirement. The DWR highly recommends this language be followed verbatim to ensure that the resolution is sufficient to execute an agreement, execute future amendments (if required), submit invoices, and submit all reporting requirements.

Funding

There is no funding required at this time.

Fiscal Impact

None

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