

AGENDA
Borrego Valley Groundwater Basin: Borrego Springs Subbasin
Sustainable Groundwater Management Act (SGMA)
Advisory Committee (AC)
November 27, 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/248931509> **Call-In:** 1 877 309 2073 **Code:** 248-931-509

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 – 10:30 am]
 - A. Call to Order
 - B. Pledge of Allegiance
 - C. Roll Call of Attendees
 - D. Review of Meeting Agenda
 - E. Approval of October 26, 2017 AC Meeting Minutes
 - F. Updates from the Core Team

- II. ITEMS FOR DISCUSSION AND POSSIBLE RECOMMENDATION** [10:30 am – 1:45 pm with lunch approximately 12:00 pm – 12:30 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. TECHNICAL AND POLICY ISSUES FOR CONTINUED DISCUSSION** [1:45 pm - 2:15 pm]
 - A. Pumping Allowance – *Core Team & Consultant*
 - B. Sustainability Criteria and Reduction Period – *Core Team & Consultant*

- IV. INFORMATIONAL ITEMS** [2:15 pm – 2:30 pm]
 - A. Stream Gauge Effort – *Core Team & Consultant*

- V. CLOSING PROCEDURES** [2:30 pm – 3:00 pm]
 - A. Correspondence
 - B. Updates and Comments from Advisory Committee Members
 - C. General Public Comments (comments may be limited to 3 minutes)
 - D. 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 **January 25, 2018** at the UCI Steele/Burnand Anza-Borrego Desert Research Center (*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)
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Location: University of California, Irvine
Steele/Burnand Anza-Borrego Desert Research Center
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I. OPENING PROCEDURES

A. Call to Order

The meeting was called to order at 10:00 a.m. by Borrego Water District (BWD) President Beth Hart. She announced that Suzanne Lawrence had resigned as the Stewardship Council representative to the AC, so the position is currently vacant. Diane Johnson has been accepted by BWD as the replacement and is present via teleconference for discussion but not yet as an AC member pending County of San Diego (County) approval.

B. Pledge of Allegiance

Those present stood for the Pledge of Allegiance.

C. Roll Call of Attendees

Committee members:	<u>Present:</u>	Jim Seley, Jim Wilson, Rebecca Falk, Dave Duncan, Bill Berkley, Gina Moran, Ryan Hall, Jack McGrory
Core Team members:	Beth Hart, BWD	Jim Bennett, County of San Diego
	Geoff Poole, BWD	Lyle Brecht, BWD
Staff:	Meagan Wylie, Center for Collaborative Policy	Wendy Quinn, Recording Secretary Trey Driscoll, Dudek, GSP Consultant
Public:	Michael Sadler, <i>Borrego Sun</i>	Judy Haldeman
	Diane Johnson, Stewardship Council (via teleconference)	Linda Haneline Bill Haneline
	Heather Davidson	Ray Shindler, Independent Ratepayers
	Peter Quinlan, Dudek	Mike Seley, Seley Ranch
	Richard Dopp	Ray Burnand
	Michael Bozick	James Saint, CR&R
	Mike Himmerich, BMA BARJ.C. Bambach, Borrego Springs Resort	
	Brian Moniz, Department of Water Resources (via teleconference)	

D. Review of Meeting Agenda

Meagan Wylie reviewed the meeting ground rules, Agenda and Brown Act provisions.

E. Approval of September 28, 2017 AC Meeting Minutes

Upon motion by Member Seley, seconded by Member Berkley and unanimously carried by those present, the Minutes of the September 28, 2017 AC Meeting were approved as amended (Item IV.A, revise fourth line to read, "Member Falk commented . . ."; add a sentence following that one, "She also suggested that the legal arguments given in the letter about water allocations appear to be flawed"; Item IV.B, revise second sentence to read, "She asked whether BWD was considering refusing future projects.")

F. Updates from the Core Team

Geoff Poole reported that the new BWD website is now in operation. It includes links to County and Groundwater Sustainability Plan (GSP) information and announcements on BWD ratepayer meetings. Ms. Wylie asked AC and Core Team members to contact Mr. Poole if they want their contact information

included on the site and/or if they want a BWD e-mail address to keep business separate from personal messages.

G. Review of Consensus Voting Process per the AC Bylaws

Ms. Wylie reviewed the approval levels agreed to for consensus voting: 1- Agree wholeheartedly; 2- Accept as best option; 3- Can live with it but not enthused; 4- Do not fully agree and want to register view, but do not want to block the decision so will stand aside; 5- Need more work before consensus; and 6- Wants to block the decision. If all members are between 1 and 4, a recommendation will be made to the Core Team and the discussion will be reflected in the Minutes.

Discussion followed regarding whether to postpone recommendations on the two Policy Issues before the AC today until there is a seated Stewardship Council representative. Members agreed to move forward today.

H. Updates from Brian Moniz, Department of Water Resources

Mr. Moniz explained that as Regional Coordinator for the Southern Office of the Department of Water Resources (DWR), part of his job is to facilitate GSP support services. DWR will continue its support of the Borrego Valley Groundwater Sustainability Agency (GSA) in support of GSP development by providing a facilitator (Center for Collaborative Policy (CCP), with Ms. Wylie as lead facilitator). This service is approved on a fiscal year annual basis, and includes GSP development and outreach. Mr. Moniz encouraged all participants to access the DWR website and review the stakeholder communications and engagement document.

Mr. Moniz discussed Proposition 1 funding, which will complete its Phase 1 application period on November 13. If there is sufficient money remaining, there will be a Phase 2.

II. ITEMS FOR DISCUSSION AND POSSIBLE RECOMMENDATION

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

Jim Bennett reminded the AC that there were two questions before them: with the exception of domestic de minimis wells, do you recommend the GSP require metering of all wells; and if yes, what options of well meter collection, reporting and calibration are preferred? So far two options are acceptable to the Core Team: monitoring and calibration by the GSA or by a third party contractor. Remote telemetry might also be considered. President Hart added that as part of the Proposition 1 grant application, funding may be available for installation of 17 well meters. If metering is required as part of the GSP and pumpers have not voluntarily installed meters, they would have to pay for it at some point in the future, following adoption and implementation of the GSP.

Discussion followed regarding concerns of some in agriculture about privacy issues associated with monitoring. Member Seley reported that the Agricultural Alliance for Water and Resource Education (AAWARE) has ten to twelve members, and they are split about 50/50 as to those who are willing to support monitoring and those who are not. Member Falk reported that of seven members on the Sponsor Group committee, six favored mandatory metering and one did not. Member Duncan reported that at all three ratepayers' meetings, they favored mandatory metering. Member Berkley reported that most recreation pumpers already meter. Member Wilson reported that his constituents supported mandatory metering. Member McGrory felt that metering was necessary, but was willing to defer the decision another month to give Member Seley's constituents more time to consider it. Member Ryan reported he was continuing to collect data from his constituents. Trey Driscoll explained that there are other methods of collecting extraction data besides metering, but they are not as accurate. Member Moran reported that the State Park supports mandatory metering and is already metering.

Member Seley explained that about 20 years ago, BWD proposed a plan to meter farmers' wells and impose a pump tax. The BWD Board at that time indicated if the farmers did not comply, they would increase the tax to the point they would be forced out of business. There is still some concern about this, and it is part of the reason the farmers are resisting metering. Member Falk pointed out that if the AC

cannot agree on a recommendation, the decision will go to the GSA, which may include mandatory metering in the GSP. Mr. Poole reiterated his offer to attend constituent meetings to explain the issue, and Member Seley agreed to schedule a constituent meeting in the next few weeks and invite the Core Team.

A straw poll was conducted of each member's consensus level, with the following results: Member Moran 1, Member Duncan 1, Member Seley 5, Member Falk 1, Member McGrory 5, Member Berkley 1, Member Hall 5, Member Wilson 1. Member Moran suggested adding to the Policy Issue question proposed to the AC, "within a reasonable time frame after adoption."

The Committee broke for lunch at 11:45 a.m. and reconvened at 12:20 p.m.

B. AC POLICY ISSUE #2: Baseline Pumping Allocation

Mr. Bennett explained that the baseline pumping allocation is the amount of groundwater each pumper will be allocated prior to applying SGMA-related reductions. There will be a process through the GSP to see how much water each individual has, then there will be required reductions relative to the respective baseline. The question to the AC is, do you recommend basing the pumping allocation on extraction using a ten-year average from 1/1/05 through 1/1/15? Mr. Driscoll explained that the ten-year period was suggested after discussions with the Borrego Water Coalition, considering that a longer baseline period would account for yearly fluctuations.

Member Duncan reported that the ratepayers support the suggested baseline period, but were concerned that "gerrymandering" could lead to an increased rate of reduction. Member McGrory pointed out that La Casa Del Zorro was closed for three years during that time frame, so that would skew their baseline usage. Mr. Driscoll envisioned that the Core Team would address such situations on a case-by-case basis. Member Wilson suggested developing a formula whereby only years where pumping actually occurred would be considered in the allocation. Member Falk reported that the Sponsor Group had six yes votes on the ten-year period and one no. Member Berkley pointed out that if one farmer used flood irrigation and another drip, the wasteful one would get a larger allocation. He had a concern similar to Member McGrory's; the Rams Hill Golf Course was closed for three years. He suggested looking into other allocation methods. Mr. Driscoll felt the average usage for ten years was the most appropriate. He had 100 percent records from BWD and most of the golf courses, but not agriculture. Member Moran supported the ten-year period, but asked whether the average usage would be calculated for each individual or by sector (recreation, municipal and agriculture). Mr. Driscoll said he would look at both, but eventually recreation and agriculture would be allocated individually and municipal by sector.

Mr. Bennett requested that the agricultural pumpers provide their extraction data to the Core Team prior to the November AC meeting. A straw poll was conducted of each member's consensus level, with the following results: Member Falk 1, Member Hall 5, Member Wilson 5, Member Duncan 1, Member Seley 5, Member Moran 2, Member McGrory 5, Member Berkley 5.

A member of the audience suggested running a variety of methods of allocation through the model to see if one yields less variance than the other, and Mr. Driscoll agreed to investigate.

III. INTRODUCTION TO TECHNICAL AND POLICY ISSUES

A. Water Budget

Mr. Bennett explained that the water budget is a key milestone in GSP development. Dudek has been gathering data since May 2017 and modifying the United States Geological Survey (USGS) water budget to develop the GSP model. Mr. Driscoll introduced Peter Quinlan of Dudek, who narrated a slide show, and it was agreed to put the slides on the County website. Mr. Quinlan reviewed the presentation topics, including the model, budget, results and uncertainties, accuracy and predictions. The project is at Step 1, looking at the USGS sustainable yield. The next step is benchmarking and establishing sustainability goals and objectives, projects and management actions and an implementation plan. Today's

presentation focused on Step 1. Mr. Quinlan reviewed the USGS numerical groundwater model, and explained the additions. Agricultural pumping and recharge were estimated. A schematic of hydrology was presented, showing input and output for various land use types. The study looked at surface water, rainfall and runoff, most of which is from Coyote and San Felipe Creeks. The outflow is mostly from pumping (74 percent). The sustainable yield is 5,700 acre feet per year, and the Borrego Valley is currently at 13,700 acre feet per year (a 65-year average). Mr. Quinlan showed recharge and pumping levels over the 65-year period. Recharge is up and down, but pumping has steadily increased. Storage is going steadily down. 500,000 acre feet of water have been taken out of storage over the last 65 years. Dudek is working to refine three areas of the water budget by well metering, testing the aquifer and adding stream gauges. In conclusion, the model has been updated and shows a good representation of the basin, and uncertainties have been identified and quantified. For next steps, the GSP must identify criteria for sustainable indicators, and eventually the model can be used to quantify the sustainable yield. Mr. Driscoll explained that once other criteria are reviewed, such as water quality and levels, the data can be refined. This will help with projects and management actions.

Member Falk asked whether climate change had been incorporated into the study, and Mr. Quinlan replied that it had not yet been incorporated, but he planned to do so. Member Moran pointed out that a lot of the water shed is in the State Park. President Hart said this is good, because it is an unpopulated area.

B. Reduction Period

President Hart shared there had been a good deal of discussion in the community regarding the proposed 20-year period for reaching sustainable yield contemplated by SGMA, and whether the time period should be shorter or longer. The 20-year proposed deadline is the maximum implementation period of the GSP for the basin to reach sustainability per SGMA. A letter from Dudek in the Agenda Package explained the statutory obligations under SGMA. Five-year milestones are required during the proposed twenty-year period, at which time objectives, potential undesirable results and thresholds will be assessed to see if sustainability goals are being met, or if a modification to the GSP is warranted. Member Falk asked whether frequency of water quality monitoring would be increased upon GSP implementation, and Mr. Driscoll replied that it would be. Over the next two weeks, DWR, BWD staff and Dudek will be sampling BWD wells for water quality, and in November, 15 additional wells will be sampled. Member Duncan inquired about the mechanism for adjusting the GSP if, during a five-year review period, it is determined that management objectives are not being met. He further asked how long it would take to implement an adjustment. Currently, the process is not described in SGMA. The Core Team will initiate conversations with DWR, as appropriate, to gain information on the potential mechanism(s) for making adjustments to the reduction period following implementation of the GSP and subsequent monitoring/measuring of sustainability indicators.

IV. INFORMATIONAL ITEMS

A. Proposition One Grant Application Update

Mr. Poole reported that yesterday the BWD Board reviewed recommendations from its Proposition One Bond Ad Hoc Committee for projects to be included in its Proposition One GSP implementation grant application. They included a socioeconomic study, meter installation rebates and a feasibility study to identify locations for new potable water wells. The County is hoping to fund an Environmental Impact Report for the GSP through its portion of the grant, and will submit a joint application with BWD. The County will take the lead in developing the application, working closely with BWD. Mr. Bennett reported that the earliest the funds could be received would be late December. Member Falk urged a request for as much funding as possible for the socioeconomic study. Director Brecht pointed out that BWD intends to fund the three projects proposed in the Proposition One grant application regardless of whether the grant is approved. President Hart added that there may be additional grant opportunities to pursue in the future.

B. Policy on Correspondence

Ms. Wylie explained that per the Brown Act, there is no requirement to publish correspondence in the AC Agenda Packet. The Core Team acknowledges the AC's desire to review correspondence. Thus, the Core Team will review all submitted correspondence and publish items in the Agenda package if said correspondence is relevant to AC discussions and GSP development.

IV. CLOSING PROCEDURES

A. Updates and Comments from Advisory Committee Members

Member Berkley inquired about the pending statewide water bond. Director Brecht reported that signature gathering is going well. The Governor has signed another bond issue which includes several water related matters, but it should not affect the Borrego Springs bond. President Hart pointed out that there is a \$35 million earmark for Borrego Springs which can be used to address SGMA issues. Member Hall asked whether bond proceeds could be used to assist farmers wanting to relocate, and Director Brecht replied that \$29 million is designated to buy out farmers.

B. General Public Comments

None.

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

The next AC meeting was scheduled for November 27, 2017. There will be no meeting in December, and the AC will reconvene on January 25, 2018.

There being no further business, the meeting was adjourned at 2:50 p.m.

November 20, 2017

TO: Advisory Committee

FROM: Core Team

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

*Information related to this AC Policy Issue was provided at the September 28, 2017 and October 26, 2017 Borrego AC meetings. A summary is referenced here again in the November 27, 2017 agenda packet for convenience. **Based on feedback received during the October 26, 2017 Borrego AC meeting, revisions have been made to AC Policy Recommendation #1, Question #2, for AC consideration.***

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. This information can be found in both the September and October 2017 AC Agenda Packets.

The AC will be polled for a consensus recommendation on the following questions at the November meeting:

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. The GSA will keep data confidential to the maximum extent allowed by law (California Govt. Code 6254(e)).

- Option 2: The property owner (or third-party contractor acceptable to the GSA) monitors/reads the meter on a monthly basis. A third party contractor acceptable to the GSA would inspect and read the meter on a semi-annual basis to verify the accuracy of data including meter calibration. On behalf of the property owner, the third-party contractor would provide an annual statement to the GSA with verification of the total extraction in gallons from each well and verification that each flow meter is calibrated to within factory acceptable limits. The GSA will keep data confidential to the maximum extent allowed by law (California Govt. Code 6254(e)).

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.

November 20, 2017

TO: Advisory Committee

FROM: Core Team

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

*Information related to this AC Policy Issue was provided at the September 28, 2017 and October 26, 2017 Borrego AC meetings. **Based on feedback received during the October 26, 2017 Borrego AC meeting, revisions have been made to AC Policy Issue #2. The Core Team has revised the baseline pumping allocation to be based on the highest annual production for the five year period from 2010 through 2014.***

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 by the Core Team at the September 28, 2017 and October 26, 2017 AC meetings as the proposed baseline period to analyze historical rates of pumping in the Borrego Springs Subbasin.

The Core Team has revised the baseline pumping allocation to be based on the highest annual production for the five year period from 2010 through 2014. Rationale regarding this revised approach is provided in a memo by DUDEK following the AC question below.

The AC may be polled for a consensus recommendation on the following question at the November meeting:

AC QUESTION

- **AC Question:** The baseline pumping allocation will be developed based upon the highest annual water consumption during the 5-year period from January 1, 2010 through December 31, 2014. The pumping allocation will take into account water use by all pumpers within Borrego Springs Subbasin.
- *Do you recommend a Baseline Pumping Allocation (prior to any SGMA required reductions) using the highest annual water consumption based upon the five year period from Jan. 2010 thru Dec. 2014?*
 - YES OR NO

WORKING DRAFT TECHNICAL MEMORANDUM

To: Core Team and Advisory Committee
From: Trey Driscoll, PG, CHG
Subject: Conceptual Baseline Pumping Allocation
Date: November 16, 2017
cc: Doug Baumwirt, PG, Geosyntec

Dudek recommends that the Advisory Committee and Core Team consider use of a five-year maximum time period to determine each groundwater user's "Baseline Pumping Allocation." A summary of an evaluation of three potential approaches and rationale for the recommended approach is presented below.

BASELINE PUMPING ALLOCATION

The "Baseline Pumping Allocation" allocates groundwater extraction based on historical rates of pumping over a defined period of time. The period of time analyzed is typically a recent five-year period.¹ The rate of pumping is based on the amount of groundwater actually pumped, which is typically based on documented flow meter data or, if flow meter data is unavailable, estimated based on consumptive water use by crop type.²

The "Baseline Pumping Allocation" is defined as the verified maximum annual production, in acre-feet, for each well owner over the prescribed baseline pumping period. As actual metered data is not available for all well owners, either validated flow meter data or estimated water use based on consumptive use by crop type and area irrigated are acceptable methods to determine "Baseline Pumping Allocation." In all cases, validated flow meter data will prevail over estimated water use.

The "Baseline Pumping Allocation" is a static value that does not change with time. This value will be published for each well owner upon implementation of the Groundwater Sustainability Plan (GSP).

¹ A 5-year period has been used in past groundwater rights adjudications to assign pumping allocation based on the 5-year statutory period required for prescriptive water rights.

² A third method, determination of water use by electrical energy consumption records could not be evaluated at this time as electrical use records are currently not available to the Groundwater Sustainability Agency.

BASELINE PUMPING PERIOD

Based on input received from the Advisory Committee in October 2017, Dudek reviewed the total estimated aggregate pumping for the 5-year maximum, 10-year maximum and 10-year average periods. The 5-year maximum period is from January 1, 2010—January 1, 2015 and the 10-year maximum and 10-year average period is from January 1, 2005—January 1, 2015. The difference between the 5-year maximum and 10-year average is 1.4%. The difference between the 10-year maximum and 10-year average is 10.5%. It should be noted that the difference may be greater or less if actual flow meter data is provided by the agricultural pumpers. Aggregate baseline pumping for the 5-year maximum, 10-year maximum, and 10-year average periods is listed in Table 1 and displayed in Exhibit 1.

Table 1
Estimated Aggregate Baseline Pumping by Sector (Acre-feet per Year)

Period	Agriculture	Municipal	Recreation	Total
5-year Maximum	13,971	2,461	3,024	19,456
10-Year Maximum	14,585	3,264	3,594	21,443
10-Year Average	13,628	2,502	3,055	19,185

Source: Dudek 2017 — Parcel Level Analysis for Agriculture. BWD 2016

Notes: Parcel level analysis based on area irrigated multiplied by water intensity. Water intensity takes into account basin specific evapotranspiration, crop coefficient, and irrigation efficiency. Municipal based on actual metered data. Recreation based on a hybrid of actual metered data and estimated data. Preliminary draft work product and subject to change.

Exhibit 1
Estimated Aggregate Baseline Pumping by Sector (Acre-Feet per Year)

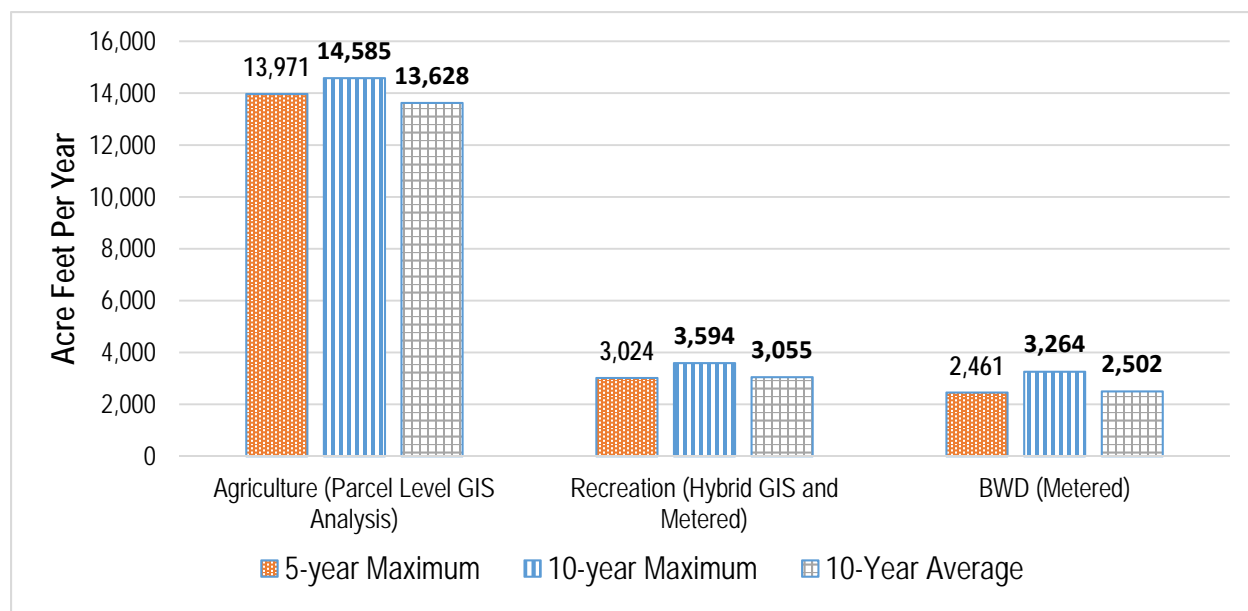


Exhibit 1 indicates the total estimated aggregate pumping is highest for all sectors during the 10-year maximum scenario at 21,443 acre-feet per year. This is estimated to be 10.2% greater than the 5-year maximum total estimated aggregate pumping. However, it is estimated that pumping did not change evenly for every sector. Municipal pumping increases the most by 32.6% and actual metered volume, 803 acre-feet per year. Recreation pumping increases by a higher percentage than agriculture (18.8%) but by less volume of water, 570 acre-feet per year. Agriculture is estimated to increase by 4.4% or 614 acre-feet per year. Estimated percent increase from the 5-year to 10-year Maximum is presented in Table 2.

Table 2
Estimated Percent Increase 5-Year to 10-Year Maximum (Acre-feet per Year)

Period	Agriculture	Municipal	Recreation	Total
10-year Maximum	14,585	3,264	3,594	21,443
5-year Maximum	13,971	2,461	3,024	19,456
Change	614	803	570	1,987
Percent Increase 5-Year to 10-Year Maximum	4.4%	32.6%	18.8%	10.2%

The total estimated aggregate pumping for the 5-year maximum and 10-year maximum indicates that both municipal and recreation pumping are a larger percentage of overall pumping during the 10-year maximum scenario. Municipal pumping is estimated to have increased by 17% and recreation pumping by 5%. Table 3 presents total estimated percentage of pumping by sector for the 5-year maximum and 10-year maximum scenarios.

Table 3
Estimated Percentage of Overall Pumping by Sector

Period	Agriculture	Municipal	Recreation	Total
10-year Maximum	0.68	0.15	0.17	100%
5-year Maximum	0.72	0.13	0.16	100%
Percent Increase 5-Year to 10-Year Maximum	-4%	17%	5%	

RECOMMENDATIONS

To determine the period of groundwater production for the “Baseline Pumping Allocation,” a 5-year maximum, 10-year maximum and 10-year average periods were analyzed. Based on input

received from the Advisory Committee in October 2017, the 10-year average period was eliminated as being too restrictive to individual pumpers.³

Use of either the 5-year maximum or the 10-year maximum will result in ‘winners and losers’ depending on the individual circumstances on water use over these periods of time. In aggregate, using a total “Baseline Pumping Allocation” that is higher or lower in a basin that is critically overdrafted and requires substantial pumping reductions only means that assigned percentage reductions or pumping allowances will be higher or lower depending on the final allocation.

Dudek recommends that the Advisory Committee and Core Team consider use of a five-year maximum time period to determine each groundwater user’s “Baseline Pumping Allocation.” The basis for this recommendation include the following:

- A 5-year maximum has been used in past groundwater rights adjudications to assign pumping allocation based on the 5-year statutory period required for prescriptive water rights;
- A 5-year maximum is the intermediate alternative, whereas the 10-year average may be overly restrictive, and a 10-year maximum may not be restrictive enough to meet objectives; and
- A 5-year maximum is an achievable goal and critical step toward sustainable basin management which balances the need for pumping reductions with the associated hardships.

The five-year maximum period for determining “Baseline Pumping Allocation” shall be from January 1, 2010—January 1, 2015.⁴ The “Baseline Pumping Allocation” should be assigned by individual well owner and published in the GSP.

³ Use of the 10 year average period to assign “Baseline Pumping Allocation” was originally developed based on recommendations presented by the Borrego Water Coalition (BWC 2014).

⁴ January 1, 2015 was selected as the end date for the “Baseline Pumping Allocation” period based on Water Code§ 10720.5.

REFERENCES

Borrego Water Coalition (BWC). 2014. Borrego Water Coalition Groundwater Management Policy Recommendations. November 6, 2014.

November 20, 2017

TO: Advisory Committee

FROM: Core Team

SUBJECT: Item III.A: Pumping Allowance

A Memorandum has been prepared by DUDEK (see next page) and will be the basis of discussion of this item during the November AC meeting.

WORKING DRAFT TECHNICAL MEMORANDUM

To: Core Team and Advisory Committee
From: Trey Driscoll, PG, CHG
Subject: Conceptual Pumping Allowance Framework
Date: November 15, 2017
cc: Doug Baumwirt, PG, Geosyntec

PUMPING ALLOWANCE

The “Pumping Allowance” is the maximum allowable groundwater production for each well owner during a given year. The “Pumping Allowance” is calculated annually based on a percentage of each well owner’s published “Baseline Pumping Allocation.” The “Pumping Allowance” will be assigned based on the groundwater pumping reduction needed to achieve the most current understanding of sustainable yield for the Borrego Springs Subbasin (Subbasin). Each year, the Groundwater Sustainability Agency (GSA) will submit in its Annual Report the “Pumping Allowance” for the Subbasin and provide, at a minimum, a five-year outlook with recommended adjustments to the “Pumping Allowance.” During each five-year period, the percent reduction will be re-evaluated based on updated values for sustainable yield.¹ The “Pumping Allocation” will be adjusted to reflect the updated sustainable yield after each five-year period and if necessary during annual reviews. The “Pumping Allowance” is allocated among all well owners in the Subbasin in proportion to the determined “Baseline Pumping Allocation.”

Pumping Allowance Example

As the Subbasin is in a condition of critical overdraft, the “Pumping Allowance” will ramp-down over time. Three examples of groundwater extraction reduction for single well owner’s “Pumping Allowance” are included in the following sections. Example 1 shows a linear reduction rate through the 20-year period. Example 2 shows a reduction rate that decreases after 10 years due to an updated water budget for the Subbasin, which increases the sustainable yield. Example 3 shows

¹ Sustainable yield for the Subbasin will be re-evaluated every five years based on an updated water budget. An updated water budget will be determined by incorporating additional data into the established groundwater model for the Subbasin.

a reduction rate that increases after 10 years due to an updated water budget for the Subbasin, which decreases the sustainable yield.²

Example 1 (Linear Reduction Rate)

A linear reduction rate will be applied if no change to the sustainable yield for the Subbasin is determined. For example, if the total annual groundwater extraction in the Subbasin is determined to be 19,000 acre-feet per year and the calculated sustainable yield is 5,700 acre-feet per year, groundwater extraction must be reduced by 70%. The Sustainable Groundwater Management Act (SGMA) recommends a 20-year timeframe to reach sustainability.³ In order to reach sustainability, the “Pumping Allowance” per well owner would ramp-down in incremental steps of 3.5% per year to reach a 70% reduction by the end of the 20-year time period.

If the “Baseline Pumping Allocation” for a well owner under the above scenario was determined to be 1,000 acre-feet, their “Pumping Allowance” will be determined annually at a defined rate. Assuming a linear reduction of 3.5% a year over the prescribed 20-year GSP implementation period, in year 1, the “Pumping Allocation” would be 96.5% or 965 acre-feet. In year 5 of GSP implementation, the “Pumping Allocation” would be 82.5% or 825 acre-feet. Table 2 and Exhibit 2 present the annual “Pumping Allowance” for a well owner assigned a “Baseline Pumping Allocation” of 1,000 acre-feet and assuming a 70% pumping reduction over the 20-year implementation period and a linear rate of reduction.

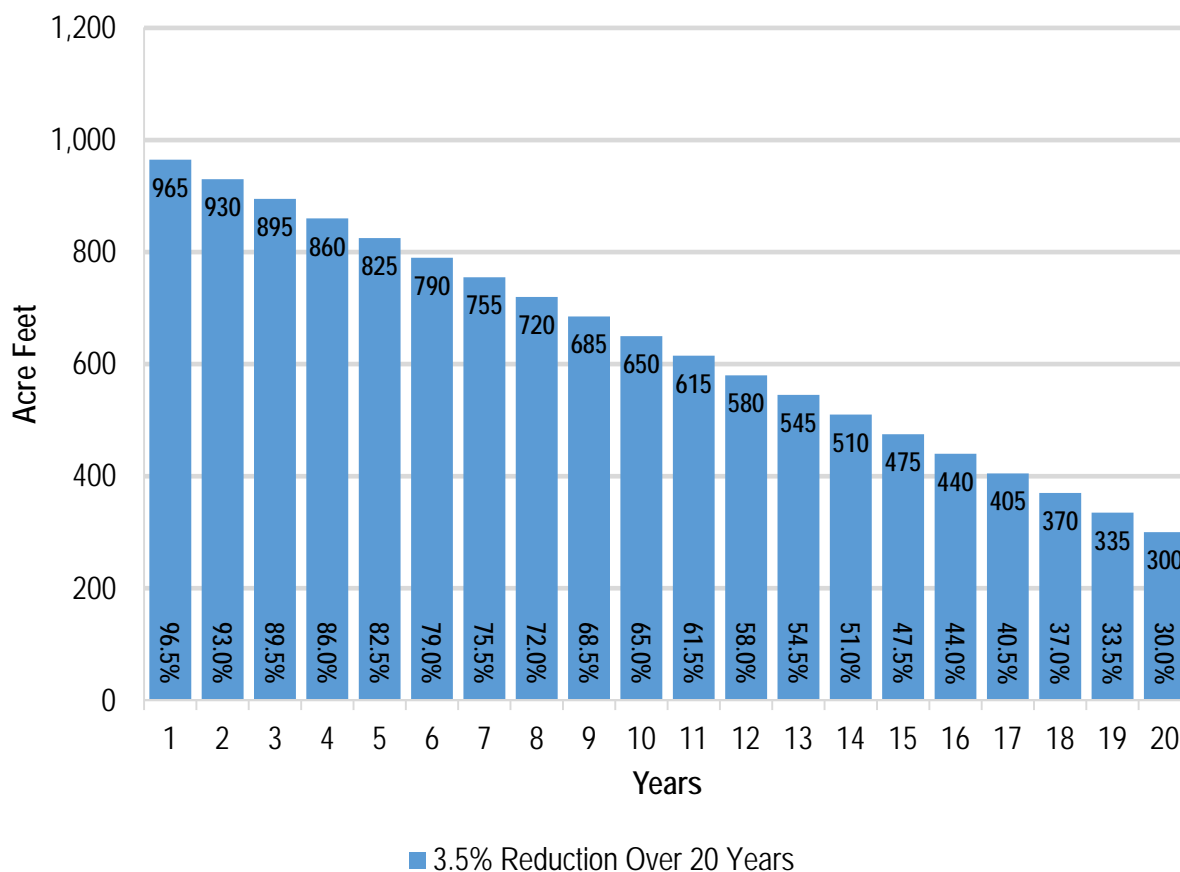
² The 10-year timeline used in the hypothetical examples is based on the end of the second 5-year implementation period. Changes to the “Pumping Allocation” could occur in any given year based on triggering an undesirable result minimum threshold.

³ The 20-year implementation period is merely a statewide baseline minimum goal to achieve sustainability, and GSA’s have the authority to develop more appropriate timeframes based on local conditions and concerns. SGMA requires regular review of GSP progress toward meeting goals and objectives every 5-years or every quarter of the 20-year period so there are effectively 4 implementation periods over 20 years. Water Code §10727.2(b)(1).

Table 2
Example 1 Pumping Allowance Over 20-Year Implementation Period

Year	Percent Reduced	Pumping Allowance	Pumping Allowance (Acre-feet)
<i>5,700 Acre-Feet per Year Sustainably Yield</i>			
0		100%	1,000
1	3.5%	96.5%	965
2	7.0%	93.0%	930
3	10.5%	89.5%	895
4	14.0%	86.0%	860
5	17.5%	82.5%	825
6	21.0%	79.0%	790
7	24.5%	75.5%	755
8	28.0%	72.0%	720
9	31.5%	68.5%	685
10	35.0%	65.0%	650
11	38.5%	61.5%	615
12	42.0%	58.0%	580
13	45.5%	54.5%	545
14	49.0%	51.0%	510
15	52.5%	47.5%	475
16	56.0%	44.0%	440
17	59.5%	40.5%	405
18	63.0%	37.0%	370
19	66.5%	33.5%	335
20	70.0%	30.0%	300

Exhibit 2
Example 1 Pumping Allocation Over 20 Year Implementation Period



Example 2 (Reduced Reduction Rate)

In example two, the initial sustainable yield is the same as example one (5,700 acre-feet per year). After 10 years of reduction at 3.5% per year, an update to the water budget indicates the sustainable yield of the Subbasin is higher by 1,300 acre-feet per year for a revised sustainable yield of 7,000 acre-feet per year rather than 5,700 acre-feet per year as previously understood.⁴ Per the updated sustainable yield, the linear reduction rate is reduced to 2.9% per year over the second 10 years of

⁴ The revised estimate of sustainable yield in year 10 to 7,000 acre-feet per year is a hypothetical example to illustrate the adaptive management approach of the GSP. Conversely, data collected during the course of GSP implementation could indicate that the sustainable yield is less than the planning estimate of 5,700 acre-feet per year as presented in Example 3.

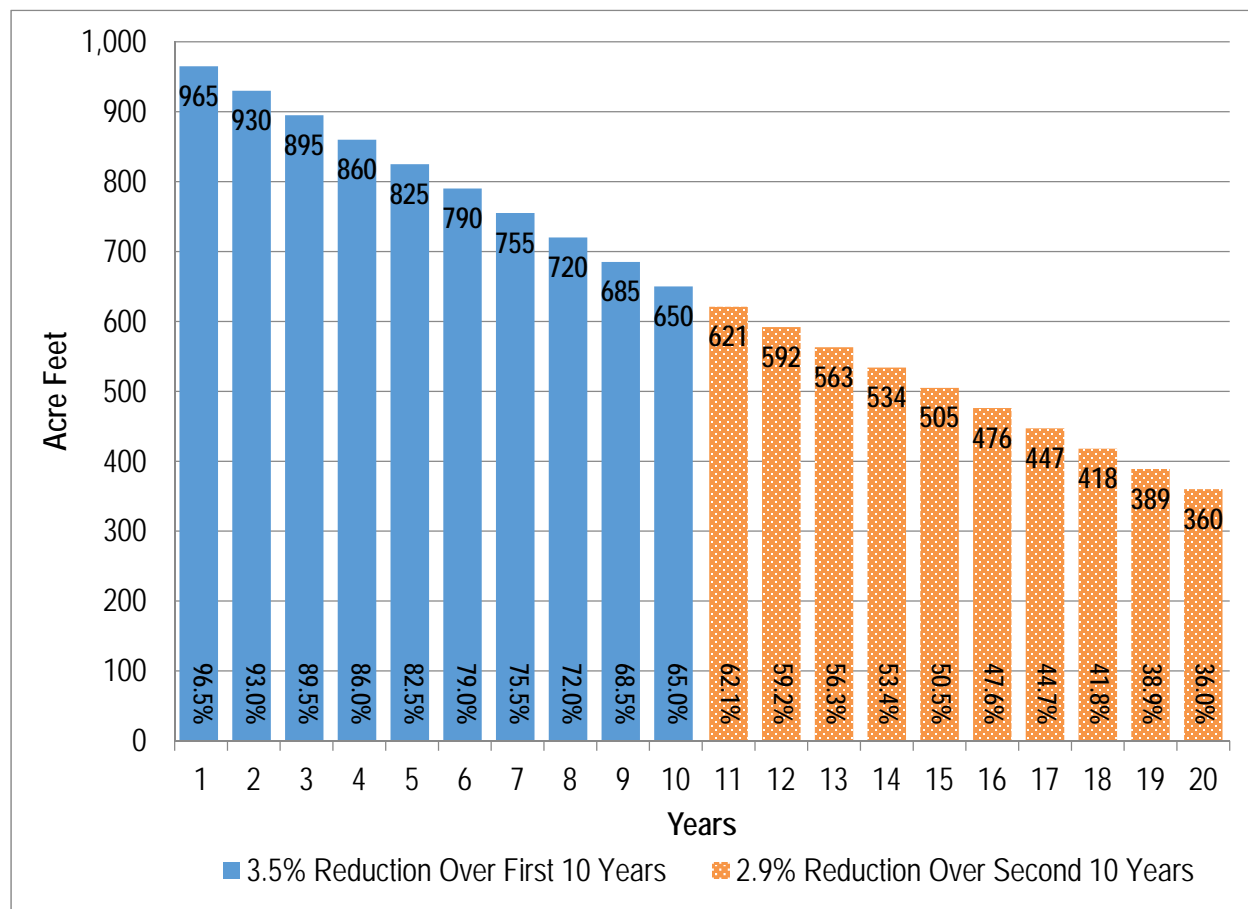
the implementation period. At the end of the 20-year implementation period for this example, the “Pumping Allowance” is 36% of the “Baseline Production Allocation” (a 64% net reduction). Table 3 and Exhibit 3 present the annual “Pumping Allowance” for a well owner assigned a “Baseline Pumping Allocation” of 1,000 acre-feet and assuming a 64% pumping reduction over the 20-year implementation period and a linear rate of reduction for each 10-year period.

Table 3
Example 2 Pumping Allowance Over 20 Year Implementation Period

Year	Percent Reduction	Pumping Allowance	Pumping Allowance (Acre-feet)
<i>5,700 Acre-Feet per Year Sustainable Yield</i>			
0		100%	1,000
1	3.5%	96.5%	965
2	7.0%	93.0%	930
3	10.5%	89.5%	895
4	14.0%	86.0%	860
5	17.5%	82.5%	825
6	21.0%	79.0%	790
7	24.5%	75.5%	755
8	28.0%	72.0%	720
9	31.5%	68.5%	685
10	35.0%	65.0%	650
<i>Theoretical Updated 7,000 Acre-Feet Acre Feet Per Year Sustainable Yield</i>			
11	37.9%	62.1%	621
12	40.8%	59.2%	592
13	43.7%	56.3%	563
14	46.6%	53.4%	534
15	49.5%	50.5%	505
16	52.4%	47.6%	476
17	55.3%	44.7%	447
18	58.2%	41.8%	418
19	61.1%	38.9%	389
20	64.0%	36.0%	360

Notes: Example based on a “Baseline Pumping Allocation” of 1,000 acre-feet and linear reduction over 20 year implementation period. In year 10, additional data collected during GSP implementation indicates a revised estimate of sustainable yield to 7,000 acre-feet per year and the linear reduction changes from 3.5% per year to 2.9% per year. This is a hypothetical example. Conversely, data collected during the course of GSP implementation could indicate that the sustainable yield is less than the planning estimate of 5,700 acre-feet per year.

Exhibit 3
Example 2 Pumping Allocation Over 20 Year Implementation Period



Notes: Assumes a linear reduction of 3.5% per year over the first 10 years of the implementation period. In year 10, an update to the water budget indicates the sustainable yield of the Subbasin is higher by 1,300 acre-feet per year for a revised sustainable yield of 7,000 acre-feet per year. After year 10, the linear reduction rate is 2.9% per year over the second 10 years of the implementation period. The upper and lower values on the annual bars represent the annual "Pumping Allocation" as a volume in acre-feet and a percentage of the "Baseline Pumping Allocation".

EXAMPLE 3 (INCREASED REDUCTION RATE)

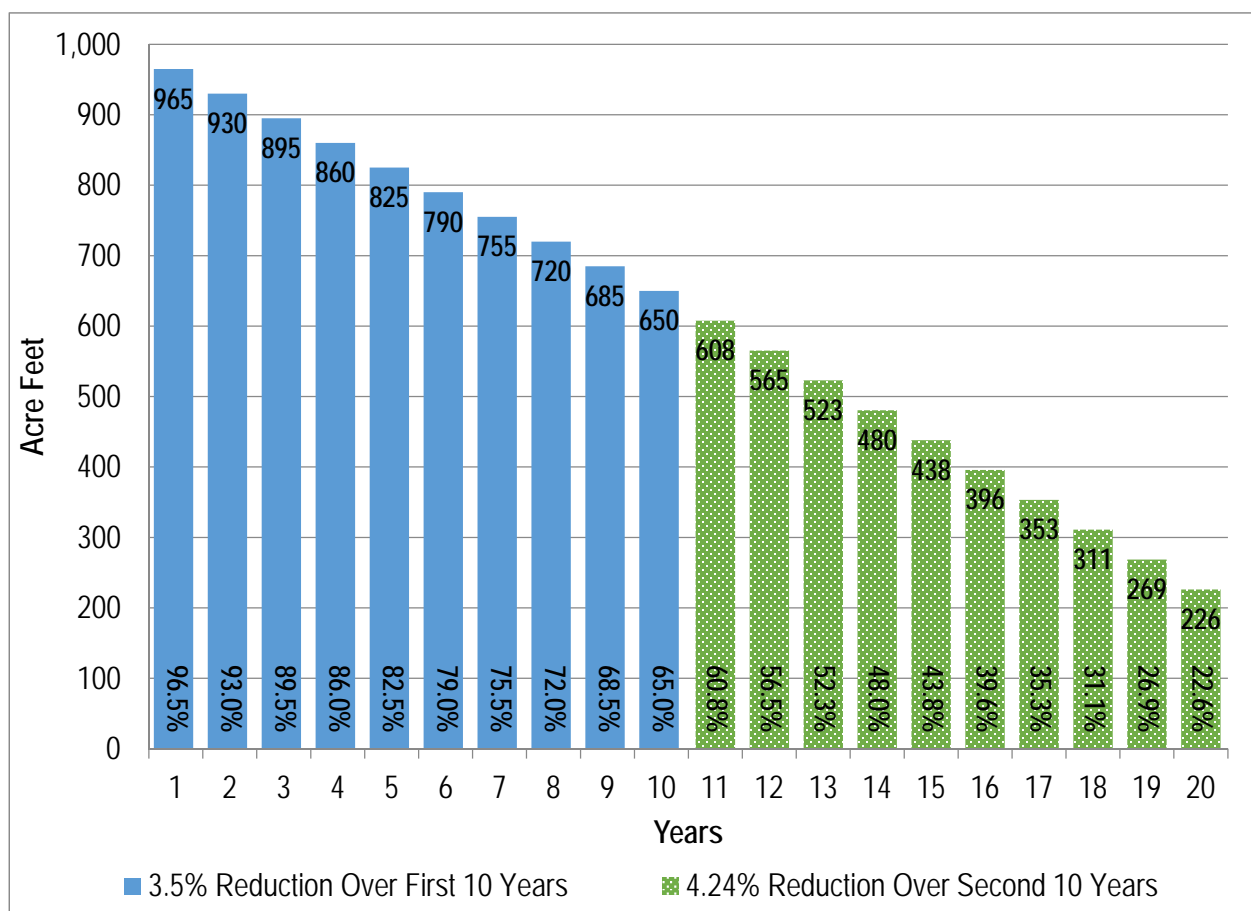
In example three, the initial sustainable yield is the same as example one (5,700 acre-feet per year). After 10 years of reduction at 3.5% per year, an update to the water budget indicates the sustainable yield of the Subbasin is lower by 1,300 acre-feet per year for a revised sustainable yield of 4,400 acre-feet per year rather than 5,700 acre-feet per year as previously understood. Per the updated sustainable yield, the linear reduction rate is increased to 4.24% per year over the second 10 years of the implementation period. At the end of the 20-year implementation period for this example, the "Pumping Allowance" is 22.6% of the "Baseline Production Allocation" (a 77.4% net reduction). Table 4 and Exhibit 4 present the annual "Pumping Allowance" for a well owner

assigned a “Baseline Pumping Allocation” of 1,000 acre-feet and assuming a 77.4% pumping reduction over the 20-year implementation period and a linear rate of reduction for each 10-year period.

Table 4
Example 3 Pumping Allowance Over 20 Year Implementation Period

Year	Percent Reduction	Pumping Allowance	Pumping Allowance (Acre-feet)
<i>5,700 Acre-Feet per Year Sustainable Yield</i>			
0		100%	1,000
1	3.5%	96.5%	965
2	7.0%	93.0%	930
3	10.5%	89.5%	895
4	14.0%	86.0%	860
5	17.5%	82.5%	825
6	21.0%	79.0%	790
7	24.5%	75.5%	755
8	28.0%	72.0%	720
9	31.5%	68.5%	685
10	35.0%	65.0%	650
<i>Theoretical Updated 4,400 Acre-Feet Acre Feet Per Year Sustainable Yield</i>			
11	39.2%	60.8%	608
12	43.5%	56.5%	565
13	47.7%	52.3%	523
14	52.0%	48.0%	480
15	56.2%	43.8%	438
16	60.4%	39.6%	396
17	64.7%	35.3%	353
18	68.9%	31.1%	311
19	73.1%	26.9%	269
20	77.4%	22.6%	226

Exhibit 3
Example 3 Pumping Allocation Over 20 Year Implementation Period



Notes: Assumes a linear reduction of 3.5% per year over the first 10 years of the implementation period. In year 10, an update to the water budget indicates the sustainable yield of the Subbasin is less by 1,300 acre-feet per year for a revised sustainable yield of 4,400 acre-feet per year. After year 10, the linear reduction rate is 4.24% per year over the second 10 years of the implementation period. The upper and lower values on the annual bars represent the annual “Pumping Allocation” as a volume in acre-feet and percentage of the “Baseline Pumping Allocation”.

RECOMMENDATIONS

The “Pumping Allowance,” assigned to each well user and determined by a percent reduction of each well owner’s “Baseline Pumping Allocation,” shall be enforced to reach the estimated sustainable yield of the Subbasin. The “Pumping Allowance” shall be reviewed at least annually and adjusted as necessary to meet GSP goals and objectives.

November 20, 2017

TO: Advisory Committee

FROM: Core Team

SUBJECT: Item III.B: Sustainability Criteria and Reduction Period

The development of sustainability criteria requires a step wise approach tailored for the Borrego Springs Subbasin (Subbasin) to address local conditions. The steps underway are as follows:

1. Assessment of sustainability indicators
 - o Significant and unreasonable conditions
 - o Management areas
 - o Representative monitoring sites
2. Minimum thresholds
3. Undesirable results
4. Measurable objectives
5. Interim milestones
6. Sustainability goal

Assessment Sustainability Indicators

An assessment of sustainability indicators was presented at the September 2017 Advisory Committee meeting. The preliminary assessment indicated that the applicable sustainability indicators to the Subbasin include: 1) chronic lowering of groundwater levels, 2) reduction in groundwater storage, and 3) degraded water quality. It was determined that three sustainability indicators—seawater intrusion, land subsidence and depletion of interconnected surface water—have limited or no applicability.¹

Significant and Unreasonable Conditions

The Groundwater Sustainability Agency (GSA) must consider and document the conditions at which each of the applicable sustainability indicators become significant and unreasonable in the Subbasin, including the reasons for justifying each particular threshold selected. General descriptions of significant and unreasonable conditions are later translated into quantitative minimum thresholds and measurable objectives. The evaluation of significant and unreasonable conditions should identify the geographic area over which the conditions need to be evaluated so the GSA can choose appropriate representative monitoring sites. A significant and unreasonable condition is not strictly defined in the Sustainable Groundwater Management Act (SGMA) legislation, the Final Emergency Regulations or in the Department of Water Resources (DWR) Draft Sustainable Management Criteria Best Management Practices (BMP) (DWR 2016, 2017). Every GSA may decide, based on local conditions, what defines significant and unreasonable conditions. This allows every GSA to define undesirable results to reflect local concerns, values, and outcomes.

Management Areas

¹ As per SGMA Section 10727.2 (b)(4) “The plan may, but is not required to, address undesirable results that occurred before, and have not been corrected by, January 1, 2015”. Thus, pre-January 1, 2015 impacts to groundwater dependent ecosystems are explicitly excluded as an undesirable result.

The proposed North, Central, and South management areas were presented at the May 2017 Advisory Committee meeting. The management areas delineate generalized areas within the Subbasin taking into account multiple factors affecting the Subbasin, including differences in water use sector, water source type, geology, and aquifer characteristics. Management areas may have different minimum thresholds and measurable objectives than the basin at large but must provide descriptions of why those differences are appropriate.

Representative Monitoring Sites

Representative monitoring sites are a subset of a basin's complete monitoring network, where minimum thresholds, measurable objectives, and interim milestones are set. Representative monitoring sites can be used for one sustainability indicator or multiple sustainability indicators.

Minimum Thresholds

A minimum threshold is the quantitative value that represents the groundwater conditions at a representative monitoring site that, when exceeded individually or in combination with minimum thresholds at other monitoring sites, may cause an undesirable result(s) in the Subbasin.

Undesirable Results

Undesirable results occur when conditions related to any of the applicable sustainability indicators become significant and unreasonable. Undesirable results will be used by the DWR to determine whether the sustainability goal has been achieved within the Subbasin. Undesirable results must be defined for each of the applicable sustainability indicators. A single undesirable result may be adequate for each sustainability indicator, or multiple undesirable results may be defined. All undesirable results will be based on minimum thresholds exceedances.

One significant development as presented in the recently released DWR Draft Sustainable Management Criteria BMP addresses problematic basin conditions that existed prior to January 1, 2015, when SGMA took effect. DWR states, "If the evaluation indicates that an undesirable result occurred prior to January 1, 2015, the GSA must set measurable objectives to either maintain or improve upon the conditions that were occurring in 2015. The GSA must plan a pathway, indicated by appropriate interim milestones, to reach and maintain the 2015 conditions within the 20-year implementation timeline (DWR 2017)."

Measurable Objectives

Measurable objectives are specific, quantifiable goals for the maintenance or improvement of specified groundwater conditions that have been included in an adopted Groundwater Sustainability Plan (GSP) to achieve the sustainability goal for the Subbasin. The GSP must include one or more measurable objectives for each applicable sustainability indicator. Appropriate measurable objectives need to be set to ensure that the Subbasin avoids undesirable results within the prescribed 20-year timeframe of GSP implementation. In addition to the measurable objective, interim milestones must be defined in five-year increments.

Interim Milestones

Interim milestones refers to a target value representing measurable groundwater conditions, in increments of five years, set by a GSA as part of a GSP.

Sustainability Goal

GSAs must develop a sustainability goal that is applicable to the entire Subbasin. The sustainability goal should succinctly state the GSA's objectives and desired conditions of the Subbasin, how the Subbasin will get to that desired condition, and why the measures planned will lead to success. The sustainability goal is

supported by the locally-defined minimum thresholds and undesirable results. Demonstration of the absence of undesirable results supports a determination that the Subbasin is operating within its sustainable yield and, thus, that the sustainability goal has been achieved.

GSA's should consider the following when developing their sustainability goal:

- **Goal description.** The goal description should qualitatively state the GSA's objective or mission statement for the Subbasin. The goal description should summarize the overall purpose for sustainably managing groundwater resources and reflect local economic, social, and environmental values within the basin.
- **Discussion of measures.** The sustainability goal should succinctly summarize the measures that will be implemented. This description of measures should be consistent with, but may be less detailed than, the description of projects and management actions proposed in the GSP. Examples of measures a GSA could implement include demand reduction and development of groundwater recharge projects. The goal should affirm that these measures will lead to operation of the Subbasin within its sustainable yield.
- **Explanation of how the goal will be achieved in 20 years.** The sustainability goal should describe how implementation of the measures will result in sustainability. For example, if the measures include demand reduction and implementation of groundwater recharge projects, then the goal would explain how those measures will lead to sustainability (e.g., they will raise groundwater levels above some threshold values and eliminate or reduce impacts to domestic wells).

References

- DWR (California Department of Water Resources). 2017. Draft Best Management Practices for the Sustainable Management of Groundwater. Sustainable Management Criteria BMP. November 2017.
- DWR. 2016. Groundwater Sustainability Plan (GSP) Emergency Regulations Guide. Sustainable Groundwater Management Program. July 2016.

Borrego SGMA Advisory Committee (AC) & Core Team (CT)
Work Planning & Timeline Chart
Draft Version 10/30/17

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 UCI Research Center 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 UCI Research Center 10:00am – 3:00pm	<ul style="list-style-type: none"> • AC Formal Recommendation: Metering • AC Formal Recommendation: Baseline Pumping Allocation • Pumping allowance discussion • Sustainability criteria and reduction period
January 2018		
January 25, 2018	Borrego AC Meeting #9 Location TBD 10:00am – 3:00pm	<ul style="list-style-type: none"> • Projects and Mgmt Actions (Winter – Spring) • Potential Discussion: Water Credits System • Potential Discussion: Review of Groundwater Water Quality data collected by DWR in October 2017
February 2018		
		<ul style="list-style-type: none"> • Projects and Mgmt Actions (Winter – Spring) • Prop 1 Grant Tasks (tentative): Decision Support System Model, GoldSim Applicability, SDAC Community Engagement, CEQA documentation, etc.
March 2018		
		<ul style="list-style-type: none"> • Projects and Mgmt Actions (Winter – Spring) •
April 2018		
		<ul style="list-style-type: none"> • Projects and Mgmt Actions (Winter – Spring) • Fees and Penalties •

May 2018		
		<ul style="list-style-type: none"> • Projects and Mgmt Actions (Winter – Spring) • Fees and Penalties • Potential Regulatory Changes (Land Use, Ordinance Amendments, etc. for implementation of GSP)
June 2018		
June 30, 2018	Draft GSP Projected Completion Date	<ul style="list-style-type: none"> • Fees and Penalties • Potential Regulatory Changes (Land Use, Ordinance Amendments, etc. for implementation of GSP)
July 2018		
August 2018		

Action Items from Borrego AC Meeting #7 10-26-17

Status update as of 11/20/17

	Responsible Party	Topic	Action Item	Status
1.	Core Team	Metering (Issue #1)	Revise Question in Issue #1 to reference the GSP specifically, and include language such as “within a reasonable timeframe” and re-distribute question to AC members	In Progress
2.	Core Team	Baseline Allocation (Issue #2)	Consider alternative statistical methods to apply to data to determine baseline allocation values (e.g. utilizing a standard deviation of 2). Bring to discussion during November AC meeting.	Complete – to discuss at Nov. AC
3.	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
4.	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 September 27th Meeting Minutes c. Draft October 26th Meeting Minutes (when available) 	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 October 26 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	In Progress
8.	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
9.	Trey Driscoll	Prop 1	Continue developing inventory of pumpers in the Borrego groundwater basin (07-28)	Ongoing
10.	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
11.	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
12.	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

September 12, 2017

Mr. Geoff Poole
Board of Directors
Borrego Water District
PO Box 1870
Borrego Springs, CA 92004

Ladies and Gentlemen:

First, thank you for your service on the Board of Directors of the Borrego Water District. The future of Borrego Springs depends on your decisions and the questions are not easy.

Second, here are three questions that I ask you to consider:

1. While you are working on a long-term plan, does it make sense to slow or stop the over-pumping of the aquifer by requiring a pumping fee? Once a cost is associated with pumping water, there will be economic discipline on the use of that water. If the costs to buy out the current overuse are estimated at \$15-\$30M, then the implicit price of that unsustainable pumping is \$3650- \$7300 per afy. Annual pumping fees, paid by all users of Borrego Valley Groundwater Basin water, of \$73-\$146 per afy would represent a charge of 2% of the value of the excess water being used. What is your view regarding the current policy where there is no charge? Does the fact that water is "free" encourage its overuse?
2. What rule can be adopted now that will provide businesses guidance as to what current uses can be counted on as available going forward? What rule can be adopted now that will provide businesses assurance that fallowing or other such investments will be recognized in the final plan? Will such rules permit markets and voluntary transactions to work more effectively to sort out what water will be available in the future? Without such rules, will there be continuing depletion of the aquifer and slower investment in the Borrego Springs economy?
3. For businesses which rely on the Borrego Water District ("BWD") for future service, have you a good measure of what are BWD's existing commitments to provide future service, whether that obligation is based on contracts (service agreements, water credits) or reliance (water availability fees, long-time zoning)? Have you a plan how BWD will accumulate any additional resources required to meet its future obligations?

Thank you for your consideration of these questions.

Sincerely,

Terry Considine

cc: Lyle Brecht



BORREGO WATER DISTRICT

November 6, 2017

Terry Considine
4582 S Ulster St;
Denver, Colorado 80237

Dear Mr. Considine,

Thank you for your correspondence to the Borrego Water District (District) and the thoughtful questions you present. Your letter was published in the Board Package of the Board's Regular Business Meeting on October 25th. At this meeting, the Board reviewed your letter and assigned an ad-hoc committee of the Board consisting of Directors Beth Hart and Lyle Brecht to research and respond to the questions you asked in your letter.

Based on the Committee's work to date:

All of your questions are being considered as part of the groundwater sustainability plan development process between the District and San Diego County (County) as the Groundwater Sustainability Agency (GSA) for the Borrego Springs Subbasin (Borrego Basin) of the Borrego Valley Groundwater Basin from which the Rams Hill Development obtains all its municipal and irrigation water.

Thus, it is in that Sustainable Groundwater Sustainability Act (SGMA) mandated process that the issues you have discussed in your letter will be most appropriately reviewed and examined. Having the District address those issues separately could, in some sense, be viewed as undermining that SGMA process and the County's role in groundwater sustainability plan development.

However, to your letter's specific concerns:

- (1) **Fee Assessment.** The California Supreme Court recently heard arguments as to whether the imposition of such a fee requires compliance with Proposition 218. A related issue is whether an agency may impose such a fee prior to the completion of a groundwater sustainability plan. Until the Supreme Court issues a ruling, which should come by the end of the year, it would be premature to take any action. Accelerating the development of the plan is probably the most prudent course of action. SGMA is clear that, especially with a Proposition 218 election, a groundwater sustainability agency may impose the type of pumping fee that is being suggested only after the groundwater sustainability plan has been approved by the County Supervisors and the District's Board. With respect to pumping fees for any lawful purpose, it is likely that such fees would apply to all pumpers in the basin.



BORREGO WATER DISTRICT

- (2) Rules re Water Availability. The purpose of the groundwater sustainability plan is to provide such business guidance for the future. As a practical matter, the District and the County will need to have an almost-complete groundwater sustainability plan in early 2019 so as to meet the schedule established in SGMA. In the interim, the District and the County could commit by resolution to three simple principles intended to guide groundwater sustainability planning. First, total extractions from the groundwater basin are to be reduced to about 5,700 AFY no later than 2040 and, depending on the results of technical studies, perhaps earlier. Second, the groundwater sustainability plan will recognize all pumping and all credits that have been issued, while also making allowances for existing County-approved subdivisions (which is to be determined). Third, the groundwater sustainability plan intends to use markets and/or market mechanisms to allow for the free transfer of SGMA-compliant pumping allowances, consistent with the ramp-down to 5,700 AFY by no later than 2040.
- (3) Future Service by BWD. The second principle identified in #2 above would recognize all of the existing approved EDU's in view of the District's provision of water service, with the intent to utilize a base period that is relatively long (say the last ten years) to ensure that no pumper is penalized due to the Great Recession or the drought. Under a market system of the type proposed in the third principle above, the District will need to seek to convert agricultural lands currently being farmed and encourage the implementation of additional water conservation landscapes and residential water use conservation approaches. At present, the GSA is working to identify the least-cost solutions but it is likely that such a path forward will become clearer closer to the adoption of the groundwater sustainability plan.

As the District and the Committee proceeds in the above work, we anticipate keeping you in the loop and would hope that you are willing to provide feedback on any proposed District actions that may impact your investments in Borrego.

Sincerely,

Geoff Poole
General Manager



BORREGO WATER DISTRICT

October 30, 2017

Borrego Springs Community Sponsor Group

Delivered by email:

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This is in response to requests from various members of the Community that the Borrego Water District (BWD) comment on whether the County of San Diego Department of Planning and Development Services (PDS) should consider future groundwater supply availability and affordability in its land use decisions within the District's municipal service boundaries of the Borrego Springs Subbasin (Borrego Basin) of the Borrego Valley Groundwater Basin.

An overdraft in the Borrego Basin is well established. In the early 1980's, a US Geological Survey (USGS) study funded by San Diego County found that the basin was in overdraft and presented a serious economic, social, and environmental threat to the future of the Borrego Valley. In 2015, the USGS concluded a second study funded by the Borrego Water District that confirmed and expanded on the 1980's study, finding that the overdraft is more severe than had been established in the early 1980's.

Current estimates of average annual withdrawals from the basin are: agricultural uses approximately 70%, recreational uses (primarily golf courses) approximately 20% and municipal uses approximately 10%. The USGS estimated that annual withdrawals equal approximately 19,000 AFY, while average annual recharge is approximately 5,700 AFY based on 66 years of historic data. Thus, the current rate of groundwater pumping produces an average annual overdraft of about 13,300 AFY (for additional information please see the District's website at borregowd.org).

On January 1, 2015, the Sustainable Groundwater Management Act (SGMA) went into effect requiring Groundwater Sustainability Agencies (GSAs) to bring basins into sustainability by taking various actions, including potentially limiting extractions, imposing fees and penalties, and requiring metering and water quality monitoring in overdrafted basins. The Borrego Basin is defined by the Department of Water Resources (DWR) as a basin in "critical" overdraft. In 2015/16, the District and San Diego County entered into a Memorandum of Agreement (MOA) to become a multi-agency GSA for the basin. The GSA is charged with developing and adopting a Groundwater Sustainability Plan (GSP) that produces basin sustainability in no more



BORREGO WATER DISTRICT

than twenty (20) years from 2020. The target date for GSP adoption is before January 1, 2020 (for additional information refer to the County's or DWR's websites).

We assume that PDS is carefully reviewing the availability of water supply and the potential environmental impacts of serving Borrego Basin groundwater to new EDU's under the California Environmental Quality Act (CEQA) as required under California law in all its deliberations concerning new development and the potential future water supply constraints in the Basin. Yet, we understand that currently the County takes the position that there is no specific statutory requirement that it consider SGMA's sustainability mandates when making its land use decisions within the District's municipal service area of the Borrego Basin. To support the continued economic growth of our area and the protection of the Basin, we want to ensure that such land use decisions are not, inadvertently, made open to challenge under CEQA or SGMA due to any allegation that Basin conditions and water availability have not been fully addressed before discretionary action is taken by the land use agency.

Practically speaking establishing sustainability will directly and permanently affect the water supply within the Borrego Basin, straining BWD's capacity to provide an affordable supply of potable water in our severely disadvantaged community for current municipal uses, the approximately 3,000 County approved, but currently unbuilt EDUs, in addition to any newly created EDUs. Accordingly, the District strongly recommends that PDS's land use decisions must consider the future availability and affordability of municipal water supply for the Borrego Springs community.

Sincerely,

Beth A Hart
President
Borrego Water District

cc: Mark Wardlaw, Director, mark.wardlaw@sdcounty.ca.gov
Kevin Johnston, kevin.johnston@sdcounty.ca.gov

To: Borrego Springs Basin Advisory Committee

From: Thomas S. Bunn III

Date: October 24, 2017

Re: Response to Agricultural Representatives Agenda Paper #1

This is a response to the Agricultural Representatives Agenda Paper #1, dated September 21, 2017. The paper contains a number of omissions and incorrect statements. This memo does not attempt a line-by-line rebuttal, but points out the most significant issues.

The paper ignores the prescriptive right of the Water District

The paper repeatedly makes the point that the groundwater rights of overlying landowners have priority over municipal water rights. It fails to mention, however, that this is only true if the municipal water rights are appropriative rights, not if they are prescriptive rights. Overlying rights do not have priority over prescriptive rights. “Acquisition of a prescriptive right in groundwater rearranges water rights priorities among water users, elevating the right of the one acquiring it above that of an appropriator to a right equivalent in priority to that of a landowner.” (*City of Santa Maria v. Adam* (2012) 211 Cal.App.4th 266, 297.)

The prescriptive right of the Water District is not acknowledged anywhere in the paper. Yet the Water District clearly has acquired a prescriptive right by pumping water in an overdrafted basin for a continuous period of five years, where there was knowledge of the overdraft and where the pumping was actual, open and notorious, hostile and adverse to the overlying users, and under claim of right. (*City of Santa Maria v. Adam* (2012) 211 Cal.App.4th 266, 291.)

“The effect of a prescriptive right [is] to give to the party acquiring it [the Water District] and take away from the private defendant against whom it was acquired [overlying landowners] either (1) enough water to make the ratio of the prescriptive right to the remaining rights of the private defendant as favorable to the former in time of subsequent shortage as it was throughout the prescriptive period or (2) the amount of the prescriptive taking, whichever is less.” (*City of Los Angeles v. City of San Fernando* (1975) 14 Cal.3d 199, 293.) In other words, the pumping during the prescriptive period is reduced pro rata to the safe yield.

Thus, the argument in the paper that agricultural water use cannot be reduced without agreement on an agricultural fallowing and landowner pumping rights transfer program is incorrect.

The paper ignores the priority for domestic use in Water Code sections 106, 106.3, and 106.5

Water Code section 106 states that the domestic use of water is a higher use than irrigation. Water Code section 106.3 declares that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes, and state agencies must take that into account in policies, regulations, and grant criteria. Water Code section 106.5 provides for the protection of the right of a municipality to acquire and hold rights to the use of water for existing and future uses.

It is routinely argued in groundwater adjudications that these statutes mean that domestic and municipal uses should get priority in times of shortage. Because adjudications are generally resolved by settlement, no appellate court has yet considered the nature and extent of this priority. But in the recent Santa Maria groundwater adjudication, the court did use these statutes to support its conclusion that parties with prescriptive rights (who are generally domestic and municipal users) do not lose their rights during times of surplus. (*City of Santa Maria v. Adam* (2012) 211 Cal.App.4th 266, 297.)

For purposes of groundwater allocations under SGMA, Water Code sections 106, 106.3, and 106.5 furnish a powerful argument that domestic and municipal uses should not suffer the same reductions as irrigation.

Even if the Water District did not have a prescriptive right, the landowners would still have to reduce their pumping

The paper does not acknowledge that landowners, who represent the vast majority of pumping, would have to reduce their pumping by almost the same amount, even if no allocation were made to the Water District at all. As among overlying users, the rights are correlative: each may use only their reasonable share [of the safe yield] when water is insufficient to meet the needs of all. (*City of Santa Maria v. Adam* (2012) 211 Cal.App.4th 266, 279.)

The paper incorrectly cites *Mojave* and other cases

The paper cites the *Mojave* case (*City of Barstow v. Mojave Water Agency*¹ (2000) 23 Cal.4th 1224) for the proposition that groundwater rights of overlying landowners have priority over municipal water rights. But, as previously stated, that is only true if there are no prescriptive rights, as was the case in *Mojave*. (23 Cal.4th at p. 1241.)

The paper also cites *Mojave* for the following proposition: “[A]n across-the-board reduction of groundwater production by all sectors is contrary to California water law, except in the rare situation where an entire city’s economy is built entirely on junior appropriations in excess of overdraft, which situation does not exist here.” The “situation” described in the *Mojave*

¹ The paper uses the incorrect name of *City of Barstow v. Adelanto*.

case, however, was not that at all, but where a “restriction to safe yield on a strict priority basis might have deprived parties who had been using substantial quantities of ground water for many years of all further access to such water.” (23 Cal.4th at pp. 1246-47.) That is exactly the situation here.

Finally, the paper says that overlying water rights need to be based on the highest year of production during the period of overdraft. It cites three adjudications for this, but the formula used in those adjudications was based on stipulation, not a judicial ruling. It goes on to say the California Supreme Court has upheld use of the highest year of production, citing *Hi-Desert County Water Dist. v. Blue Skies Country Club, Inc.* (1994) 23 Cal.App.4th 1723, 1727. First, the case was not a Supreme Court case, but a court of appeal case. Second, and more significantly, the formula in the case was again based on a stipulation and was not an issue before the court. It is incorrect to say the formula was “upheld” by the court.

Conclusion

Groundwater sustainability agencies are given the authority to determine groundwater extraction allocations. (Wat. Code 10726.4(a).) A reasonable approach would be to allocate the Water District its historical use, and allocate the remainder of the safe yield to overlying users, without any compensation to those users. This approach would be consistent with SGMA and California water rights law.