

AGENDA
Borrego Valley Groundwater Basin: Borrego Springs Subbasin
Sustainable Groundwater Management Act (SGMA)
Advisory Committee (AC)
October 26, 2017 @ 10:00 AM – 3:00 PM
Location: University of California, Irvine
Steele/Burnand Anza-Borrego Desert Research Center
401 Tilting T Drive
Borrego Springs, CA 92004-2098

Remote Access: <https://global.gotomeeting.com/join/980267637> **Call-In:** 1-877-309-2070 **Code:** 980-267-637

Lunch: Lunch will be provided at no charge for Advisory Committee members and \$10 for members of the public.

- I. OPENING PROCEDURES [10:00 am – 10:45 am]**
 - A. Call to Order
 - B. Pledge of Allegiance
 - C. Roll Call of Attendees
 - D. Review of Meeting Agenda
 - E. Approval of September 28, 2017 AC Meeting Minutes
 - F. Updates from the Core Team
 - G. Review of Consensus Voting Process per the AC Bylaws
 - H. Updates from Brian Moniz, Department of Water Resources [10 mins]

- II. ITEMS FOR DISCUSSION AND POSSIBLE RECOMMENDATION [10:45 am – 1:00 pm with Lunch 11:30 am – 12:00 pm]**
 - A. AC POLICY ISSUE #1: Metering Requirements for Non-de Minimis Wells – *Core Team*
 - B. AC POLICY ISSUE #2: Baseline Pumping Allocation – *Core Team*

- III. INTRODUCTION TO TECHNICAL AND POLICY ISSUES [1:00 pm – 2:15 pm]**
 - A. Water Budget – *Core Team & Consultant*
 - B. Reduction Period – *Core Team & Consultant*

- IV. INFORMATIONAL ITEMS [2:15 pm – 2:30 pm]**
 - A. Proposition One Grant Application Update – *Core Team*
 - B. Policy on Correspondence – *Core Team & Facilitator*

- V. CLOSING PROCEDURES [2:30 pm – 3:00 pm]**
 - A. Updates and Comments from Advisory Committee Members
 - B. General Public Comments (comments may be limited to 3 minutes)
 - C. Review Action Items from Previous AC Meetings, Next AC Meeting Date(s), and Next Steps

The next regular meeting of the Advisory Committee is scheduled for **November 27, 2017** at the Borrego Water District (*location is subject to change).

Please be advised that times associated with agenda are approximations only. Public comment periods will be accommodated at the end of each item listed for discussion and possible action. The duration of each comment period will be at the discretion of the meeting Facilitator.

Any public record provided to the A/C less than 72 hours prior to the meeting, regarding any item on the open session portion of this agenda, is available for public inspection during normal business hours at the Office of the Borrego Water District, located at 806 Palm Canyon Drive, Borrego Springs CA 92004.

The Borrego Springs Water District complies with the Americans with Disabilities Act. Persons with special needs should call Geoff Poole at 760-767-5806 at least 48 hours in advance of the start of this meeting, in order to enable the District to make reasonable arrangements to ensure accessibility. Borrego SGMA Website: <http://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html>

MINUTES
Borrego Valley Groundwater Basin: Borrego Springs Subasin
Sustainable Groundwater Management Act (SGMA)
Advisory Committee (AC)
September 28, 2017 @ 10:00 AM – 3:00 PM
Borrego Water District, Board Room
806 Palm Canyon Drive, Borrego Springs, CA 92004

I. OPENING PROCEDURES

A. Call to Order

The meeting was called to order at 10:00 a.m. by Meagan Wylie

B. Pledge of Allegiance

Those present stood for the Pledge of Allegiance.

C. Roll Call of Attendees

Committee members: Present: Jim Seley, Jim Wilson, Suzanne Lawrence, Rebecca Falk, Dave Duncan, Bill Berkley, Gina Moran

Core Team members: Beth Hart, BWD Jim Bennett, County of San Diego
Geoff Poole, BWD Leanne Crow, County of San Diego

Staff: Meagan Wylie, Center Wendy Quinn, Recording Secretary
for Collaborative Policy Trey Driscoll, Dudek, GSP
Martha Deichler, BSUS Consultant

Public: Michael Sadler, *Borrego Sun* Judy Haldeman
Diane Johnson, Stewardship Council Ralph Singer, ABF, BWC
Dennis Jensen, Oasis Ranch
Management
Michael Bozick Betsy Knaak, ABDNHA
Heather Davidson Cathy Milkey
Lyle Stewart Betty Feathers
Bonnie Clapp Ray Shindler
Bruce Manildi

D. Approval of July 27, 2017 AC Meeting Minutes

Upon motion by Member Falk, seconded by Member Seley and unanimously carried by those present, the Minutes of the July 27, 2017 AC Meeting were approved as written.

E. Review of Meeting Agenda

Ms. Wylie announced that the Agenda package was available on the County website, and participants wishing a hard copy should print their own. The Agenda had been restructured in accordance with several requests. Ms. Wylie reviewed the meeting ground rules, Agenda and Brown Act provisions. Member Lawrence asked whether attendees could submit written comments, and Ms. Wylie replied that they could submit them in advance of the meeting and request that they be distributed. Geoff Poole will investigate the best way to do this.

F. Updates from the Core Team on Organizational Procedures and Tools

Jim Bennett reported that he had been working with the Borrego Water District (BWD) and the Center for Collaborative Policy since the last AC meeting. Several AC members wanted to change the overall structure of the meetings. A six-step process for the AC to provide policy recommendations was developed, which will be used for today's policy issue discussions. BWD President Beth Hart emphasized the importance of the AC members obtaining feedback from their constituent groups as part of this six-step process. Hopefully via this process, the members will be able to formulate a recommendation to the Core

Team on a particular issue in a period of approximately up to three months from the issue's introduction. The timeline will be developed to be in line with the overall timeline for Groundwater Sustainability Plan (GSP) development.

A work sheet was provided to facilitate the constituent group feedback process. Member Lawrence inquired about the use of the worksheets, and President Hart replied that they are for internal use by the AC Members and their constituents. The six steps include introduction and overview, technical presentation, questions, constituent group input, AC discussion of constituent group comments, and development of a policy recommendation. If the AC cannot reach consensus on a recommendation, the Core Team will relieve them of the responsibility and develop a recommendation of their own. The ultimate decision-making authority rests with the BWD Board of Directors and the County of San Diego (County) Board of Supervisors.

Mr. Poole pointed out that for today's policy issues, Steps 1 and 2 have already been completed. Mr. Bennett stressed the value of the collaborative process and the importance of reaching consensus, so the whole community can come together and avoid confrontation.

II. ITEMS FOR DISCUSSION AND POSSIBLE RECOMMENDATION

A. AC POLICY ISSUE #1: Metering Requirements for Non-de Minimis Wells

Mr. Poole explained that once the GSP is adopted, the Groundwater Sustainability Agency (GSA) has the authority to make well metering mandatory. The policy issue before the AC was to decide whether or not to include this requirement in the GSP. If the GSP is to include mandatory metering, then a monitoring option must be recommended: by the GSA, or by a neutral third-party. Mr. Bennett pointed out that with mandatory metering, the cost of the meter and installation would be borne by the pumper. BWD sent letters to all well owners asking whether they would be interested in voluntary metering, in which case grant funding may be available to cover the cost. Of the 17 responses, 10 were interested and 7 were not. Mr. Poole agreed to send a copy of the letter to the AC members. Mr. Bennett went on to explain that the metering data would be used to monitor the amount of water being pumped out of the basin, and the information would be available to the public. Wells pumping less than two acre-feet per year are exempt.

Member Falk reported that in a straw poll of the Community Sponsor Group, those present unanimously supported mandatory metering. Member Berkley reported that all local golf courses are currently metered, and he assumed they would be willing to share the data. Member Duncan reported that at both his BWD ratepayer meetings, there was unanimous support for mandatory metering. Member Seley explained that most of the farmers expect there will be mandatory metering upon GSP adoption and are resigned to it. However, they have an issue with voluntary metering due to concerns about a monitor accessing their property. He suggested the AC consider accepting collated pumping statistics from farmers as a group, including photographs of meter readings. Mr. Bennett pointed out that Trey Driscoll is completing the water budget using evapotranspiration figures for the farm extraction, but if Member Seley and his constituents could provide actual figures within the next 30 days, it would be helpful. Member Seley will work with Mr. Driscoll on this and poll his constituents.

Member Moran reported that the State Park supports metering and monitoring. Discussion followed regarding the options for monitoring. Although she had not yet polled her constituents, Member Falk favored monitoring by the GSA. She pointed out that if evapotranspiration is used in lieu of metering data, the baseline would likely be low, so it would be in the interest of the pumpers to meter. Member Duncan noted that monitoring by the GSA would be more cost effective than using a third party, since BWD had meter readers on staff. Member Lawrence stated that electronic monitoring could benefit the community in other ways by enhancing technology. Member Wilson suggested quarterly monitoring rather

than monthly, but Mr. Bennett explained that monthly monitoring allows for proactive management of each well by detecting any leaks or ongoing corrections to erroneous data being collected.

Bruce Manildi, a retired farmer, stated that the National Resource Conservation Service provides money for wells to be metered. The pumper pays for the installation.

The Committee broke for lunch at 11:30 a.m. and reconvened at 12:05 p.m.

B. AC POLICY ISSUE #2: Baseline Pumping Allocations

Mr. Driscoll presented slides representing the preliminary estimate of groundwater extraction for a ten-year baseline, 2005-2014. It indicated between 66 and 77 percent of the water was used by agriculture. The working draft is using 72 percent for agriculture, 15 for recreation and 13 for municipal. Mr. Bennett explained that the baseline determines how much water individual sectors and pumpers used prior to any reductions that would be part of the GSP. The Core Team suggested a ten-year baseline period. Mr. Driscoll noted that for adjudication or prescriptive rights, a five-year baseline is used, but a ten-year period is acceptable under SGMA. The AC was requested to agree or disagree with this recommendation. Members Duncan and Moran supported the ten-year baseline.

Mr. Driscoll explained that the Core Team is considering the issue of fallowed farmland, and how this would factor into the baseline. Member Falk thought it should be considered. Member Seley pointed out that recent court rulings have considered the highest water use over a five-year period. Mr. Driscoll explained that legal advice would be needed on this issue, and Member Seley urged that it be taken into consideration. Member Berkley pointed out that the Rams Hill Golf Course was closed during 2011, 12, 13, and part of 14, so it would be to his benefit to use the highest use. He predicted the Borrego Springs Resort would agree, since they removed nine of their twenty-seven holes. He also pointed out that Rams Hill uses non-potable water for irrigation. Member Wilson suggested allowing exceptions to the ten-year average, and Mr. Poole noted that the missing years (for golf course closure or fallowing) might be filled in with an average usage figure. Member Berkley asked what happens after the baseline is determined. Mr. Driscoll explained that pumpers would be assigned a percentage of their baseline on which their allowable future extraction would be calculated. Member Duncan requested some examples of different baseline levels and their associated reduction levels at the next meeting, and Mr. Driscoll agreed to provide them.

III. INFORMATIONAL ITEMS

A. State of California SGMA/GSP Informational Document

Ms. Wylie announced that a draft, annotated GSP outline is available on the Department of Water Resources (DWR) website and is a good resource for GSP development.

B. Sustainability Indicators, Measurable Objectives, and Minimum Thresholds

Mr. Driscoll reminded the AC that the GSP must meet the goal of SGMA without causing undesirable results. The potential undesirable results are grouped into six categories: chronic lowering of groundwater levels, reduction in groundwater storage, degraded water quality, seawater intrusion, land subsidence and depletion of interconnected surface water. The last three are likely not applicable to Borrego, although the depletion of interconnected surface water is being studied further. Measurable objectives and threshold values need to be identified for each indicator. Mr. Driscoll presented graphs depicting water extraction and recharge from 1992 through 2004. Leanne Crow will put the slides on the County website.

C. Proposition One Grant Application Update

Mr. Poole announced the next round of Proposition 1 grant applications, which include grants for Severely Disadvantaged Communities (SDACs), of which Borrego Springs is one. BWD and the County

are coordinating their efforts on the applications, and BWD is seeking public input to define and prioritize projects to be included. BWD Directors Harry Ehrlich and Joe Tatusko are working with citizens, including some AC Members. Drilling of new wells is not eligible, but feasibility studies are. Reimbursement for installation or improvement of well meters is another possibility, as is assessment of socioeconomic impacts of the GSP. The limit for an SDAC grant is \$1 million. Mr. Bennett reported that the County planned to earmark \$500,000 of the grant application for California Environmental Quality Act compliance and land use (General Plan and zoning) amendments associated with GSP projects.

Betsy Knaak expressed support for including the services of LeSar Development Consultants to study the socioeconomic impacts of the GSP in the grant application. Diane Johnson concurred. Martha Deichler suggested including an educational component and addressing family issues. President Hart reported that BWD has commissioned a financial study to determine what level of water rate increases can be tolerated by the community. Under a proposed change in State law, it may be possible to offer lower rates to low income families. Ms. Johnson suggested retaining a grant consulting for assistance with this complex process.

D. Revisions to SGMA Frequently Asked Questions (FAQ) Document

Ms. Wylie reported that the FAQs, drafted by BWD, had not yet been reviewed by the AC, the County and legal counsel. They are still in draft form. Member Falk had comments and will send them to Mr. Poole. She hoped to discuss her comments with legal counsel should there be differences of opinion. Ray Shindler, representing an independent group of ratepayers, expressed the opinion that the document was fatally flawed.

IV. CLOSING PROCEDURES

A. Correspondence

- a. AC – Bill Berkley, Rebecca Falk, Suzanne Lawrence, Jim Wilson, Agriculture Representatives
- b. Public – Diane Johnson, David Garmon

President Hart acknowledged the correspondence and thanked those who wrote for providing an opportunity to make appropriate changes in the GSP process. Member Lawrence hoped that future correspondence would also be included in the Agenda package. Members Duncan and Berkley concurred. Member Lawrence commented on the letter from the agricultural representatives, which indicated that per the Borrego Water Coalition (BWC) recommendations, if the farmers are not compensated for their reduced water rights under the GSP they are not bound by it. She hoped BWD would look into this. Member Seley explained that the purpose of the letter was to emphasize that the BWC wanted all to work together for their common aquifer, and that there is a compensation factor.

B. Updates and Comments from Advisory Committee Members

Member Falk reported that the Community Sponsor Group had received recent requests for extensions of Subdivision Map Act applications. She questioned whether BWD was considering refusing them. Mr. Poole explained that the BWD Board had discussed the matter in closed session and he could not share it at this time. The two recent requestors had a long history with their projects and had paid fees. New developments must comply with the water credit mitigation policy.

C. General Public Comments

Ms. Johnson asked whether the proportional water use assumed by the BWC (70 percent agriculture, 20 recreation and 10 municipal) would remain the same under the GSP. Ms. Wylie replied that Mr. Driscoll would introduce further detail regarding this issue in the future. Member Wilson agreed that it should be addressed before including it in the GSP. Mr. Shindler asked whether the Anza Borrego Foundation, the State Park and BWD believed they were bound to support the BWC recommendations,

which they signed. Member Seley pointed out that the BWC was formed by the DWR in an effort to foster community cooperation and reach a common ground. He believed they did a lot of good, and the signatories should support their recommendations. President Hart explained that BWD received the recommendations but did not adopt them. Upon Member Wilson's request, Member Duncan agreed to send him a copy of the recommendations.

D. Review Action Items from previous AC Meetings, Next AC Meeting Date(s), and Next Steps

Ms. Wylie invited the AC's attention to Agenda package page 22, the Work Planning and Timeline Chart. The next meeting is scheduled for October 26, location to be determined. The AC may consider formal adoption of recommendations regarding today's Policy Issues 1 and 2. President Hart asked that the AC and Core Team members think about the meeting schedule for November and December, considering the holidays, and e-mail Ms. Wylie any vacation plans.

Ms. Wylie reported that all action items are complete or ongoing, except the Interests and Issues Tracking spreadsheet, which is in development with the Core Team. President Hart welcomed comments and suggestions on the new Agenda format.

There being no further business, the meeting was adjourned at 3:00 p.m.

October 20, 2017

TO: Advisory Committee

FROM: Core Team

SUBJECT: Item I.G: Review of Consensus Voting Process per the AC Bylaws

The following excerpt from the Borrego AC Bylaws, as adopted and approved at the June 29, 2017 Borrego Valley GSP Advisory Committee Meeting, reviews the AC consensus voting process:

Article 5 ORGANIZATIONAL PROCEDURES

Section A – Robert’s Rules of Order govern the operation of the AC in all cases not covered by these by-laws, the AC may formulate specific procedural rules of order to govern the conduct of its meetings.

Section B – Any voting is on the basis of one vote per AC member. No proxy or absentee voting is permitted.

Section C – All AC recommendations regarding the GSP shall be made by consensus. Consensus is achieved when AC participants indicate that they are at Levels 1-4 (not Levels 5 or 6) as described below. If after multiple attempts, the AC deems consensus improbable among the AC members on a particular matter, the issue will be returned to the Core Team without a recommendation.

Levels of consensus are as follows:

1. I can say an **unqualified ‘yes’** to the decision. I am satisfied that the decision is an expression of the wisdom of the group.
2. I find the decision **acceptable**. It is the best of the real options we have available to us.
3. I can **live with** the decision. However, I’m not enthusiastic about it.
4. I do not fully agree with the decision and need to register my view about it. However, I do not choose to block the decision and will **stand aside**. I am willing to support the decision because I trust the wisdom of the group.
5. We need to **do more work** before consensus can be achieved.
6. I do not agree with the decision and feel the need to **block** the decision being accepted as consensus.

October 20, 2017

TO: Advisory Committee

FROM: Core Team

SUBJECT: Item II.A: AC POLICY ISSUE #1: Metering Requirements for Non-de Minimis Wells

The following information was provided at the September 28, 2017 Borrego AC meeting, and is included here again in the October 26, 2017 agenda packet for convenient reference:

SGMA gives the legal authority for GSAs to create implementation measures within the Basin to reach sustainability including Mandatory Metering on domestic wells greater than 2 acre feet per year (651,702 gal). The issue of Mandatory Metering has been the topic of discussion for the previous two AC meetings. In June 2017, the issue was introduced, and in July 2017, a technical PowerPoint presentation was given by Dudek. During and following the presentation a few of the key components of metering such as mandatory vs. voluntary as well as various options for monitoring (GSA vs. Independent Contractor) were discussed.

To begin this process, relevant Background Info and a List of Issues/Questions have been created by the CT based on past discussions regarding mandatory metering and follows this Staff Report.

ISSUES REQUIRING AC POLICY RECOMMENDATIONS

AC POLICY ISSUE #1: Metering Requirements for Non-de Minimis Wells

INTRODUCED: September 28, 2017

Following is background information and the initial list of relevant questions to be considered by the AC and their Constituent Groups (CG) to aid in answering the questions on the issue of Mandatory Water Metering, **the GSA Core Team (CT) requests the questions be polled for consensus by the CGs at the October 2017 AC meeting.**

BACKGROUND INFORMATION:

- What authority does SGMA provide for a GSA to meter wells? SGMA (Section 10725.8(a)) authorizes a GSA the ability to require through its groundwater sustainability plan (GSP) that every well within the management area of the GSA be measured by a water-measuring device satisfactory to the GSA. SGMA exempts domestic wells that use two afy (651,702 gal/yr) or less per year. Well metering can be required once a GSP is adopted.
- Who will pay for the installation of well meters? If mandatory metering is required, SGMA (Section 10725.8(b)) states that all costs associated with the purchase and installation of the water measuring device shall be borne by the owner or operator of each well. In early September 2017, Borrego Water District (BWD) sent out letters to well users in the Borrego Springs subbasin to determine the level of interest in participating in a voluntary metering program in which partial or complete rebates may be available through State Proposition 1 grant funding. The BWD will determine whether to pursue the State grant based on level of interest.
- How will the well metering data be used? Individual metering data collected will be used for GSP implementation to accurately monitor pumping volumes.
- Will the well metering data be public information once provided to the GSA? Yes, the GSA as a public agency would be required to disclose the data to anyone in the public who requests to receive the well metering data.
- What are the long-term funding sources of the well metering program? GSA expenses for administering the metering and monitoring program may be recovered through an administrative fee charged to individual pumpers.
- What potential impacts exist if wells are not metered and monitored? Any public agency required to purchase water allocations from an outside source will be required to establish that it is purchasing a measurable product within the constraints of required Basin wide reductions. As a result, unmetered water sources will likely not be eligible to participate in any purchase program.

AC QUESTIONS

- **AC Policy Recommendation #1 – Question #1:** With the exception of domestic wells that use two afy (651,702 gal/yr.) or less per year, do you recommend meters be required to be installed on all wells within Borrego Springs subbasin?
 - YES or NO IF YES, See Question 2 below:
- **AC Policy Recommendation #1 - Question #2:** If YES, what option(s) of well meter data collection, reporting, and calibration are preferred?

The following are potential options for AC consideration:

- Option 1: The Groundwater Sustainability Agency (GSA) inspects and monitors/reads the meter on a monthly basis and ensures the accuracy of the data including meter calibration. The GSA would provide an annual statement setting forth the total extraction in gallons from each well.
- Option 2: A third-party contractor acceptable to the GSA would inspect and monitor/read the meter on a monthly basis and verify the accuracy of data including meter calibration. The third-party contractor would provide an annual statement to the GSA setting forth the total extraction in gallons from each well.

Regardless of which Option is selected above, remote telemetry is a potential technology that could be considered, where practical, for the GSA or Contractor to obtain meter reads on a monthly basis and can be further discussed.

October 20, 2017

TO: Advisory Committee

FROM: Core Team

SUBJECT: Item II.B: AC POLICY ISSUE #2: Baseline Pumping Allocation

The Core Team and Dudek have proposed using the average production for the 10-year period from 2005 to 2014 (10-year average) for the groundwater extractors in the Borrego Springs Subbasin of the BVGB as part of the Groundwater Sustainability Plan (GSP) for the basin. The Core Team and Dudek will include rationale during AC deliberation of Item II.B. regarding the approach of using a 10-year average to establish baseline pumping for groundwater extractors.

The following information was provided at the September 28, 2017 Borrego AC meeting related to AC Policy Issue #2 Baseline Pumping Allocation, and is included below in the October 26, 2017 agenda packet for convenient reference:

ITEM EXPLANATION: Dudek provided a Technical Presentation on the issue of Benchmarking (Baseline Pumping Allocation) at the July 27, 2017 AC meeting. The PowerPoint presentation is available from the County's website. In summary, the Baseline Pumping Allocation establishes historical rates of groundwater extraction (pumping) over a given period of time. SGMA allows for local development of the Baseline Pumping Allocation period. The 10-year period from January 1, 2005 to January 1, 2015 was presented as the baseline period to analyze historical rates of pumping in the Borrego Springs Subbasin. The end date of the pumping period is based on Water Code § 10720.5, which is the cut-off date for claims of prescription. The average pumping rate over the 10-year period by each pumper is their baseline pumping allocation. This is the starting point from which future water use reductions will be based.

In the presentation at the last July 27, 2017 AC Meeting, Dudek discussed the general approach of setting a baseline pumping allocation and how water use trended by water sector (i.e. Agricultural, Municipal and Recreation) during the 10-year period from 2001 to 2010.

Dudek will present at the September 28, 2017 AC meeting additional information pertaining to Baseline Pumping Allocation including preliminary water use by sector estimates for the 10-year period from January 1, 2005 to January 1, 2015.

To begin this process, relevant Background Info and a List of Issues/Questions has been created by the CT based on past discussions regarding baseline pumping allocations, and follows this Staff Report.

Borrego Sustainable Groundwater Management Act (SGMA)
Advisory Committee (AC)

ISSUES REQUIRING AC POLICY RECOMMENDATIONS

AC POLICY ISSUE #2: Baseline Pumping Allocation

INTRODUCED: September 28, 2017

Following are questions to be considered by the AC and their CG on the issue of developing a baseline pumping allocation for water use and background information to aid in answering the questions. **The CT requests the questions be polled for consensus at the October 2017 AC meeting.**

BACKGROUND INFORMATION:

- What authority does SGMA provide for a GSA to establish baseline pumping allocations? A GSA has the authority to control groundwater extractions by regulating, limiting, or suspending extractions from individual groundwater wells or extractions from groundwater wells in the aggregate, construction of new groundwater wells, enlargement of existing groundwater wells, or reactivation of abandoned groundwater wells, or otherwise establishing groundwater extraction allocations. Those actions shall be consistent with the applicable elements of the city or county general plan, unless there is insufficient sustainable yield in the basin to serve a land use designated in the city or county general plan. A limitation on extractions by a groundwater sustainability agency shall not be construed to be a final determination of rights to extract groundwater from the basin or any portion of the basin (Section 10726.4(a) (2)).
- Are allocations transferable? A GSA has the authority to authorize temporary and permanent transfers of groundwater extraction allocations within the agency's boundaries, if the total quantity of groundwater extracted in any water year is consistent with the provisions of the groundwater sustainability plan. The transfer is subject to applicable city and county ordinances (Section 10726.4(a) (3)).
- What if I do not use my entire pumping allocation? A GSA has the authority to establish accounting rules to allow unused groundwater extraction allocations issued by the agency to be carried over from one year to another and voluntarily transferred, if the total quantity of groundwater extracted in any five-year period is consistent with the provisions of the groundwater sustainability plan (Section 10726.4(a) (4)).
- Who sets the baseline pumping allocation? The GSA establishes the baseline pumping allocation.

- How do you define baseline pumping allocation? It is defined as the amount of groundwater each pumper in Borrego Springs is allocated prior to applying any SGMA required water use reductions.
- How is the baseline pumping allocation determined? Pumping allocations are typically determined based on documented metered groundwater extraction (pumping) records. In the absence of metered data, water use will be estimated based on area of irrigation and water intensity. If documented metered data is not provided an adjustment of pumping allocations could be required to account for over estimating water use based on consumptive use of crops. The average annual groundwater extraction over the 10-year period from January 1, 2005 to January 1, 2015 will be assigned as the baseline pumping allocation to each pumper in the Borrego Springs Subbasin.
- How was the end date of January 1, 2015 selected? This is based on Water Code 10720.5 No Modification of Water Rights or Priorities, and No Determination of Water Rights Pursuant to This Part. This will be explained by DUDEK during the September 28, 2017 AC meeting.
- The GSA will not include domestic wells that use two afy (651,702 gal/yr) or less per year since it is exempt from SGMA.
- The GSA requests to receive historical groundwater extraction data in order to refine groundwater demand. Without the actual historical groundwater data, the allocation will be developed based on estimates.

AC QUESTIONS

- **AC Question:** The baseline pumping allocation will be developed based on average water consumption during the 10-year period from January 1, 2005 to January 1, 2015. The pumping allocation will take into account water use by all pumping sectors: agricultural, municipal, and recreational.
- *Do you recommend a Baseline Pumping Allocation (prior to any SGMA required reductions) using a 10-year average from Jan. 2005 thru Jan. 2015?*
 - *YES OR NO*

October 20, 2017

TO: Advisory Committee

FROM: Core Team

SUBJECT: Item III.A: Water Budget

Dudek obtained the U.S. Geological Survey (USGS) numerical model files for the Borrego Valley Hydrologic Model (BVHM), which was developed in 2014 using the USGS code One-Water Hydrologic Flow Model (OWHM). OWHM is a MODFLOW-based numerical model code designed for the analysis of a broad range of integrated groundwater and surface water issues. OWHM includes a new model package, called the Farm Process that estimates dynamically integrated supply and demand components of irrigated agriculture in the absence of historical metered data.

The USGS developed the BVHM to simulate hydrologic conditions in a portion of the Borrego Valley Groundwater Basin that includes the Borrego Springs Subbasin from 1945 to 2010. The numerical model simulated pumping at Borrego Water District (BWD) wells using metered data, estimated agriculture pumping based on water demands estimated for irrigated agriculture using the Farm Process package, and estimated water input from precipitation and streamflow using data extracted from the USGS Basin Characterization Model (BCM). The BCM is a regional hydrologic model that uses historical climate data to calculate a monthly water balance for water years from 1896 to 2016.

Water balance elements in the BCM used in the BVHM include precipitation, runoff, recharge, and evapotranspiration. The BCM covers all of the California hydrologic region, with inputs for the BVHM extracted from the larger BCM. The hydraulic conductivity and specific yield of the groundwater basin were estimated based on limited aquifer test data. Hydraulic conductivity characterizes the ability of the aquifer to transmit water. Specific yield, for unconfined aquifers, characterizes an aquifer's ability to store and release water.

The USGS estimated that the natural recharge to the basin in absence of anthropogenic inputs (i.e. irrigation return flow) was approximately 5,700 acre-feet per year. During the course of model calibration, the USGS conducted a sensitivity analysis. A sensitivity analysis runs the model multiple times while adjusting model input parameters that are uncertain to see which model inputs have the most significant impact on model results. The sensitivity analysis determined that the model simulated agricultural pumping had the largest impact on the model outputs (approximately 68% of the scaled sensitivity), followed by specific yield (11%) and stream flow entering the basin (7%).

In order to validate the model, better understand the accuracy of modeled water budget outputs, and comply with SGMA requirements, Dudek extended the model input files to cover the period from January 2011 through September 2016. Precipitation and evapotranspiration inputs were extended using data

extracted from the BCM. Municipal pumping was extended using metered pumping data from the BWD. Recreational pumping from BWD wells was also used to update model pumping inputs. Streamflow entering the basin was extended by comparing measured precipitation in the validation period to historical precipitation, then using historical stream gage data to get flows from months with similar precipitation amounts.

Uncertainty in modeled heads was consistent in the validation period when compared to the original model simulation period. In general, the model showed a slight bias towards lower modeled heads than observed heads in areas of intense pumping (i.e. the model is overestimating groundwater level decline in some areas of the aquifer). The model may overestimate groundwater level decline in the basin because it is overestimating pumping, underestimating recharge, underestimating water stored in the aquifer, or some combination of these three factors.

While model calibration and validation indicated a tendency of the model to simulate lower heads than those observed in the basin, additional data is needed to determine which model inputs are responsible for this model bias. Given the results of the sensitivity analysis, data for agricultural pumping, streamflow, and aquifer storage properties would be the most useful for reducing model uncertainty and bias.

October 20, 2017

TO: Advisory Committee
FROM: Core Team
SUBJECT: Item III.B: Reduction Period

The SGMA statutorily requires the development and implementation of a GSP. A required element of the GSP is establishment of measurable objectives, as well as interim milestones in increments of five years, to achieve the sustainability goal in the basin within 20 years of the implementation of the GSP [§10727.2(b)(1)].

Subsequent to adoption of the GSP, annual reporting is required to the Department of Water Resources to provide groundwater elevation data, aggregated groundwater extraction for the preceding water year, surface water supply, total water use, and change in groundwater storage [§10728]. In addition, a GSA shall periodically evaluate its GSP, assess changing conditions in the basin that may warrant modification of the plan or management objectives, and may adjust components in the plan. Evaluation of the plan shall focus on determining whether the actions under the plan are meeting the plan's management objectives and whether those objectives are meeting the sustainability goals in the basin [§10728.2].

The Borrego Springs Subbasin GSP is currently in development, including evaluation of measurable objectives, undesirable results, and minimum thresholds related to overdraft of the basin. Targeted implementation periods will be determined based on the analysis of data specific to each management unit as they relate to the undesirable effects and associated measurable objectives and minimum thresholds to be identified in the pending GSP. Further, progress toward targeted implementation periods will be tracked throughout implementation of the GSP, and periodic evaluation of the GSP may result in adjustments to implementation periods.

For example, an increasing trend of arsenic concentrations correlated with lowering water levels is known to exist in the South Management Area. Routine water quality sampling and groundwater elevation monitoring are planned throughout the Subbasin and will provide critical data for arsenic concentrations and trends (if any) in the three management areas. Analysis of those trends (arsenic concentrations and groundwater levels) will help predict a groundwater elevation at which arsenic concentrations would be expected to exceed the designated threshold (e.g., California drinking water maximum contaminant level of 10 µg/L, or a more conservative value of 5 µg/L or some other concentration yet to be determined). The calculated timeframe for the associated undesirable effects (potentially less than 20 years) would drive the determination of the maximum implementation period for the GSP. During GSP implementation, if evaluation of ongoing monitoring data identifies changing conditions or otherwise suggests that the GSP's management objectives may not be met, adjustments to the GSP implementation timeframe may be warranted.

Borrego SGMA Advisory Committee (AC) & Core Team (CT)
Work Planning & Timeline Chart
Draft Version 10/19/2017

Date	Meeting / Milestone / Action	Topics to Discuss / Notes
September 2017		
September 28, 2017	Borrego AC Meeting #6 Borrego Water District 10:00am – 3:00pm	<ul style="list-style-type: none"> • AC Six-Step Decision Making Process • AC Issue #1: Mandatory Metering • AC Issue #2: Baseline Pumping Allocation • Proposition 1 Funding Updates • Water Budget / Groundwater Model • Concepts/Approach for Refining Sustainability Indicators and Minimum Thresholds
October 2017		
October 26, 2017	Borrego AC Meeting #7 Location TBD 10:00am – 3:00pm	<ul style="list-style-type: none"> • AC Formal Recommendation: Metering • AC Formal Recommendation: Baseline Pumping Allocation • Water Budget • Reduction Period • Prop 1 Updates
November 2017		
November 13, 2017	Proposition 1 Applications Due	
November 27, 2017	Borrego AC Meeting #8 Location TBD 10:00am – 3:00pm	<ul style="list-style-type: none"> • Projects and Mgmt Actions (Fall – Spring) • Projects and Management Actions: Matrix with considerations feasibility and cost/benefit, weighed against sustainability indicators (effect)
January 25, 2018		
	Borrego AC Meeting #9 Location TBD 10:00am – 3:00pm	<ul style="list-style-type: none"> • Projects and Mgmt Actions (Fall – Spring) • Potential Discussion: Water Credits System
February 2018		
		<ul style="list-style-type: none"> • Projects and Mgmt Actions (Fall – Spring) • Prop 1 Grant Tasks (tentative)
March 2018		
		<ul style="list-style-type: none"> • Projects and Mgmt Actions (Fall – Spring) •
April 2018		
		<ul style="list-style-type: none"> • Projects and Mgmt Actions (Fall – Spring)
May 2018		
		<ul style="list-style-type: none"> • Projects and Mgmt Actions (Fall – Spring) • Fees and Penalties • Potential Regulatory Changes

June 2018		
June 30, 2018	Draft GSP Projected Completion Date	<ul style="list-style-type: none"> • Fees and Penalties • Potential Regulatory Changes
July 2018		
August 2018		

Action Items from Borrego AC Meeting #6 09-28-17 Status update as of 10/19/17

	Responsible Party	Topic	Action Item	Status
1.	AC Members	CG Engagement	Using provided background and notetaking forms, discuss with constituent groups (CG) the two issues (#1 and #2) presented at the meeting for AC recommendation. Return to the subsequent AC meeting with positions on issues/questions identified.	In Progress
2.	Meagan Wylie	Admin	Circulate relevant meeting documents to AC members via email: <ul style="list-style-type: none"> a. PDF of PPT slides presented at meeting b. Finalized July 29th Meeting Minutes c. Draft September 28th Meeting Minutes (when available) 	Complete
3.	Geoff Poole	Admin/Prop1	Circulate Copy of Prop 1 related letter that was distributed to well owners in August	Complete
4.	AC Members	Admin	Email Meagan any holiday travel plans for November and December	Complete
5.	AC Members	Admin	Prepare and bring any proposed language revisions/edits to Meeting Minutes, or any future formal document, into subsequent meeting for efficiency of group discussion.	Ongoing
6.	Leanne Crow Geoff Poole Trey Driscoll	Admin	Post Sept. 28 th PowerPoint presentation slides and other associated meeting materials to the Project Webpages. As needed, work with Trey to ensure notes/annotations accompany the various slides for further explanation of detail.	Complete
7.	Geoff Poole	Admin	Update AC email contacts posted to BWD website; send updated contacted list to County and Consultant Teams - <i>BWD anticipated website launch week of Oct. 2</i>	In Progress
8.	Geoff Poole	Admin	Look into change of venue for Oct. meeting (possibly High School or UCI)	Complete
9.	Core Team	Admin	Consider Nov. and Dec. holiday and travel schedules, and propose meeting dates	Complete
10.	Meagan Wylie Core Team	Admin	Update "Interests and Issues Tracking" spreadsheet for capturing AC issues identified at each meeting and status of the related discussion	Ongoing
11.	Trey Driscoll	Prop 1	Provide accurate count of number of de minimus well owners for AC's information	In Progress
12.	AC Members	Prop 1	Contact Geoff Poole with any questions re: Prop 1 grant application and next BWD meeting on this topic	Ongoing
13.	Trey Driscoll	Prop 1	Continue developing inventory of pumpers in the Borrego groundwater basin (07-28)	In Progress
14.	Jim Seeley	Metering	Inquire with CG if there is historical metering data that can be shared with Trey Driscoll for the purpose of developing more accurate baseline records. (07-28)	In Progress
15.	Jim Seeley Jim Bennett Trey Driscoll	Metering	Poll constituents regarding their interest in the voluntary metering/monitoring. Consider option of submitting data in aggregate form (i.e. one joint, voluntary pumping data report), maybe using pictures of meter readouts, prior to GSP adoption.	In Progress
16.	AC Members	Proposed Mgmt. Acts.	(06/28/17) Develop a list of factors against which to measure potential management actions (e.g. employment, schools, dust abatement, etc.); send them to Geoff for distribution to the Core Team and discussion at subsequent AC meeting	In Progress