APPENDIX G
RESPONSES TO COMMENTS

Under the Sustainable Groundwater Management Act (SGMA), the County of San Diego (County) and Borrego Water District (BWD), as the Groundwater Sustainability Agency (GSA) for the Borrego Springs Groundwater Subbasin (Subbasin), has solicited and responded to comments from the public and from other agencies concerned with the Draft Groundwater Sustainability Plan (GSP). The Draft GSP was made available by the GSA for public review on March 22, 2019. The public comment period for the Draft GSP ended on May 21, 2019. Agencies, organizations, and individuals submitting comments on the plan are listed below, organized by category.

Letter Number	Organization/Commenter
C1	Borrego Springs Community Sponsor Group
I1	Janet Johnson
I2	Bill Carpenter
I3	Lee Grismer
I4	John Geyer
I5	Eric Nessa
I6	Larry Grismer
I7	Linda Goodrich
I8	Pat Hall
I9	Mike Himmerich
I10	Jeff Grismer
I11	Bill Bancroft
I12	Steve and Debbie Riehle
I13	Terry and Pam Rhodes
I14	Rebecca Falk
I15	Rebecca Falk
I16	Rebecca Falk
I17	Rebecca Falk
I18	Diane Johnson
I19	Bill Berkley
I20	Jack and Linda Laughlin
I21	Richard and Artemisa Walker
I22	Eric Nessa
I23	Marsha Boring
I24	John Peterson
I25	Robert Kleist
I26	Garold Edwards
I27	Mark Jorgenson
I28	Don Rideout
I29	Judy Davis
I30	Cary Lowe
I31	Bill Haneline

Letter Number	Organization/Commenter
I32	Hugh Dietz
I33	Cristin McVey
I34	Henry Liu
I35	Susan Boutwell
I36	Thomas Hall
I37	Rudy Monica
I38	Lance Lundberg
I39	Barry Berndes
I40	David Leibert
I41	Elena and John Thompson
I42	Joseph Tatusko
I43	Paul Ocheltree
I44	Ray Shindler
I45	Ray Shindler
I46	Saul Miller
I47	Gary Haldeman
I48	Gary Haldeman
I49	Diane Martin
I50	I Donald
I51	Herbert Stone
I52	Karen and Fred Wise
I53	Jack Sims
I54	Joanne Sims
I55	James Roller
I56	Jeff Meagher
I57	Heather Davidson
I58	Linda Roller
I59	John and Mary Delaney
I60	Ellen Fitzpatrick
I61	Michael Wells
I62	Harold and Joanne Cohen
I63	Jennifer Edwards
I64	Wayne Boring
I65	Barbara Coates
I66	Timothy Kight
I67	Mary Leahy
I68	Betsy Knaak
I69	Ginger Dunlap-Dietz
I70	Charlene Aron
I71	Sandy Jorgenson-Funk
I72	Sally Theriault
I73	Bob Theriault

Letter Number	Organization/Commenter
I74	Merrij Smith
I75	Linda Mocere
I76	D.E. and R.A. Owen
I77	Gary Funk
I78	Linda McBride
I79	Jeanne Gemmell
I80	Cyril Weaver
I81	Marjorie and Paul Schuessler
I82	Alfred DeVico
I83	Liesel Paris
I84	Sal Moceri
I85	Heidi Noyes
I86	Robin Montgomery
I87	William Bonnell
I88	James Rickard
I89	Grace Rickard
I90	Jim Wilson
O1	Agricultural Alliance for Water and Resource Education (AAWARE), Michelle Staples, Jackson Tidus, A Law Corporation
O2	AAWARE, Michelle Staples, Esq. and Boyd Hill, Esq., Jackson Tidus, A Law Corporation
O3	T2 Borrego (Owner of Rams Hill Golf Course), Russell McGlothlin, O'Melveny
O4	Tubb Canyon Desert Conservancy, J. David Garmon, President
O5	The Nature Conservancy, Sandi Matsumoto, Associate Director, California Water Program
O6	San Diego Audubon Society, James A. Peugh, Conservation Chair
O7	Anza Borrego Foundation, Bri Fordem, Executive Director
O8	Clean Water Action, Jennifer Clary, Water Program Manager
O9	Borrego Village Association, J. David Garmon, Acting President
O10	Borrego Springs Unified School District, James L. Markman
O11	Borrego Springs Unified School District, Martha Deichler, School Community Liaison
O12	Borrego Stewardship Council, Diane Johnson
O13	Borrego Stewardship Council, Diane Johnson
O14	Borrego Water District, Kathy Dice, President, Board of Directors
O15	Borrego Valley Endowment Fund, Bob Kelly, President
S1	California Department of Fish and Wildlife, Leslie MacNair, Regional Manager, Inland Desert Region
S2	California State Parks, Gina Moran, District Superintendent

Notes: L = local agency; C= community; O = organization; I = individual; S = state agency.

All comments received on the Draft GSP have been coded to facilitate identification and tracking. Each of the written comment letters and public hearing comments received during the public comment period were assigned an identification letter and number, provided in the list above. These letters and public hearing comments were reviewed and divided into individual comments, with each comment containing a single theme, issue, or concern. Individual comments and the responses to them were assigned corresponding numbers. Each letter is the submittal of a single

individual, agency, or organization. The comment letters' identification consists of two parts. The first part is the letter and number of the document and the second is the number of the comment. As an example, Comment S2-1 refers to the first comment made and addressed in Comment Letter S2. Copies of the bracketed comment letters may be requested by contacting the Plan Manager, or visiting the GSA's website at https://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley/GSP.html.

To finalize the GSP, the GSA has prepared the following responses to comments that were received during the public review period.

RTC.1 MASTER RESPONSES

Baseline Pumping Allocation and Pumping Reduction Program

Issue Summary: Numerous comments have been received from the community stating that the GSP places a unreasonable burden on municipal uses, small water systems (e.g., Air Ranch), and the Anza-Borrego Desert State Park (ABDSP), in reducing water demands through the GSP implementation period, without acknowledging the significant water conservation that has already been achieved to date by municipal, domestic and recreational water users. Several commenters questioned how the period between 2010 and 2015 was selected as the period in which to determine the baseline pumping allocation (BPA) as this was a period in which conservation efforts were already underway. Commenters argue that this leaves little room for further conservation efforts, and are concerned that the Pumping Reduction Program (Project and Management Action [PMA] No. 3) will require cutbacks that cannot be achieved without jeopardizing health and safety, would unreasonably raise water rates, and could result in depreciation of property values. The primary request from commenters is that the municipal sector and small water systems, such as Air Ranch and ABDSP, not be subject to the same percentage reduction as is being applied to the recreation and agricultural sectors. The overarching sentiment is that it is unfair to require an "across the board" reductions of 75% for all sectors, when agricultural pumping has been the primary contributor to groundwater overdraft in the Subbasin.

Response: The Pumping Reduction Program (PMA No. 3) will determine how, where and by whom physical reductions in pumping are to be achieved. Although the Draft GSP establishes baseline pumping allocations for each sector, and sets a Subbasin-wide pumping reduction target of 75% by 2040, it neither mandates that the level of pumping reduction be equal across all sectors nor prescribes or predicts how actual pumping reductions will be distributed across sectors at the end of the implementation period. The Pumping Reduction Program is designed to work in conjunction with other PMAs, including the Water Trading Program (PMA No. 1), the Water Conservation Program (PMA No. 2), and the Voluntary Fallowing of Agricultural Land (PMA No.4) to optimize beneficial uses of groundwater while recognizing the need to bring the Subbasin into balance. The Draft GSP states that the Water Trading Program would allow groundwater users (including the BWD) to purchase needed baseline pumping allocation from others to maintain economic activities in the Subbasin. As implementation of the GSP proceeds, it is anticipated that annual pumping allowances published by the GSA will be adjusted to reflect transfer of baseline pumping allocation between pumpers.

In response to establishing 2010 through 2014 as the baseline pumping period, the GSA sought public input prior to determining the time period for the baseline pumping allocation. Please see meeting minutes from September 28, 2017, November 17, 2017, and January 25, 2018. They can

be found on the County's SGMA website at: https://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html.

Commenters are reminded that the Draft GSP does not set specific groundwater use reductions through its sustainable management criteria (i.e., GSP Chapter 3). As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of groundwater use reductions and a specific ramp down schedule. The Draft GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions and a specific ramp down schedule may be developed and agreed to by pumpers in the basin. On July 9, 2019, the BWD held a public meeting at which proposed stipulated agreement terms were made public.

Groundwater Dependent Ecosystems

Summary: Comments from public agencies and organizations—namely the California Department of Fish and Wildlife (CDFW), Anza Borrego Desert State Park (ABDSP), the Nature Conservancy (TNC), the San Diego Audubon Society, and Tubb Canyon Desert Conservancy—have raised concern that the Draft GSP has not adequately identified, evaluated and/or considered undesirable effects associated with interconnected surface water (and groundwater dependent ecosystems in particular), and has not included environmental uses of water as a beneficial use of groundwater within the Plan Area. In essence, commenters disagree with the GSA's Draft GSP's determination that undesirable results on interconnected surface water occurred from declining groundwater levels caused by groundwater pumping decades ago, and that there is no longer a significant nexus between the Subbasin's groundwater aquifer and the potential groundwater dependent ecosystems identified by TNC. Commenters believe that the GSA's conclusion is not adequately supported by the data presented in the GSP, and that at least, a data gap should be identified and further study is warranted.

Response: The Draft GSP, based on the best available data, describes a situation where there very likely are no undesirable effects associated with interconnected surface water and groundwater dependent ecosystems. Appendix D4 has been amended to provide additional resources newly made available by TNC after the public draft of the GSP was published that further demonstrates the disconnection of potential GDEs from the groundwater table underlying the Plan Area. This includes a rooting depth database, and a collection of Landsat data from NASA over a 30 year period that was processed to provide metrics for vegetation greenness and moisture for all of the Natural Communities Commonly Associated with Groundwater (NCCAG) areas mapped by TNC. In addition, Appendix D4 was amended to provide a comparison of aerial photography to further evaluate trends in vegetation communities in the Subbasin. The additional data provided in Appendix D4 indicates the following:

- Comparison of aerial photography shows potential GDEs mapped around the western margins of the Subbasin (i.e., GDE Units 1 and 2, Henderson Canyon, Hellhole Canyon, Culp Canyon, Tubb Canyon, and other minor or unnamed stream segments entering the Subbasin) have remained in place since the early 1950s, despite a long term and persistent trend of declining groundwater levels in the Subbasin. This suggests that these communities are being supported by surface water entering the Subbasin from perennial and ephemeral waters originating outside its boundaries, rather than the regional water table within the Subbasin.
- Evaluation of plant health indices derived from Landsat data have shown that there have been minimal changes in vegetation moisture and/or greenness since 1985 within any of the potential GDEs mapped within the Subbasin. Changes observed by year between 1985 and 2015 have been minor, and have tracked consistently with changes in annual precipitation occurring over the same time frame, rather than the steady decline in groundwater levels. If potential GDEs were relying primarily on the regional groundwater table, one would expect to see a steady decline in community health over the 20-year period.
- Evaluation of the plant root database released by TNC indicate that worldwide, Honey Mesquite have been observed to have maximum plant roots of at least 65 feet deep. This maximum depth was reported from a study in Israel. The database included one study completed closer to Plan Area, at base of the Fish Creek Mountains, about 9.3 miles west of the southern tip of the Salton Sea (Harper's Well site). In this location, the Honey Mesquite community was found to have roots extending to a maximum of 19.6 feet. The groundwater depth recorded at Well MW-5 in the Borrego Sink is 56 feet below the ground surface. There are inherent limitations to the root depth database in terms of both sample size (small) and study design (maximum depths reported may actually just correspond to maximum depth investigated).

The persistence of potential GDEs around the margins of the Subbasin, despite the occurrence of long term groundwater overdraft and declining groundwater levels in the Subbasin, provides inferential evidence that these plant communities are supported primarily by surface water, or groundwater originating from the fractured rock (i.e., springs) likely outside the Subbasin. There is also reasonable evidence that the roots of the potential GDEs may not extend hundreds of feet along the margins of the Subbasin to the regional groundwater table.

The groundwater table has most likely dropped below the likely rooting depth of the Honey Mesquite community identified in GDE Unit 3. Satellite-derived plant indices do not show any changes in aerial extent of the Honey Mesquite community from 1985 through 2018, a period with a documented steady decline in groundwater level. In GDE Unit 3, Honey Mesquite have a dimorphic root system that allows them to utilize soil moisture originating from surface water or the groundwater table, and thus adapt to the sources of water available. Thus, the GSA maintains its position that the Honey Mesquite

community as it exists today is likely no longer being supported by the groundwater. This is also the reason no BPA for beneficial use of groundwater for environmental uses (which would result in GDEs becoming another beneficial user of groundwater) is identified in the Draft GSP.

The GSA would like to remind commenters that a groundwater dependent ecosystem is defined by the Department of Water Resources' (DWR's) implementing regulations as "ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface" (Title 23 CCR Section 351[m]). Although "near the ground surface" is not defined, a groundwater table that is in excess of 50 feet bgs, for example, cannot be reasonably considered as being near the ground surface. Interconnected surface water refers to surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted (Title 23 CCR Section 351[o]). The Subbasin as a whole is a system whose surface waters are disconnected from the underlying groundwater system (i.e., losing streams). The occurrence of a hydraulic connection to the fractured rock system outside the Subbasin boundaries that sustain flow within portions of Coyote Creek, Palm Canyon Creek, and other creeks around the margins of the Subbasin is not necessarily evidence that conditions within the Subbasin has caused undesirable results with respect to interconnected surface waters.

Initial Estimate of Sustainable Yield

Summary: Numerous comments were received that raised concerns over how the sustainable yield estimate was determined, specifically regarding the accuracy and/or absence of specific water budget components, a perception that climate change was not adequately considered, and/or general sentiments that the budget it too restrictive.

Response: The GSA has reviewed comments related to the sustainable yield for the Subbasin and determined that the initial estimate proposed in the Draft GSP remains appropriate and based on the best available data and well-regarded modeling science[1]. However, GSP Section 2.2.3, and Section 2.2.3.6 in particular, has been revised to clarify how the sustainable yield estimate was developed.

The initial sustainable yield estimate used in the Draft GSP of 5,700 acre-feet per year (AFY) was based on the USGS' *pre-development scenario* that estimated natural inflows to the boundaries of the Borrego Valley Hydrologic Model (BVHM) for the period 1945 through 2010. The USGS referenced approximately 1,400 AFY that enters the basin as underflow from adjacent basins, but the USGS Model Update Report in the Draft GSP did not clarify the outflow components used in the *pre-development scenario.* Since calculations of sustainable yield must include both inflow and outflow

[1] "Best available science" refers to the use of sufficient and credible information and data, specific to the decision being made and the time frame available for making that decision, that is consistent with scientific and engineering professional standards of practice (Title 23 CCR Section 351[h]).

components, the GSP has been updated to include the water budget from the modeling update to confirm the validity and appropriateness of using 5,700 AFY as the initial sustainable yield.

Use of 5,700 AFY as the initial estimate of sustainable yield for the Borrego Springs GSP is a reasonable approach recognizing the iterative and adaptive nature of SGMA to identify data gaps, acquire new data and update the estimate of sustainable yield at each 5-year check-in during GSP implementation.

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Comment Letter S1

State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Inland Deserts Region
3602 Inland Empire Boulevard, Suite C-220
Ontario, CA 91764
www.wildlife.ca.gov

GAVIN NEWSOM, Governor
CHARLTON H. BONHAM, Director

May 20, 2019

Via Electronic Mail and Online Submission

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Subject: Comments on the Draft Borrego Valley Groundwater Basin Groundwater Sustainability Plan

Dear Mr. Bennett:

The California Department of Fish and Wildlife (Department) is providing comments on the Draft Borrego Valley Groundwater Basin Groundwater Sustainability Plan (GSP). As trustee agency for the State's fish and wildlife resources, the Department has jurisdiction over the conservation, protection, and management of fish, wildlife, native plants, and the habitat necessary for biologically sustainable populations of such species [Fish & Game Code §§ 711.7 and 1802]. The Department has an interest in the sustainable management of groundwater, as many sensitive ecosystems and public trust resources depend on groundwater and interconnected surface waters, including ecosystems on Department lands that fall within an alluvial groundwater basin adjacent to the Borrego Springs Groundwater Subbasin (7-024.02).

COMMENT OVERVIEW

The Department is writing to support ecosystem preservation and enhancement under Sustainable Groundwater Management Act (SGMA) implementation in the context of the following SGMA statutory mandates and with the benefit of Department expertise.

SGMA affords ecosystems specific statutory and regulatory consideration:

- Groundwater Sustainability Plans (GSPs) must consider **impacts to groundwater dependent ecosystems** [Water Code §10727.4(l)].
- GSPs must identify potential **effects on all beneficial uses and users of groundwater**, including fish and wildlife preservation and enhancement [Title 23

S1-1

California Code of Regulations §666], that may occur from undesirable results [Title 23 California Code of Regulations (CCR) §354.26(b)(3)].

- GSPs must **account for groundwater extraction for all Water Use Sectors** including managed wetlands, managed recharge, and native vegetation [Title 23 CCR §351(al), §356.2(b)(4)].

In consideration of these and other SGMA statute and GSP regulations, the Borrego Valley Groundwater Basin GSP does not: adequately describe the basin setting, rely on the best available science to develop the water budget, adequately estimate sustainable yield, address data gaps associated with potential groundwater flux at the Coyote Creek fault, include undesirable results to groundwater dependent ecosystems (GDEs) in adjacent groundwater basins, and address data gaps in the proposed monitoring network. The Department recommends addressing these concerns before submitting the GSP to the Department of Water Resources for evaluation and assessment.

S1-1 Cont.

COMMENTS AND RECOMMENDATIONS

The Department comments are as follows:

1. **Section 2.2 (Basin Setting).** The Basin Setting is not adequately described. In section 2.2.1.2, it is stated that the hydraulic connectivity across the Coyote Creek fault between the Borrego Springs Subbasin and the adjacent Ocotillo-Clark Valley basin is not precisely known and the range of flux across this fault is estimated to be anywhere between 32 acre-feet per year (AFY) and 3,200 AFY. This is noted as a data gap in section 2.2.2.1 (Groundwater Elevation Data), "Data Gaps" subsection as well.

   a. Issue: The basin cannot be accurately characterized with such a wide range of potential influx. This influx range is inadequate to define and assess reasonable sustainable management criteria as required by Title 23 CCR section 354.12. This issue has been identified as a data gap on p. 2-54.

   b. Recommendation: Address existing data gap through monitoring efforts (see Comment #8) prior to development of a water budget.

S1-2

2. **Section 2.2.2.1 (Groundwater Elevation Data), Data Gaps Subsection.** Groundwater movement along (parallel to) the San Felipe fault should be included as a data gap. It is noted that on Figure 2.2-8 (Geologic Map) that the San Felipe fault may potentially be directing subsurface flow along the fault towards a low spot in groundwater elevation associated with the Borrego Sink (see Figures 2.2-13A). The Department recommends that monitoring wells be installed along the San Felipe fault to evaluate subsurface inflow and outflow

S1-3

along the San Felipe fault in order to "…develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate Plan implementation" as required by Title 23 CCR section 354.34(a).

a. Issue: Unknown groundwater movement along the San Felipe fault potentially affects subsurface flow to San Felipe Creek GDE. Groundwater declines at San Felipe Creek GDE are currently impacting the state- and federally-endangered desert pupfish (*Cyprinodon macularius*) habitat and Designated Critical Habitat (DCH) through dewatering spring-fed surface waters.

b. Recommendation: Plan and install monitoring wells along the San Felipe Fault.

S1-3 Cont.

3. **Section 2.2.3 (Water Budget).** Assumptions are used for the Borrego Valley Hydrologic Model (BVHM) that don't represent the best available science. The BVHM is used to develop the water budget and is appropriate to model groundwater in an agricultural setting with an arid/semi-arid environment. However, the output of the BVHM is dependent on the validity of the data set used by the model. If the data input is biased, it can yield a biased result. In section 2.2.3.3 it is noted that the Subbasin lost 7,300 AFY from storage during the 1945-2016 time-period, but the average loss for the last 10 years was 13,700 AFY. This information indicates that more recent years are characterized by higher extraction rates potentially associated with climatic shifts. Within Section 2.6.8 of *Update to United States Geological Survey Borrego Valley Hydrologic Model for Borrego Valley Sustainability Agency* (included as Appendix D1 of the Plan), the average annual natural recharge of water reaching the saturated zone was calculated to be 5,700 AFY based on a simulation period of 1929 to 2010. Inclusion of older data to develop the model output can introduce a bias into model output. The Plan does not adequately quantify the current inflows and outflows for the basin using the most recent hydrology, water supply, and water demand information as required by Title 23 CCR section 354.18(c)(1) or provide a quantitative assessment of the historic water budget as required in Title 23 CCR section 354.18(c)(2)(B).

S1-4

a. Issue: Using a long historical record of groundwater use can bias BVHM outputs and water budget calculations towards inflow/outflow numbers that are not reflective of current climate and groundwater use patterns.

b. Recommendation: The GSP should use datasets from the most recent 50-year period for precipitation, evapotranspiration, and streamflow information; and the GSP should use only the most recent 10-year period of a quantitative assessment of the historical water budget to estimate and

project future water budget information and future aquifer response to proposed groundwater management practices.

S1-4 Cont.

4. **Section 2.2.3.6 (Sustainable Yield Estimate).** In section 2.2.3.6 on p. 2-80, the average annual natural recharge of water reaching the saturated zone is estimated to be 5,700 AFY. However, this includes an average annual agricultural return flow of 1,473 AFY. As the pumping reduction and fallowing Project and Management Actions are implemented, the agricultural return flow can reasonably be expected to be reduced. This would result in an underestimate of the natural recharge in the water budget and would not provide an accurate estimate of the "Inflow to the groundwater water…" specified by Title 23 CCR section 354.18(b)(2).

   a. Issue: The water budget does not account for reduction in agricultural return flow associated with GSP implementation.

   b. Recommendation: Redesign water budget calculations to account for reduction in agricultural return flow.

S1-5

5. **Section 3.3 (Minimum Thresholds).** Section 3.3 identifies on p. 3-16 that Title 23 CCR section 354.28(e) states, "the description of minimum thresholds shall include the following: ...How minimum thresholds have been selected to avoid undesirable results in adjacent basins or affecting the basins ability to achieve sustainability goals". Because of the unknown flux across the Coyote Creek fault and the known overdraft of the Borrego Valley Subbasin, groundwater extraction in the Borrego Valley Subbasin may be impacting recharge in the adjacent Ocotillo-Clark Valley Groundwater Basin. San Felipe Creek is a GDE within the Ocotillo-Clark Valley Basin that has been experiencing groundwater declines that is causing severe impacts to State- and federally-endangered desert pupfish (*Cyprinodon macularius*) and DCH for this species.

   a. Issue: Minimum thresholds do not include consideration of undesirable results in adjacent basins.

   b. Recommendation: Include a consideration of GDEs in adjacent Ocotillo-Clark Valley groundwater basin within section 3.3.6 (Depletions of Interconnected Surface Waters-Minimum Thresholds) and section 3.4.6 (Depletions of Interconnected Surface Water-Measurable Outcomes).

S1-6

6. **Section 3.3.1.3 (Minimum Threshold Impacts to Adjacent Basins).** Section 3.3.1.3 states that "…adjacent Ocotillo-Clark Valley Groundwater Basin and Ocotillo Wells Subbasin are both "very low" priority basins not required to prepare GSPs. As such, they are not expected to develop descriptive undesirable results or quantitative minimum thresholds and measurable objectives." Title 23 CCR section 354.28(e) states, "the description of minimum thresholds shall include the

S1-7

following:..How minimum thresholds have been selected to avoid undesirable results in adjacent basins or affecting the basins ability to achieve sustainability goals". Desert pupfish are protected under the California Endangered Species Act (CESA) and the federal Endangered Species Act (ESA). Potential impacts to desert pupfish and desert pupfish DCH at San Felipe Creek should be considered an undesirable result.

a. Issue: Minimum thresholds do not include consideration of undesirable results in adjacent basins.

b. Recommendation: Include a consideration of GDEs in adjacent Ocotillo-Clark Valley Groundwater Basin within section 3.3.6 (Depletions of Interconnected Surface Waters-Minimum Thresholds) and section 3.4.6 (Depletions of Interconnected Surface Water-Measurable Outcomes).

S1-7 Cont.

7. **Section 3.5.4.2 (Identification of Data Gaps) Groundwater Elevation subsection.** Section 3.5.4.2 states on p. 3-45 that "Multicompletion wells or well clusters screened at discrete intervals in the upper, middle and lower aquifers would be required to determine potentiometric surface by aquifer unit. However, the average potentiometric surface measured at wells that are screened over one or more aquifer units appears to sufficiently represent groundwater conditions…" The Department does not agree that wells screened at more than one aquifer sufficiently represent groundwater conditions. The Department agrees with the recommendation included within section 6 on p.16 of the *Update to Borrego Valley Hydrologic Model* where it is recommended to "Conduct aquifer tests at wells screened only in the upper aquifer and only in the middle aquifer to obtain site-specific estimates of hydraulic conductivity and specific yield for each aquifer unit. This information may be used to enhance the calibration of the model to these hydraulic properties and our understanding of storage in the BVGB." This information is also identified in the "Borrego Valley Hydrologic Model" subsection of section 3.5.4.2 as a means to address the aforementioned data gap. The use of wells screened only for the upper and middle aquifers will "…develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate Plan implementation" as required by Title 23 CCR section 354.34(a).

S1-8

a. Issue: Proposed use of wells screened at more than one aquifer could be inadequate to monitor groundwater conditions within each aquifer.

b. Recommendation: Plan and install multicompletion wells or well clusters screened only in the upper aquifer and only in the middle aquifer to specifically monitor aquifer conditions within these aquifers.

8. **Section 3.5.4.2 (Identification of Data Gaps) Groundwater Elevation subsection.** The "Borrego Valley Hydrologic Model" subsection of section 3.5.4.2 also identifies the previously mentioned data gap associated with potential flux across the Coyote Creek fault. The Department recommends that monitoring wells be installed on both sides of the Coyote Creek fault to evaluate subsurface inflow and outflow along and across the Coyote Creek fault in order to "…develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate Plan implementation" as required by Title CCR section 354.34(a).

    a. Issue: There is an unknown amount of groundwater flux across and/or along the Coyote Creek Fault.

    b. Recommendation: Plan and install monitoring wells on both sides of the Coyote Creek Fault.

S1-9

9. **Section 3.5.4.2 (Identification of Data Gaps) Groundwater Elevation subsection.** The "Borrego Valley Hydrologic Model" subsection of section 3.5.4.2 does not mention a data gap associated with the San Felipe Fault. However, it is noted that on Figure 2.2-8 (Geologic Map) that the San Felipe fault potentially may be directing subsurface flow along the fault towards a low spot in groundwater elevation associated with the Borrego Sink (see Figures 2.2-13A). The Department recommends that monitoring wells be installed along the San Felipe fault to evaluate subsurface inflow and outflow along the San Felipe fault in order to "…develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate Plan implementation" as required by Title 23 CCR section 354.34(a).

    a. Issue: There is an unknown amount of groundwater movement along the San Felipe Fault.

    b. Recommendation: Plan and install monitoring wells along the San Felipe Fault.

S1-10

10. **Section 3.5.4.2 (Identification of Data Gaps).** The "Borrego Valley Hydrologic Model" subsection of section 3.5.4.2 does not mention a data gap associated with spring systems. However, Figure 2.2-17 identifies multiple spring systems that may be associated with the Borrego Springs Groundwater Basin. Springs constitute a GDE. The Department recommends identifying what springs, if any, should be considered GDEs potentially impacted by the Plan through a phased approach. Springs that would potentially be impacted by groundwater decline in

S1-11

the Borrego Springs Groundwater Basin would most likely be associated with a regional fault system that provides a hydrologic connection between the springs and the alluvial basin. Springs associated with regional faults would likely exhibit elevated temperatures in comparison to springs that are not associated with the fault system. A simple procedure of measuring temperatures of the neighboring springs can identify those associated with the basin. A second method, such as measurement of dissolved Helium isotope ratio of those springs with elevated temperatures can positively identify those systems associated with fault system. Waters with contact with regional fault systems tend to exhibit an atypical Helium isotope ratio (in comparison to surface waters) that is indicative of exposure to mantle derived Helium. If springs are associated with regional fault systems they should be considered potential GDEs and included within the Plan in order to "…develop a monitoring network capable of collecting sufficient data to demonstrate short-term, seasonal, and long-term trends in groundwater and related surface conditions, and yield representative information about groundwater conditions as necessary to evaluate Plan implementation" as required by Title 23 CCR section 354.34(a).

S1-11 Cont.

a. Issue: It is unknown if springs have hydrologic connection to basin.

b. Recommendation: Measure water temperatures among springs to identify those with potential hydrologic connection to regional fault systems and basin. Perform second test for Helium isotope ratio to verify potential GDEs.

11. **Appendix D1 (Update to Borrego Valley Hydrologic Model).** The Department recommends that recharge from streamflow be monitored and the estimated annual average recharge during the term of the Plan be revised as climatic changes occur. In addition, recharge estimates from agricultural return flow will be altered by implementation of the Plan itself. This will alter the estimated recharge used by the BVHM. Accounting for changes in recharge components over time will provide a description of current groundwater conditions as required by Title 23 CCR section 354.16 and will quantify the inflow to the groundwater system required by Title 23 CCR section 354.18 (b)(2).

S1-12

a. Issue: Recharge associated with changing climate and changes in agricultural return flow are likely to be substantially altered during the term of the Plan.

b. Recommendation: Revise the BVHM to be adaptive and incorporate systematic adjustments to input (e.g. agricultural return flow) used to calculate recharge.

12. **Appendix D1 (Update to Borrego Valley Hydrologic Model), Section 6.** As described in section 6 of the *Update to Borrego Valley Hydrologic Model*, considerable uncertainty exists about agricultural pumping and stream flow leakage. The Department supports the recommendations contained in section 6 to install stream gauges and well pumping meters to address these uncertainties. Implementing these recommendations provide information about flow directions, lateral and vertical gradients, and regional pumping patterns as required by Title 23 CCR section 354.16(a) and quantify the inflow to the groundwater system required by Title 23 CCR section 354.18 (b)(2).

    a. Issue: Considerable uncertainty exists regarding agricultural pumping and stream flow leakage.

    b. Recommendation: Install stream gauges and well pumping meters as recommended in section 6 of Appendix D1.

13. **Appendix D1 (Update to Borrego Valley Hydrologic Model), Figures 11 and 12.** Both residual plots (Update to the Borrego Valley Hydrologic Model – Figure 11) and the linear model plots (Figure 12) suggest potential changes and increased bias in the model between the first and second runs (1945-2010 and 2011-2016). Performing a statistical comparison would provide information about flow directions, lateral and vertical gradients, and regional pumping patterns as required by Title 23 CCR section 354.16(a).

    a. Issue: There are potential changes and increased bias in the model between the first and second runs (1945-2010 and 2011-2016).

    b. Recommendation: Use an appropriate statistical comparison (e.g. ANCOVA) to determine changes in the relationship between predicted and estimated head.

CONCLUSION

In conclusion, the Borrego Valley Groundwater Basin Groundwater Sustainability Plan does not comply with all aspects of SGMA statute and regulations, and the Department deems the plan insufficient to consider impacts fish and wildlife beneficial users of groundwater. The Department recommends that the Borrego Valley Groundwater Sustainability Agency address the above comments to avoid a potential 'incomplete,' or 'inadequate' plan determination, as assessed by the Department of Water Resources, for the following reasons derived from regulatory criteria for plan evaluation:

1. The assumptions, criteria, findings, and objectives, including the sustainability goal, undesirable results, minimum thresholds, measurable objectives, and interim milestones are not reasonable and/or not supported by the best available

S1-13

S1-14

S1-15

information and best available science. [CCR 355.4(b)(1)] (See Comments #1 and 3)

2. The Plan does not identify reasonable measures and schedules to eliminate data gaps. [CCR §355.4(b)(2)] (See Comments #2, 7, 8, 9, and 10)

3. The sustainable management criteria and projects and management actions are not commensurate with the level of understanding of the basin setting, based on the level of uncertainty, as reflected in the Plan. [CCR §355.4(b)(3)] (See Comments #2, 4, 11, 12, and 13).

4. The projects and management actions are not feasible and/or not likely to prevent undesirable results and ensure that the basin is operated within its sustainable yield. [CCR §355.4(b)(5)] (See Comments #4, 11, 12, and 13)

5. The Plan does not include a reasonable assessment of overdraft conditions or include reasonable means to mitigate overdraft, if present. [CCR §355.4(b)(6)] (See Comments #4, 11, 12, and 13)

6. The Plan will adversely affect the ability of an adjacent basin to implement its Plan or impede achievement of its sustainability goal. [CCR §355.4(b)(7)] (See Comments #5, 6, and 8)

S1-15 Cont.

The Department appreciates the opportunity to provide comments. Please contact Nick Buckmaster at Nick.Buckmaster@wildlife.ca.gov or Charley Land at Charles.Land@wildlife.ca.gov with any questions.

Sincerely,

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Conserving California's Wildlife Since 1870

RTC.2 STATE AGENCIES

Letter S1

Commenter: Leslie MacNair, Regional Director, Inland Desert Region, California Department of Fish and Wildlife (CDFW)
Date: May 20, 2015

S1-1 This comment provides introductory information about CDFW's role as a trustee agency and summarizes the comments in the letter. Specific responses to issues raised are provided below (Responses S1-2 through S2-14). The Groundwater Sustainability Plan (GSP) adequately considers impacts to groundwater dependent ecosystems (GDEs) (GSP Section 2.2.2.7, Section 3.2.6, and Appendix D4), effects of beneficial uses and users of groundwater (GSP Section 2.1.4 and Chapter 3), and accounts for groundwater extraction for all sectors, including native vegetation (GSP Section 2.2.3). The Draft GSP, Appendix D4 in particular, has been revised to provide clarification and additional supporting information. However, the Groundwater Sustainability Agency (GSA) maintains there are likely no interconnected surface waters within the Plan Area, and that the potential GDEs mapped within the Subbasin are dependent on surface water, percolating or perched water within the unsaturated zone, and/or groundwater originating from springs outside the Subbasin. Because potential GDEs are disconnected from the Subbasin's groundwater aquifer, there are no undesirable effects occurring with respect to depletions of interconnected surface waters. Naturally, this conclusion extends to fish and wildlife species that may depend on habitats located within the Plan Area.

S1-2 The basin setting provided in Chapter 2 of the Draft GSP provides an adequate description of the Borrego Springs Subbasin. The U.S. Geological Survey (USGS) has a reasonable basis for considering the Coyote Creek Fault in its report as a no-flow barrier, including differences in groundwater levels across the fault and the orientation of groundwater contours. The description of the Subbasin in the Draft GSP is exhaustive and thorough, and includes the description of additional work done by graduate students under Dr. David Huntley that suggests the fault acts as a partial barrier to groundwater flow rather than a no-flow barrier (with an estimated inflow between 32 and 3,200 acre-feet per year [AFY]). This additional information satisfies the requirements under SGMA to identify data gaps and levels of uncertainty.

Although the potential inflow at the Coyote Creek fault could have additional inflow not accounted for in the Subbasin's water budget in GSP Section 2.2.3, it

does not mean that the Subbasin has been inaccurately characterized. The Borrego Valley Hydrologic Model (BVHM) is a calibrated model based on observed groundwater levels, which means that if inflow across Coyote Creek Fault were added to the model, inflows and outflows for other model components would need to be redistributed to explain the same observed groundwater levels (finite difference model), such as an increase in the subsurface outflow to the Ocotillo Wells Subbasin, a decrease in stream recharge, or a decrease in subsurface inflow already estimated in the BVHM.

As stated in GSP Section 2.2.2.1,

> the GSA does not consider this a critical data gap because historical groundwater levels and trends suggest the flux would be into the Subbasin rather than out of the Subbasin (i.e., a potential missing input to the water budget), and because the Coyote Creek Fault is distant from the active pumping centers within the Subbasin. This data gap does not affect the GSP's establishment of sustainable management criteria in Chapter 3, or the effectiveness of projects and management actions described in Chapter 4.

In other words, if the flow across the Coyote Creek Fault into the Subbasin is substantial, it would have a positive rather than a negative effect on meeting the GSA's sustainability criteria. Data gaps and uncertainties do not make a water budget "inadequate" especially when they are clearly identified; instead, uncertainty is an expected part of the development of a water budget. As described in the GSP Section 3.5.4, the GSA will continue to assess and improve the monitoring network, and will re-evaluate the BVHM to improve the accuracy of key water budget components and model forecasts.

S1-3 The rationale for the southern and southeastern boundary of the Subbasin, marked by San Felipe Creek, is provided in Draft GSP Section 2.2.1.2, including a description of how the geologic structure associated with the San Felipe Fault (San Felipe Anticline) affects the geometry of the Subbasin. It is unclear why the commenter asserts that the San Felipe Fault may be directing subsurface flow to the Borrego Sink, as this is not indicated in the geologic map (GSP Figure 2.2-8), the groundwater level contours (GSP Figure 2.2-13A), or the HCM for the Subbasin (GSP Section 2.2.1). In addition, there are no potential GDEs along San Felipe Creek within the Subbasin, as described in GSP Section 2.2.2.7 and Appendix D4. Furthermore, the location of the Desert pupfish habitat is in the lower-most Imperial County reach of San Felipe Creek, near the Salton Sea, downstream of the

confluence of Fish Creek with San Felipe Creek. This habitat is not within the Plan Area, but is more than 18 miles southeast of the closest part of the Borrego Springs Subbasin boundary.[2] The Desert pupfish habitat is located in the southern part of the Ocotillo-Clark Valley Groundwater Basin. There is no native Desert pupfish habitat located within the Plan Area. Several captive populations of Desert pupfish occur within the plan area, namely at Anza-Borrego State Park, Borrego Springs High School, and the UCR Palm Desert campus.[3] These artificial habitats are unaffected by groundwater conditions in the Plan Area.

Neither the existing conditions of the Plan Area, the sustainability criteria, nor the projects and management actions contemplated in this GSP would have the ability to impact (either positively or negatively) the desert pup fish habitat referenced by CDFW as "San Felipe Creek GDE." As there are no GDEs within the Plan Area along San Felipe Creek, and the designated critical habitat for the Desert pupfish is more than 18 miles away and not affected by the GSP, no data gap is identified for the San Felipe Fault.

S1-4 It is unclear why CDFW claims that inclusion of a longer period of record into datasets used in the BVHM results in biased outputs. The BVHM prepared by the USGS and updated by the GSA is based on basin conditions (like pumping) that change over time, so model outputs averaged over any particular period, such as the last 10 years, will naturally differ from the outputs from prior periods. The increased pumping in the recent past is incorporated into the BVHM and water budget (GSP Section 2.2.3), as is climate change considerations (GSP Section 3.3.1.1). Historical data on precipitation and evapotranspiration is used to the extent it is available. The U.S. Geological Survey uses the Basin Characterization Model (BCM), as described in GSP Section 2.2.3.1.

The projected water budget is based on the baseline pumping allocation and the planned pumping reduction program described in GSP Section 4.4, and the effects of the project pumping reductions on applicable sustainability indicators is described in GSP Chapter 3 (see Section 3.3.1.1). The level of pumping will be controlled by incrementally decreasing allocations to the target rate, not by climate change. In addition, the GSP recognizes that the long-term average for natural recharge may not be reproduced in the future, especially over shorter time intervals, as evaluated through a Monte Carlo Simulation (MCS) uncertainty analysis, described in GSP Section 3.3.1.1. This analysis found that the uncertainty

[2] https://databasin.org/datasets/1aaf058b573a412bb0a43b47ecb107bd
[3] https://www.wildlife.ca.gov/Regions/6/Desert-Fishes/Desert-Pupfish

associated with precipitation and recharge variability is much greater than that associated with climate change.

As a point of clarification, both the original USGS model and the model update start in the year 1929. However, the period from 1929 through 1944 is considered to be a "spin-up" period for the model, and the data for these years is considered less reliable. In all calculations made by the USGS in their original report and by the GSA in the model update, data from 1929 through 1944 is excluded.

S1-5 The sustainable yield of 5,700 AFY presented in the Draft GSP is based the USGS' pre-development scenario that estimated natural inflows to the boundaries of the Borrego Valley Hydrologic Model (BVHM) for the period 1945 through 2010 (USGS 2015), recognizing the adaptive management approach of SGMA and iterative process of updating the sustainable yield estimate at each 5-year check-in period during GSP implementation. Additionally, the USGS referenced approximately 1,400 AFY that enters the basin as underflow from adjacent basins but did not clarify the outflow components used in the pre-development scenario. Since calculations of sustainable yield must include both inflow and outflow components, a water budget from the GSP modeling update is presented to confirm the validity of using 5,700 AFY as the initial sustainable yield.

The USGS water budget using the BVHM for the developed condition for the years 1945 through 2010 and updated by Dudek for the years 2011 through 2016 indicate that average total inflows that includes groundwater subsurface inflow (specified flows), stream leakage, unsaturated zone recharge (UZF recharge) is 6,900 AFY for the period 1945 to 2010 and 6,800 AFY for the period 1945 to 2016. The 20-year and 10-year averages for the most recent periods are 5,800 AF and 4,700 AFY, respectively. These recent periods were comprised mostly of a drier climatic period compared to the longer scenarios beginning in 1945 that included both wet and dry periods. Historical inflows from 1945 to 2016 were compared to recent (past 10 years) groundwater outflows from the BHVM model update to estimate the initial sustainable yield of the basin. Average inflows from the entire run of the model update provide a reasonable estimate of potential basin inflows because they capture a variety of climatic conditions. Outflows from the most recent 10 years were considered to be more representative of potential basin outflows than the entire historical model period because the loss of native phreatophytes has decreased outflow from evapotranspiration in the basin. Using these assumptions, the surplus of inflows over outflows in the basin is estimated to be approximately 5,750 AFY.

S1-6 See response to Comment S1-3 regarding the commenter's reference to the potential GDEs along San Felipe Creek and the federally endangered desert pupfish. Regardless of the presence and/or magnitude of (1) the flux into the Borrego Springs Subbasin from the Ocotillo-Clark Valley Groundwater Basin across the Coyote Creek Fault or (2) the flux out of the Subbasin across its southern boundary (formed by San Felipe Creek), there would be no appreciable effects on DWR's priority status for adjacent basins due to conditions occurring in the Borrego Valley Subbasin. Furthermore, the minimum thresholds—as well as projects and management actions to avoid those thresholds—to be implemented under the GSP means that indirect effects on the adjacent basins, if any, would be positive in nature when compared to continuation of the status quo. In GSP Section 3.3, the GSA addresses impacts to adjacent basins as a subsection under the description of the minimum thresholds for each sustainability indicator.

S1-7 The response to this comment has been addressed under responses to Comment S1-3 and Comment S1-6.

S1-8 The sentence cited by the commenter (GSP Section 3.5.4.2, p. 3-45) accurately states that the average potentiometric surface (i.e., the theoretical groundwater level for each aquifer, if it was screened in isolation) across all three aquifers sufficiently represents groundwater conditions. The definition of aquifers in the BVHM is based on a textural model, which evaluates differences in grain size composition from a complete dataset of well completion reports (i.e., boring logs) within the Subbasin. The recommendation provided in the Draft GSP (e.g., GSP Section 3.5.4.2 and Appendix D1) to develop specific aquifer parameters for each of the three layers would help improve the academic understanding of the aquifer, but is not required to develop "representative information about groundwater conditions" (Title 23 CCR Section 354.34[a]).

There are no regionally significant confining layers (i.e., aquitards) present within the Subbasin. The lack of any confining layers means the potentiometric across the three aquifers are not sufficiently different to meaningfully affect the groundwater levels observed regardless of the screened interval of a well. Monitoring Well MW-5A/B is a multicompletion well near the Borrego Sink which has two well casings, one screened in the upper aquifer and one screened in the lower aquifer. The difference in the groundwater levels between the two was 0.03 feet as of Fall 2018 (GSP Figure 2.2-13B). Although it is the only dual-completion monitoring well in the Subbasin, groundwater monitoring data elsewhere validates this because monitoring wells, even where within short distances of each other, report similar groundwater levels despites having different screened intervals.

S1-9 This comment has been addressed in response to Comment S1-2.

S1-10 This comment has been addressed in response to Comment S1-3.

S1-11 The only springs identified within the Subbasin, as shown in GSP Figure 2.2-17, are Borrego Spring and Pup Fish Pond Spring. Borrego Spring dried up sometime before 1963, as stated on Draft GSP p. 2-86, and the artificial Pup Fish Pond (in addition to the pupfish pond near the Palm Canyon Trailhead in Borrego Palm Canyon Campground) is sustained by ABDSP's public water system, and not a spring. As discussed in Draft GSP Section 2.2.2.6, the water source for springs outside the Subbasin as well as perennial waters that may flow for a short length into the margins of the basin is runoff from the watershed, and/or springs or seeps originating from the fractured rock aquifer that make up the mountain front. These surface water sources are topographically higher than the groundwater elevation of the underlying basin, in many cases hundreds of feet higher. For reference, the GSP's elevation contours and labels have been added to the GSP's groundwater contour maps to further illustrate this. Neither the hydrogeological conceptual model (HCM) developed for the basin (GSP Section 2.2.1) nor the HCM developed to evaluate GDEs (GSP Appendix D4) support the idea that there would be a hydrologic connection between springs originating from bedrock outside the Subbasin, and the Quaternary age sediments that make up the Borrego Springs Subbasin.

S1-12 As described in GSP Section 2.2.3.1 and Appendix D1 (BVHM Update), flows from streams into the model domain are estimated using the modeled streamflow from the U.S. Geological Survey Basin Characterization Model (BCM), which is calibrated using the USGS streamgages for the periods when data are available from the streamgages within the Subbasin or its contributing watersheds. There are two historical streamgages along Coyote Creek, and one active streamgage on Borrego Palm Creek. Therefore, all available data from streamgages are incorporated into the BVHM. The GSA will continue to use the BCM in future model updates, and incorporate new streamflow records that may become available within the watershed, in accordance with adaptive management needs and as necessary to meet the GSP's sustainability goal.

Agricultural return flow is not an input to the BVHM and cannot be adjusted directly, but rather is calculated based on the estimated consumptive use in the model that is calculated using land use/crop type, farm efficiency factors, and climate data. Land use in the model future projections was left the same as land use in 2016 as determined during the BVHM update. The justification for this is presented in Draft GSP Section 2.1.3, which explains why the GSA expects little

to no growth to occur in the Plan Area. Farm efficiency factors were estimated by the USGS based on the best available information, and will be adjusted in the future if and when data becomes available to support changes. Climate data was adjusted for future projections based on the DWR guidance. It should be noted that since applied water and return flows are calculated by the model using these consumptive use calculations, irrigation return flows decrease through time in the future model scenarios as applied water decreases.

S1-13 The level of study presented in the Draft GSP is appropriately at the Subbasin-wide scale, and thus with regard to stream gages, use of the BCM, as described in response to Comment S1-12, is appropriate and represents the best available data. With regard to agricultural pumping, the commenter is referred to Draft GSP Section 4.4, which describes the pumping reduction program. To implement this program, the GSA will require metering of production wells to allow direct measurements of pumping volumes by agricultural users. The quantification of agricultural pumping will be significantly improved upon implementation of the Metering Plan, included as Appendix E3 of the Draft GSP. With regard to past and current agricultural pumping, the indirect method of estimating irrigation needs used by the U.S Geological Survey and the GSA (i.e., the Farm Process Package) is the most appropriate method available. The GSA will incorporate the recommendations in Appendix D1 during the GSP's planning and implementation horizon, in accordance with adaptive management needs and as necessary to meet the GSP's sustainability goal.

S1-14 The commenter is referred to Sections 4 and 5 of Draft GSP Appendix D1 for a comparison of the USGS's BVHM from 1945 to 2010 and the GSA's BVHM Update to include the period from January 2011 to September 2016.

S1-15 The commenter provides conclusory remarks, and summarizes the comments provided in the letter. These issues have been responded to above under responses to Comment S1-2 through Comment S1-14.

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Comment Letter S2

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RE: Draft Groundwater Sustainability Plan for the Borrego Valley Groundwater Basin

E-mail: PDS.LUEGGroundWater@sdcounty.ca.gov

Thank you for the opportunity to comment on the Draft Groundwater Sustainability Plan for the Borrego Valley Groundwater Basin ("GSP"). Anza-Borrego Desert State Park® ("ABDSP") is approximately 1,000 square miles and surrounds the approximate 98 square mile Borrego Springs Subbasin ("Subbasin"). Since March 2017, a representative from the California Department of Parks and Recreation ("State Parks") has voluntarily been a member of the Borrego Springs Subbasin Advisory Committee. State Parks takes the opportunity to participate in the committee seriously because ABDSP surrounds the community of Borrego Springs (GSP Figure 2.1-3) and supplies the majority of the natural groundwater recharge to the Subbasin (GSP Figure 2.2-1). Additionally, ABDSP is a Borrego Water District ratepayer, and ABDSP operates a public water system permitted since 2004 by the State Water Resources Control Board, Division of Drinking Water. S2-1

State Parks believes that the reduction requirements should be adjusted under the Pumping Reduction Program (GSP 4.4.1) using considerations other than a 74% reduction for each non-*de minimis* pumper. [1] This approach does not take advantage of the flexibility the Sustainable Groundwater Management Act ("SGMA") provides the local agencies. (Water Code § 10725 (b).) The draft GSP gives a great history and description of the Plan Area (GSP, Chapter 2), but does not apply that history to its Pumping Reduction Program. S2-2

This letter recommends the Groundwater Sustainability Agency ("GSA") adjust the current shares of the estimated sustainable yield by considering proportion of land ownership, historic beneficial use, and feasibility of further reduction of water use. State Parks is not suggesting that the GSA use any one of these considerations as the sole

[1] The term "*de minimis*" is used in this letter in reference to the GSP's use of the term. (See, e.g., GSP 4.2.1 and 4.4.1.)

consideration, but that it apply a more nuanced approach using these considerations collectively. In this way, the GSA should be able to take advantage of the flexibility SGMA intended to provide the local agency.

S2-2 Cont.

Proportion of Land Ownership

The draft GSP does not take into account the proportion of land each non-*de minimis* pumper services in the Subbasin. Instead, it focuses only on prior use over a five year period. (GSP 3.3.2.1.) According to the draft GSP, ABDSP covers 27% of the land subject to the GSP. (GSP Table 2.1-2.) The draft GSP also identifies that Anza-Borrego Foundation owns an additional 5% that will be transferred to ABDSP. (GSP Table 2.1-2.) In other words, State Parks has, or will have, the responsibility of stewardship over 32% of the land that is subject to this GSP, but its water use consists of less than .07% of the total baseline pumping allocation.[2] Yet under the draft GSP, it is still responsible for reducing its water use by 74%.

Whereas State Parks is responsible for a large portion of the land and minimal water use, the agriculture sector's responsibility and use is the opposite. According to the draft GSP, the agriculture sector comprises 4.2% of the Subbasin's surface area of 62,776 acres and uses 70% of the pumped water. (GSP Table 2.1-1; GSP 2.1.1; and GSP 3.1.4.) Because recent usage data is the only method the GSA used to determine shares of the estimated sustainable yield, the agriculture sector is also being allocated around 71.7% of the total baseline pumping allocation. (GSP Table 2.1-7; and GSP Table 3-6.)

S2-3

The draft GSP states that two pumping-related depressions have been found to exist in the Subbasin: one in agricultural areas, and one north of Ram's Hill Country Club. (GSP 2.2.2.1.) The draft GSP also states that since the late 1970's when citrus cultivation gained presence in the valley, the groundwater levels have been dropping "at a relatively constant rate." (GSP 2.2.2.1.) By considering only past recent use for determining allocations and reduction responsibilities, the Pumping Reduction Plan does not address the existing spatial patterns of groundwater extraction. (See Green Nylen, Nell, Michael Kiparsky, Kelly Archer, Kurt Schnier, and Holly Doremus. 2017. *Trading Sustainably: Critical Considerations for local Groundwater Markets Under the Sustainable Groundwater Management Act* ("Trading Sustainably"), p. 28. Center for Law, Energy & the Environment, UC Berkeley School of Law, Berkeley, C. 90 pp. law.berkeley.edu/trading-sustainably.)

S2-4

State Parks' responsibility of keeping ABDSP open to the public inextricably includes housing employees to provide safety and resource access, and providing water to the public for day use and overnight use so that the public can continue to enjoy this

S2-5

[2] Calculated by the GSA's determination of State Parks' baseline pumping allocation of 15 acre feet per year, out of the total 21,938 acre feet. (See GSP Table 3-6; But see GSP 3.1.4 ("a total pumping allowance of 21,936 acre-feet per year . . .."; and GSP Table 2.1-7 ("Baseline Pumping Allocation" column does not add up to 21,938 or 21,936).)

tremendous resource. The amount of water State Parks pumps from the groundwater basin is already incredibly minimal, especially given the amount of land that small amount of water supplies. By failing to give any consideration to the amount of land sustained by each pumper's use, the GSP assigns a significant burden to ABDSP that may be impossible without shutting down the park or portions thereof, with diminishing returns for the Subbasin's primary goal of sustainability. The 74% reduction is an ineffective method of obtaining sustainability, particularly where the current use is known to be concentrated in agricultural areas and the agriculture sector will be maintaining its 70% of the water use.

S2-5 Cont.

SGMA does not prohibit the GSA from taking proportion of land ownership into account. Ownership is a concrete metric that State Parks believes could be used in conjunction with other considerations such as past use and purpose of use. (Green Nylen, et al. *Trading Sustainably,* p. 14.) State Parks recommends making some adjustment to the current shares of the estimated sustainable yield according to proportionate land ownership.

Historic Beneficial Use

1. *Public Water System and Human Right to Water*

The GSP also does not consider the type of use in establishing the current shares of the estimated sustainable yield. California law establishes the use of water for domestic purposes as the highest use of water. (Water Code § 106.) "Domestic purpose" includes uses such as "auto camps or resorts." (*Prather v. Hoberg* (1944) 24 Cal.2d 549.)

There are multiple historic and current purposes for State Parks' water use at ABDSP, including domestic use. The Anza Borrego State Park Palm Canyon public water system conveys water to the Borrego Palm Canyon area of ABDSP. Currently, the system supplies water for 10 employee residences, 6 employee trailer pads, the Borrego Palm Canyon Campground, and the ABDSP maintenance shop. Of the 117 campsites, there are 52 RV sites with both potable water and sanitary sewer hookups and 65 tent sites without hookups. There are also 9 group campsites. Both the tent and group sites have dispersed potable water, flush toilets, and showers.

S2-6

In 2012, the State of California added section 106.3 to the California Water Code that is known as the human right to water: "It is hereby declared to be the established policy of the state that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes."

Because it supplies water to residents and visitors, the ABDSP Palm Canyon public water system is subject to the human right to water, which is not accounted for in the

draft GSP. Applying the GSA's draft Policy for Human Right to Water ("Draft Policy"),[3] State Parks should be allocated more than double the water it is currently being allocated. (https://www.sandiegocounty.gov/content/dam/sdc/pds/SGMA/Human-Right-To-Water-Presentation.pdf.) During the March 29, 2018 Advisory Committee meeting, a formula was provided to calculate the Human Right to Water for Borrego Water District by using the annual average sewage flows to the Ram's Hill Wastewater Treatment Facility. To show the difference between what the draft GSP allocated and what State Parks could be allocated if the GSA had applied the human right to water policy to domestic users that are not within the Borrego Water District, here is an example calculation:

> Under the Draft Policy, the annual sewage generation is 126 gallons per day per equivalent dwelling unit ("EDU"). Using ABDSP's 52 RV sites, 10 employee residences, and 6 employee trailer pads, we have 68 EDU's in Borrego Palm Canyon Campground that are eligible for the human right to water. Multiplying 68 existing EDU by the annual sewage generation per EDU (126 gallons per day) results in a Borrego Palm Canyon right to water of 9.6 acre feet per year.

(See https://www.sandiegocounty.gov/content/dam/sdc/pds/SGMA/Human-Right-To-Water-Presentation-Notes.pdf.)

Per the GSP, the baseline pumping allocation for the Palm Canyon system is 15 acre feet per year. This allocation was determined from metered data. Page 4-21 of the GSP requires a 74% reduction in each non-*de minimis* pumper's baseline allocation over 20 years. This reduction results in an allocation of 4 acre feet for ABDSP Palm Canyon public water system. However, using the human right to water calculation for employee residences and RV sites, State Parks could require up to 9.6 acre feet per year for the RV's and employee residences alone. State Parks recommends adjusting the current shares of the estimated sustainable yield to provide for the statutory human right to water.

S2-6 Cont.

2. *Other Critical Beneficial Uses at Anza-Borrego Desert State Park*

S2-7

Borrego Palm Canyon is a critical area that annually averages approximately 30,000 visitors for daily hikes and approximately 120,000 visitors for overnight camping. As

[3] The draft GSP does not discuss whether the Draft Policy will be implemented. In the minutes for the August 30, 2018 Subbasin's Advisory Committee Public Meeting, the Core Team was still considering the Human Right to Water allocation to Borrego Water District. (https://www.sandiegocounty.gov/content/dam/sdc/pds/SGMA/AC-MINUTES-Aug-18-vFinal.pdf.) However, it is unclear whether any further decision was documented regarding the Draft Policy, as the hyperlink for the January 31, 2019 meeting minutes directs website visitors to the August 30, 2018 meeting minutes. (https://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html (Last visited May 20, 2019).)

noted on page 2-6 of the GSP, the estimated revenue to the region generated by visitation to ABDSP is approximately $40 million annually.

ABDSP also provides critical environmental habitat for endangered species. In addition to supplying water subject to the human right to water statute, ABDSP's public water system supplies water to a lined pond that is a refuge for the federally and state endangered Desert Pupfish and is also a water source for the federally and state endangered Peninsular Bighorn Sheep. The pond is a refuge listed under the September 1993 Desert Pupfish Recovery Plan. The Peninsular Bighorn Sheep have increasingly used the pond, which is adjacent to the Borrego Palm Canyon trailhead parking lot, as a water source. (Colby, Janene, and Randy Botta, California Department of Fish and Wildlife Peninsular Bighorn Sheep Annual Report 2017-18, p. 22.) State Parks is obligated to provide this habitat for both species.

State Parks recommends adjusting the current shares of the estimated sustainable yield according to respective beneficial uses.

S2-7 Cont.

Consideration of Prior Conservation Efforts

State Parks, in fulfilling its obligations as a state entity, already contributes to the reduction of water use in the Subbasin. As stated in State Parks' previous comment letter sent to the GSA on August 15, 2018, water use at ABDSP has already been subject to Executive Order (B-18-12) requiring a 20% reduction of water usage in state facilities by 2020. Therefore, State Parks has already implemented water conservation methods, the benefits of which are reflected in the metered data used for the ABDSP baseline pumping.

Throughout the last decade, ABDSP has equipped its campground with low flow pay showers thereby reducing the amount of water used by each ABDSP visitor. ABDSP has also removed most landscaping, antiquated irrigation systems, replaced corroded galvanized water distribution lines with PVC pipe, and replaced non-operating shut off valves. As funding allows, low flow bathroom fixtures have been installed.

The GSP indicates that the Borrego Water District, some golf courses, and agricultural users have implemented conservation methods. (GSP 3.1.4.) In establishing its baseline pumping allocations, the GSP states that it includes "allocations for water credits issued in conjunction with the County/[Borrego Water District] program for sites fallowed prior to adoption of the GSP, municipal water use previously reduced through end use efficiency and conservation efforts, and recreation use curtailed prior to GSP

S2-8

adoption." (GSP 3.3.1.4.)[4] The GSP does not state that it included allocations for State Parks' state-mandated conservation efforts.[5]

State Parks intends to make every effort to continue to implement any water conservation measures as appropriations allow. However, State Parks recommends making some adjustment to the current shares of the estimated sustainable yield according to conservation methods implemented due to state mandate, since those conservation methods were not considered in determining State Parks' baseline pumping allocation. Because it already has considered other conservation measures, it should also consider State Parks' conservation measures.

S2-8 Cont.

Consequences of 74% Reduction at ABDSP

ABDSP strives to balance the visitor experience while conserving our precious natural resources and being stewards of the land. A potential reduction to 4 acre feet per year at Borrego Palm Canyon in conjunction with the water conservation measures already in place would require ABDSP to close campground operations and would not meet the statutory human right to water for the Palm Canyon public water system.

State Parks would be required to limit the occupation of employee residences and thus limit the operation of the ABDSP Visitor Center, limit an important educational experience for the school children of Borrego Springs, and limit the number of State Parks employees staffed to protect the park resources and visitors. ABDSP would not be able to provide the high quality recreational experience that it has provided over the last several decades. Therefore, State Parks recommends that the GSA apply a more nuanced approach than this 74% reduction plan by applying other considerations, such as those mentioned in this letter.

S2-9

General GSP Comments

State Parks supports the immediate implementation upon GSP approval of the mandatory metering program as detailed in Appendix E of the GSP.

S2-10

There are data gaps in the water quality monitoring particularly in the North Management Area. Wells now in the process of being secured for water quality monitoring will not yield usable initial data for years. The GSP should explicitly specify mandatory water quality monitoring of any major wells in the Subbasin. As water quality

S2-11

[4] The GSP also states that water credits "are currently not included in the Baseline Pumping Allocation but may be converted to Baseline Pumping Allocation during GSP implementation." (GSP 3.3.1.4, FN 8.)

[5] In its January 18, 2019 letter to the ABDSP, the County of San Diego described how it calculated baseline pumping allocations and gave State Parks until February 8, 2019 to comment before the GSA finalized the baseline pumping allocations on March 1, 2019. State Parks' allocation is based solely on metered use. However, the letter did not indicate that in establishing the users' respective baseline pumping allocations it was considering previous municipal conservation efforts. Therefore, State Parks is commenting on this in response to the draft GSP, rather than in response to the January 18, 2019 letter.

degrades and additional treatment is required, the cost for ratepayers, including ABDSP, will increase. The GSP should identify Ratepayers as stakeholders in the development of a Water Trading Program because pumped water in Borrego Springs is a matter of public concern about a public resource. S2-11

While the Water Trading Program is referred to as an economic incentive that will lead to more water conservation (GSP 4.1), the Water Trading Program is not necessarily the key to water reduction. S2-12

Any consideration of the fallowing of agricultural land must include the removal of invasive weed species. There are two highly invasive weed species that threaten native habitats, wildflowers, and native species in ABDSP: Egyptian knapweed (*Volutaria tubuliflora*) and Sahara mustard (*Brassica tournefortii*). Currently, there are fallowed agricultural fields that host these species. State Parks devotes staff time and resources to remove and control these species in the Coyote Canyon area of ABDSP which borders the North Management Area. S2-13

State Parks recognizes the complexity of the GSA's task and appreciates the extensive work that the GSA has completed thus far. However, without further consideration of the historic and beneficial uses, proportion of land ownership, and pumpers' feasibility of reducing use (i.e. conservation methods accounted for in the historical data), the GSA is not taking advantage of the maximum degree of flexibility SGMA has provided it in order to achieve SGMA's goal of preserving water rights to the greatest extent possible while achieving sustainability. State Parks looks forward to continuing to work with you on this challenging and significant plan. S2-14

Sincerely,

Gina Moran

Gina Moran
District Superintendent
Colorado Desert District

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Letter S2

Commenter: Gina Moran, District Superintendent, Colorado Desert District, California Department of Parks and Recreation (State Parks)
Date: May 21, 2019

S2-1 This comment provides introductory information about Anza-Borrego Desert State Park (ABDSP), its role in the Borrego Springs Subbasin Advisory Committee, as the major steward of watershed lands contributing to Subbasin, and its interest in protecting its permitted public water system.

S2-2 The Groundwater Sustainability Agency (GSA) has carefully developed the baseline pumping allocation (BPA) in coordination with members of the Advisory Committee and in concert with numerous public workshop and outreach efforts. Please see Advisory Committee meeting minutes from September 28, 2017, November 17, 2017, and January 25, 2018. They can be found on the County's SGMA website at:
https//www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html

The GSA acknowledges the commenter's request for flexibility in determining reductions other than proportional reductions. While the Groundwater Sustainability Plan (GSP) does not set specific groundwater use reductions, the GSP includes Project and Management Action (PMA) No. 3 – Pumping Reduction Program. As indicated in the Draft GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The Draft GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions may be developed. On July 9, 2019, the Borrego Water District (BWD) held a public meeting in which proposed stipulated agreement terms were made public.

For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

S2-3 See response to Comment S2-2 as well as the master response on the BPA.

S2-4 The commenter's assessment is accurate, but the goal of the Pumping Reduction Program is to meet the sustainable management criteria established in Chapter 3 of the Draft GSP. The GSP seeks to correct groundwater conditions on a Subbasin-wide scale, and does not establish a sustainability goal specific to the two pumping depressions cited in Chapter 2 (Section 2.2.2.1). However, the PMAs discussed in

Chapter 4, including the Pumping Reduction Program, the Voluntary Fallowing of Agricultural Land, and Intrabasin Water Transfers, are all actions that will be beneficial with regard to existing pumping depressions.

S2-5 See response to Comment S2-2 as well as the master response on the BPA.

S2-6 The BPA is based on metered data for ABDSP and this is an accurate accounting of the water use, and it spans the periods of high use and occupancy for the Borrego Palm Canyon Campground. Flexibility is built into the BPA because it uses the highest water recorded over a 5-year period. ABDSP's yearly water use has fluctuated between 4 and 15 AFY between 2010 and 2015. The commenter is also referred to the master response on the BPA.

S2-7 The GSA understands the importance of maintaining water for the lined pond, which acts as an artificial habitat for the Desert Pupfish, and as a drinking water source for the Peninsular Bighorn Sheep. A rough estimate for the amount of water needed to keep these ponds filled can be made by multiplying the ponds' combined areas by the average evapotranspiration rate as measured at the Subbasin's CIMIS station (No. 207). According to measurements from satellite imagery, the combined size of the two pupfish ponds is 800 square feet (approximately 400 square feet each), and pond evaporation is estimated to about 5.75 feet per year based on pan evaporation data from Imperial Valley (U.S. Department of Interior 2004). Therefore, the water needed to keep the ponds full can be expected to be about 4,600 cubic feet/year, or 0.11 AFY. This constitutes less than 1% of ABDSP's current BPA, and does not account for precipitation. The commenter is referred to the master response on the BPA.

S2-8 The commenter is referred to the master response on the Baseline Pumping Allocation. Water credits under the existing Demand Offset Mitigation Water Credits Policy, described in Draft GSP Section 2.1.2, were historically issued for physical removal of water using crops, namely agriculture, and in one case replacement of turf with native landscape. Water credits were only issued for entities who applied for and were issued credits under the program, and only for water reductions that were verifiable and permanent. It would not be appropriate for the GSA to assign water credits for temporary water curtailments (e.g., Executive Order [B-18-12] and unverifiable or temporary conservation efforts). The sentence quoted by the commenter in the Draft GSP has been modified accordingly.

S2-9 The commenter is referred to the master response on the BPA. The Water Trading Program can provide the ABDSP with flexibility to continue serving the demands of

its employees, visitor uses, and operations. Furthermore, because the BPA is based on the highest metered use between 2010 and 2015, there is some flexibility built into the initial BPA. The metered use at ABDSP has gone as low as 4 AFY in the last 5 years.

S2-10 Comment noted.

S2-11 The Draft GSP states,

> Degraded water quality is significant and unreasonable if the magnitude of degradation at pre-existing groundwater wells precludes the use of groundwater for existing beneficial use(s), including through migration of contaminant plumes that impair water supplies, where alternative means of treating or otherwise obtaining sufficient alternative groundwater resources are not technically or financially feasible. At a minimum, for municipal and domestic wells, water quality must meet potable drinking water standards specified in Title 22 of the CCR. For irrigation wells, water quality should generally be suitable for agriculture use. The Basin Plan has not established numerical objectives for groundwater quality in the Plan Area but recognizes that in most cases irrigation return flows return to the aquifer with an increase in mineral concentrations such as TDS and nitrate (Colorado River RWQCB 2017), as well as potentially toxic chemicals. The Basin Plan objective is to minimize quantities of contaminants reaching the aquifer by establishing stormwater and irrigation/fertilizer use best management practices. (Draft GSP Section 3.2.5; page 3-13)

The Draft GSP indicates that the GSA continues to work with private landowners to expand the monitoring network. The GSA will continue to use the existing water quality monitoring network to assess Subbasin conditions, and further develop the groundwater quality network over the GSP's planning and implementation horizon, in accordance with adaptive management needs and as necessary to meet the GSP's sustainability goal.

S2-12 Comment noted.

S2-13 The GSA acknowledges your comment regarding the environmental concerns over fallowing of agricultural land. The Draft GSP includes Project and Management Action No. 4 – Voluntary Fallowing of Agricultural Land. As indicated in the Draft GSP, the GSA will prepare policy development and CEQA documentation after

GSP adoption in advance of considering formal adoption and implementation of a voluntary fallowing program.

S2-14 Comment noted.

RTC.3 ORGANIZATIONS

Comment Letter O1

Jackson Tidus
A LAW CORPORATION

April 26, 2019

Direct Dial: 949.851.7409
Email: mstaples@jacksontidus.law
Reply to: Irvine Office
File No: 7588-122439

VIA EMAIL

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geoff@borregowd.org

RE: AAWARE REQUEST FOR GROUNDWATER SUSTAINABILITY AGENCY APPROVAL OF METER SYSTEM

Dear Messrs. Bennett and Poole:

We represent the Agricultural Alliance for Water and Resource Education ("AAWARE"). AAWARE's members comprise the majority of the agricultural property owners in Borrego Valley. By this letter, we ask that the Borrego Valley Groundwater Sustainability Agency approve acceptable propeller meter systems so that the AAWARE members can make plans to install groundwater production meters, and not have to wait until Groundwater Sustainability Plan approval to do so.

Enclosed is information on the SWIIM well meter system that Mike Seley of AAWARE has discussed with Geoff Poole. Benefits of the SWIIM meter system include significant cost savings by:

- Eliminating the need for manual, monthly readings of groundwater production (the meter system provides real time data by cellular transmission, or if cellular is interrupted, by radio transmission); and
- Eliminating the need for semi-annual calibration verification and annual meter accuracy checks. Under the service agreement, each flow meter is regularly checked for accuracy. The maintenance schedule also includes technician visits to each site at least every four to six weeks. In addition to maintaining the telemetry and solar charging systems during these visits, technicians perform visual inspections of flow meters to ensure there are no erratic or unreasonable flow readings, blank LCDs, or damaged registers.

O1-1

Irvine Office
2030 Main Street, 12th Floor
Irvine, California 92614
t 949.752.8585 f 949.752.0597

Westlake Village Office
2815 Townsgate Road, Suite 200
Westlake Village, California 91361
t 805.230.0023 f 805.230.0087

www.jacksontidus.law

We are additionally awaiting information on the similar McCrometer meter system and service agreement. Enclosed is information from the McCrometer web site about their meters and reporting technology.

Please let us know as soon as possible whether the SWIIM or McCrometer meters, along with their data collection and reporting systems, and their calibration systems, are approved as acceptable metering systems. Please also let us know whether there are any other meter systems acceptable to the GSA.

O1-1 Cont.

Sincerely,

Michele A. Staples

Enclosures: SWIIM and McCrometer systems information

cc: Jim Seley, AAWARE*
Mike Seley, AAWARE*
Jack McGrory, AAWARE*
Boyd L. Hill, Esq., for AAWARE*
*by email only

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1. Introduction
2. Case Studies
3. How SWIIM Works
4. Delivery & Water Balance Reports
5. Remote Sensing & Software
6. Questions & Discussion

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Introduction: SWIIM Overview
A full service, turn-key solution that produces a very accurate on-farm water budget. It provides cost-effective, field- or crop-level, actionable data. It includes a software suite that enables agricultural water users to plan, manage and optimize crop water use through the use of sensors, data loggers, telemetry and remote sensing via satellite.
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Software Dashboard
Instrumentation
Full-service installation & maintenance
Remote Sensing
ET data with satellite images
Remote sensing via satellite and aircraft
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How SWIIM Works

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Daily Ledger Water Balance Approach
i = 1,n where n is number of days of recharge
DP = deep percolation below the root zone
V_B = daily inflow (measured) = Q_B *t
ΔS = volumetric change in soil moisture storage (assumed zero over water balance period)
ET = evapotranspiration (from weather station data calibrated with regular remote sensing)
P = precipitation (measured)
A = average surface water area
d_w = average depth of water
ET
P
A
ΔS
V_B
DP
For each day, i: $DP_i * A_i = V_{Bi} + (Pi - ETi) * Ai \pm \Delta S \pm \Delta d_w * Ai$
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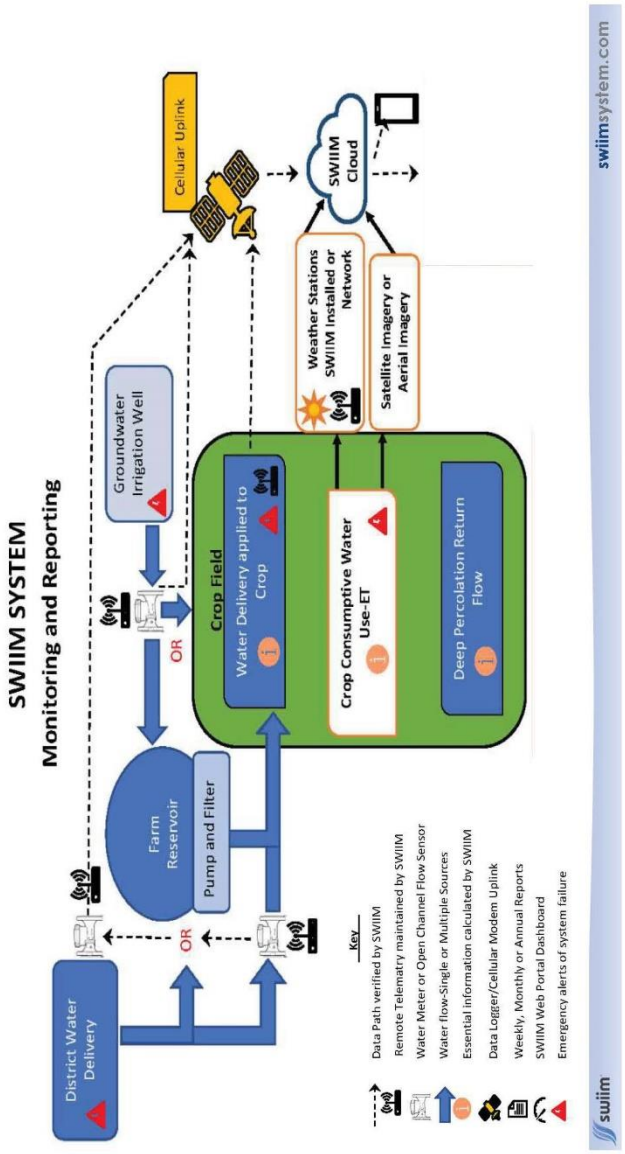
SWIIM SYSTEM
Monitoring and Reporting
Cellular Uplink
SWIIM Cloud
Weather Stations SWIIM installed or Network
Satellite imagery or Aerial Imagery
Groundwater Irrigation Well
Crop Field
Water Delivery applied to Crop
Crop Consumptive Water Use-ET
Deep Percolation Return Flow
OR
Farm Reservoir
Pump and Filter
District Water Delivery
Key
Data Path verified by SWIIM
Remote Telemetry maintained by SWIIM
Water Meter or Open Channel Flow Sensor
Water flow-Single or Multiple Sources
Essential information calculated by SWIIM
Data Logger/Cellular Modem Uplink
Weekly, Monthly or Annual Reports
SWIIM Web Portal Dashboard
Emergency alerts of system failure
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Equipment in the Field
Reservoir Water Balance
Closed Conduit Flow Monitoring
Direct Turn-Out
(not used on this deployment but is available)
Telemetry Interface for Equipment Configuration and Maintenance
Open Channel Flow Monitoring
(not used on this deployment but is available)
SWIIM Weather Station
CIMIS Weather Station
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Delivery & Water Balance Reports
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Deliveries
Water Balance Full Report
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Cumulative Daily Water Balance
SWIIM's daily water balance tracks system inflows (irrigation and effective rainfall) and outflows (actual ET and, where applicable, surface runoff) throughout the season. It solves for the residual subsurface drainage on a daily time-step.
Comparing trends among these components and historical data helps irrigation managers and water stewards plan and account for reasonable and beneficial water use while optimizing critical flow paths such as subsurface return flows.
Cumulative Water Balance Components
Volume (acft)
1250
1000
750
500
250
0
Date
Historical Deliveries
Water Sources
Consumptive Use
Surface Return Flows
Subsurface Return Flows
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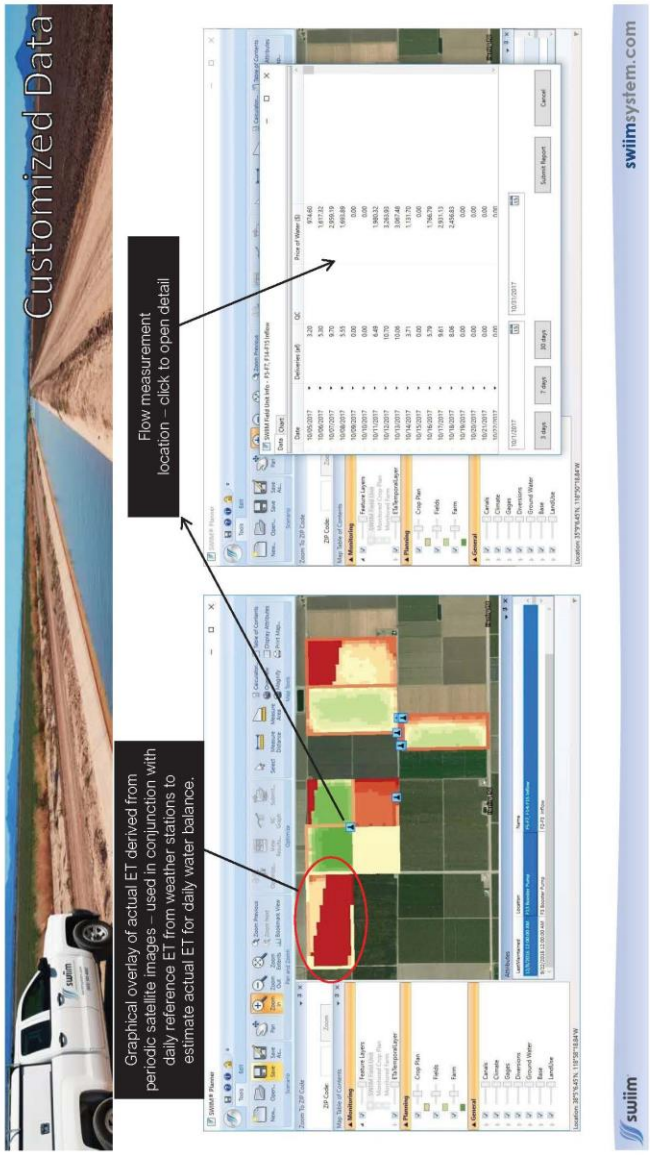
Remote Sensing Integration
2017
ET Actual
in/day
High: 0.2
Low: 0.0
Image Notes:
Date of Image: 8/28/2017
Average ETa (in): 0.18
Landsat Cloud Cover: 10%
Date Eto Ks ETa
4/29/2017 2.343 0.500 1.172
4/30/2017 5.360 0.500 2.680
5/1/2017 4.249 0.500 2.125
5/2/2017 3.501 0.500 1.750
Date Eto Ks ETa
6/9/2017 7.519 0.500 3.760
6/10/2017 7.687 0.500 3.844
6/11/2017 7.408 0.500 3.704
6/12/2017 8.351 0.500 4.175
Date Eto Ks ETa
7/20/2017 8.188 1.150 7.116
7/21/2017 8.307 1.150 7.253
7/22/2017 4.567 1.150 5.253
7/23/2017 5.415 1.150 6.227
ET Actual
in/day
0 0.1 0.2 0.4 0.6
Miles
swiim
swiimsystem.com

Remote Sensing Comparison
Field A ETc and ETa
Field A Crop Coefficients
ETc
ETa
Kc
Ka
swimsystem.com
swiim


Customized Data
Graphical overlay of actual ET derived from periodic satellite images – used in conjunction with daily reference ET from weather stations to estimate actual ET for daily water balance.
Flow measurement location – click to open detail
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SWIIM Dashboard (OnFarm)
OnFarm automatically aggregates data from any source to provide a real-time, unified farm decision dashboard.
• Simplified view of SWIIM data and reports.
• Integration of weather, soil moisture, agronomic, and other 3rd party data in the same view.
• Optimizes irrigation to reduce water, energy, and fertilizer.
• Enter and track manually recorded field data.
• Monitor and alerts for risks like frost.
• Plans and schedules activities more accurately to avoid field conflicts.
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- **FS100 Flow Straightener:** Uses breakthrough flow straightening technology for highly accurate, reliable flow measurement with minimal upstream/downstream pipe runs requirements.

	Propeller Meter	Mag Meter	Telemetry Ready	Accuracy	Line Sizes	Easy to Install & Service	Custom Lengths / Flanges
DuraMag		✓	✓	±1%	4" - 12"		✓
FlowConnect			✓	N/A	N/A		
Flow Straightener	✓			±2%	6" - 12"	✓	
Mc Mag3000™		✓	✓	±2%	4" - 12"	✓	
Mc® Propeller	✓		✓	±2%	2" - 96"	✓	✓
Ultra Mag®		✓	✓	±0.5%	2" - 48"		✓
Water Specialties Propeller Meter™	✓		✓	±2%	2" - 72"	✓	✓

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Fortunately, there is. McCrometer's FlowConnect™ is a built-in solution for collecting and transmitting flow data from the Mc Propeller and Water Specialties meters. Its unique one-piece design eliminates the need for cables, pole mounting and other hardware typically required with traditional telemetry systems. FlowConnect's features include ExactRead™ Technology, a proprietary technology for exact match from meter to website, affordable and reliable remote meter reading with a streamlined design, timely and accessible data for water management decisions, pre-assembled on new meters for simplified installation and retrofits on existing meters in less than 30 minutes. With multiple register input and output options, modem options and power options, McCrometer, your trusted partner for flow meters, offers innovative built-in remote meter reading. Finally, this is a much better way of automatic meter reading.

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4/26/2019 Smart Output | McCrometer USA - Overview

Smart Output mag meters from McCrometer are designed with a highly intelligent module in their transmitters that is similar to a communication protocol. This capability allows McCrometer mag meters to transmit data on a schedule or on demand, as well as receive diagnostic queries to ensure or update meter operation. There's no need for technicians to gather flow data manually or check meter status with McCrometer's Smart Output mag meters.

With advanced plug-and-play, real-time Smart Output communications, McCrometer's FPI Mag Flow Meter, SPI Mag Flow Meter and Ultra Mag Flow Meter provide highly effective solutions for automatic meter reading (AMR) and advanced meter infrastructure (AMI) in support of utility smart grids that help conserve valuable water resources, reduce expensive non-revenue water costs, and simplify daily operations and routine maintenance.

McCrometer's Smart Output technology is backed by the company's 60-plus years of solving flow measurement problems.

Letter O1

Commenter: Michele Staples, Jackson Tidus – A Law Corporation, on behalf of the Agricultural Alliance for Water and Resource Education (AAWARE)
Date: April 26, 2019

O1-1 The Groundwater Sustainability Agency (GSA) acknowledges the Agricultural Alliance for Water and Resource Education ("AAWARE") request to consider use of the SWIIM meter system to monitor groundwater production in the Subbasin, or McCrometer meters. SWIIM includes a comprehensive administration/management tool that verifies water use and related conservation against a specified baseline, along with the resulting newly projected crop production output. SWIIM is "hardware agnostic" and compatible with many commercially available equipment, including flow meters, gate meters, tail water sensors, climatic sensors, groundwater instrumentation and supporting infrastructure such as weirs, flumes, stilling wells, and similar technologies. This equipment is connected near real-time via telemetry to SWIIM to provide near-real-time water usage and consumption reports, along with "alarms" if a specific field is going outside the projected/approved water usage, alongside other pre-determined irregularities" (SWIIM 2019). SWIIM is a comprehensive metering and on-farm water accounting platform that requires detailed evaluation to verify compatibility with planned groundwater production reporting requirements.

The GSA will consider use of metering and monitoring systems/platforms in coordination with the non-de minimis pumpers in the Subbasin. The cost, technology, hardware integration, management platforms, and opportunities and constraints of multiple systems should be considered including but not limited to SWIIM meter system. Of particular interest is the reporting and data management capabilities of each system to document groundwater production for purposes of Groundwater Sustainability Plan (GSP) implementation. As the SWIIM meter system appears compatible with existing well meters, pressure transducers and weather stations in the Subbasin, the GSA could consider after the GSP is adopted a trial project potentially be conducted to confirm suitability of use, cellular access and document actual costs for system installation, ongoing use and compatibility with proposed GSA groundwater production metering requirements.

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Comment Letter O2

Jackson Tidus
A LAW CORPORATION

Letter to Borrego Valley Groundwater Sustainability Agency

Re: AAWARE Comments on March 2019 Draft Groundwater Sustainability Plan for the Borrego Valley Groundwater Basin and Baseline Pumping Allocations

May 20, 2019

Delivered via E-Mail and Overnight Delivery to:
County of San Diego Planning & Development Services
Attention: Mr. Jim Bennett

Submitted by:
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A LAW CORPORATION

May 20, 2019

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Reply to: Irvine Office
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VIA E-MAIL (PDS.LUEGGroundWater@sdcounty.ca.gov) & Overnight Delivery

County of San Diego Planning & Development Services
c/o Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

RE: AAWARE COMMENTS ON MARCH 2019 DRAFT GROUNDWATER SUSTAINABILITY PLAN FOR THE BORREGO VALLEY GROUNDWATER BASIN AND BASELINE PUMPING ALLOCATIONS

Dear Mr. Bennett:

I. INTRODUCTION AND SUMMARY.

The Agricultural Alliance for Water and Resource Education ("AAWARE") provides this comment letter to the Borrego Valley Groundwater Sustainability Agency ("GSA") to address AAWARE's concerns regarding the March 2019 draft Groundwater Sustainability Plan ("GSP") for the Borrego Valley Groundwater Basin ("Basin"). AAWARE's members comprise the majority of the agricultural property owners and groundwater users overlying the Basin. AAWARE's members are dependent on the Basin for agricultural and domestic water uses on their properties.

For many years, AAWARE's members have been working toward a solution to bring the Basin into balance, both individually and, more recently, as members of the Borrego Water Coalition ("Coalition") and the Advisory Committee to the GSA ("Advisory Committee"). AAWARE members have voluntarily reduced water consumption, willingly shared their production data with the Core Team in confidence, researched and proposed metering systems for approval by the GSA, and devoted countless hours to engage in various forums at which groundwater management alternatives have been discussed.

AAWARE seeks constructive dialog with the GSA in the hopes of reaching a workable solution to the GSP and its intended implementing programs that will facilitate beneficial use of the Basin, including agricultural use, together with sound management under the Sustainable Groundwater Management Act ("SGMA", Wat. Code, § 10720 et seq.). Unfortunately, the 60-day public review period for the GSP was not further extended as necessary to allow the ongoing dialog to reach a satisfactory conclusion. Compounding the problem, the GSA withheld from public disclosure critical information upon which the GSP is based, hindering AAWARE's ability to provide relevant information during the Advisory Committee proceedings and during the public comment period on the GSP. For example, Dudek's "Update to the USGS Borrego Valley Hydrologic Model" and summary report dated December 2018 (GSP Appendix D1 ("Dudek Model Update")) were withheld from public disclosure until the draft GSP was

published in March 2019. (See, Exhibit 1,[1] November 2, 2018 joint T2 Borrego/AAWARE letter, p. 1.) The GSA is still withholding the Planning, Permitting and Ordinance Review Technical Report (referenced at GSP p. 4-38) and Working Draft Financing Plan (referenced at GSP pp. 5-9, 5-10).

Therefore, AAWARE and its individual members (who join in these comments) must now preserve their rights regarding the substantive and procedural deficiencies of the draft GSP and the process of its development that improperly marginalize, subordinate and prevent consideration of the AAWARE members' interests in the Basin, and violate their Constitutionally-protected substantive and procedural due process rights, water rights, and private property rights.

As a result of the Core Team's failure to adhere to SGMA's statutory and regulatory requirements and guidance provided by the Department of Water Resources ("DWR") (such as the use of best available science and compliance with fundamental principles of substantial evidence and due process), the draft GSP proposes excessive regulatory obligations and crushing financial burdens that would plainly eliminate private agricultural water use from the Basin. In enacting SGMA, the Legislature was clear that it did not seek to create a subordinate class of beneficial users regulated out of existence by SGMA. Instead, the Legislature mandated that beneficial users are to be full participants in the planning process, with the express intent to preserve beneficial uses through "sustainable", rather than draconian, management.

As discussed in greater depth below, the draft GSP:

1. Is being developed by a process that withholds relevant information relied upon in the GSP and prevents active involvement by affected agricultural water users, thereby preventing the GSA's consideration of the agricultural users' interests as required by SGMA. (Wat. Code, §§ 10723.2(a)(1), 10727.8(a).)
2. Fails to rely upon the best available science provided in the USGS report prepared in cooperation with the District entitled, "Hydrogeology, Hydrologic Effects of Development, and Simulation of Groundwater Flow in the Borrego Valley" ("2015 USGS Model Report"-- https://pubs.usgs.gov/sir/2015/5150/sir20155150.pdf, excerpts cited to herein are attached hereto as Exhibit 2.)
3. Establishes arbitrary management zones without model testing the zones.
4. Adopts sustainability measures that are not supported by the evidence.
5. Calls for excessive and costly implementing programs that are economically infeasible and needlessly harm beneficial agricultural uses in the Basin.
6. Includes administrative and program development costs that far exceed what is contemplated by SGMA for a small basin with few pumpers, rendering GSP implementation economically infeasible.

[1] The Exhibits referenced in this letter have been uploaded to a share site and may be accessed at the following link: https://sharefile.jacksontidus.law/wl/?id=H2lcpnHVFl2x6XJrcHnLpAySefoKnfDt

County of San Diego Planning & Development Services
c/o Jim Bennett
May 20, 2019

In order to correct the draft GSP's procedural and substantive deficiencies, AAWARE asks the GSA to:

- Establish a collaborative technical process to be convened before GSP adoption to allow a meaningful opportunity for public review and dialog on matters that were not adequately developed through the Advisory Committee process;
- Convene technical meetings before GSP adoption among the water producers who will be subject to the GSP and their respective technical consultants in order to finalize their Baseline Pumping Allocations;
- Provide information explaining why the GSA decided to effectively reject the USGS's Scenario 6 sustainable pumping target of 7,824 AFY (Exhibit 2, 2015 USGS Model Report, p. 122 (Table 20)), including any data indicating a potential undesirable result at that pumping target;
- Produce at least one model run evaluating a pumping target of 7,100 AFY, which is the total average natural safe yield amount substantiated in both the 2015 USGS Model Report and Dudek Model Update;
- Provide for a permanent Technical Advisory Committee as part of the GSP governance process to be comprised of California licensed engineers, hydrogeologists and other licensed technical representatives from all stakeholders desiring to participate (see Exhibit 1, November 2, 2018, joint letter on behalf of T2 Borrego and AAWARE regarding Borrego Springs Groundwater Model and Proposal for Collaborative Technical Approach); and
- Amend and recirculate an updated draft GSP, and extend the comment period to allow for further review and comment by affected beneficial users.

II. AAWARE COMMENTS ON THE DRAFT GROUNDWATER SUSTAINABILITY PLAN.

A. THE GSP FAILS TO RELY UPON THE BEST AVAILABLE SCIENCE AND INSTEAD JUSTIFIES THE GSA's PRE-DETERMINED SUSTAINABLE YIELD FOR THE BASIN AT 5,700 AFY.

1. The GSP Mischaracterizes and Wrongly Adopts the USGS Natural Surface Recharge Estimate as the Basin's Sustainable Yield.

The 2015 USGS Model Report indicates that the available yield of the Basin in the pre-development condition is 7,074 afy. The 2015 USGS Model Report's "Scenario 6" evaluates a target pumping rate of 7,824 AFY (for 30 years commencing in 2030) and concludes that at 2060, recharge approximates discharge. (See, Exhibit 2, 2015 USGS Model Report pp. 4, 118 (Table 19), 122 (Table 20); Exhibit 3, May 16, 2019, Wagner & Bonsignore Letter Report, p. 2.)

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Rather than adopt the sustainable yield of 7,824 AFY as set forth in the 2015 USGS Report Scenario 6, or even the available pre-development yield of 7,100 AFY set forth in the USGS Model Report, the GSP mischaracterizes the USGS Model Report and incorrectly adopts

the USGS Model Report's natural *surface* recharge of 5,700 AFY as the Basin's "sustainable yield":

> At present, the total baseline pumping allocation (BPA) of 21,963 acre-feet per year (AFY) greatly exceeds the **Subbasin's estimated long-term sustainable yield of 5,700 AFY determined by the U.S. Geological Survey and confirmed in this GSP.** (GSP, p. ES-3 [emphasis added].)

As set forth above, **the USGS did not determine or estimate the long-term sustainable yield at 5,700 AFY**. Rather, the USGS estimated the long-term sustainable pumping rate at 7,824 AFY and only estimated the natural recharge to the Basin from **surface** water at 5,700 AFY. (Exhibit 2, 2015 USGS Model Report, pp. 2, 122 (Table 20), 129.) USGS estimated the total average natural recharge to the Basin to be approximately 7,100 AFY, comprised of 5,700 AFY surface recharge and 1,400 AFY underflow into the Basin. (See, Exhibit 2, 2015 USGS Model Report pp. 2, 129; See also, Dudek Model Update, p.10; Exhibit 3, Wagner & Bonsignore Letter Report, p. 2; Exhibit 6, Thomas Harder Letter Report p. 7.)

The GSP's mischaracterization and adoption of USGS estimated natural surface recharge of 5,700 AFY as the "sustainable yield" **violates the statutory definition of sustainable yield as the maximum quantity of water** that can be sustainably used. (Wat. Code, § 10721(w).)

The evidence contained in the 2015 USGS Model Report shows that 5,700 AFY is **not the maximum quantity** of water that can be sustainably used. The USGS model runs for SGMA sustainability that take into natural subsurface recharge, irrigation return flows and other components of the Basin's developed state estimate the long-term sustainable yield at 7,824 AFY.

The evidence contained in the GSP also shows that 5,700 AFY is not the maximum quantity of water that can be sustainably operated within the Basin. The GSP Basin setting discussion for safe yield estimate concedes that the water budget numbers set forth in the 2015 USGS Model Report are the correct numbers for what the GSP calls the "combined natural recharge" to the Basin:

> The average annual natural recharge of water reaching the saturated zone, which includes stream leakage and infiltrating water through the unsaturated zone, was 5,700 AFY for the full model simulation period from 1929 to 2010 (USGS 2015). In addition to natural recharge from stream leakage and infiltrating water (mostly from irrigation return flows), the Subbasin received underflow originating from the adjacent watersheds at an average annual rate of 1.400 AFY. **Therefore the combined average annual natural recharge to the BVGB is approximately 7,100 AFY**. (GSP, pp. 2-80 – 2-81 [emphasis added].)

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The GSP Basin setting discussion for water budget purposes provides a slightly lower number of 6,770 AFY for combined total inflow based on the Dudek Model Update that admittedly either overestimates pumping or underestimates recharge. (GSP, pp. 2-72, 2-73 (Table 2.2-9A), 2-79.) However, even at that lower water budget inflow number of 6,770 AFY, the **GSP concedes that the "sustainable yield" of 5,700 AFY is not the maximum quantity of water that can be sustainably operated within the Basin**. By arbitrarily picking the average annual natural surface recharge number as the sustainable yield, **the GSP violates the SGMA regulations requiring the GSA to use water budget projections and safe yield estimates as the foundation for determination of sustainable yield**. (23 Cal. Code Regs., § 354.18(b)(7), (c)(3).)

The County's GSP contract with Dudek specifically tasked Dudek to "consider both surface and groundwater data and run predictive simulations to determine effects of recharge and extraction on levels and quality along with implementation measures to be detailed in the GSP." (See, Exhibit 4, excerpts of County Contract No. 555655, Agreement with Dudek, pp. 21-22) The County/Dudek contract explains that the purpose of this task, among other things, is "to determine sustainable yield for the basin in its entirety that is acceptable to DWR".

Instead, Dudek ran only model scenarios evaluating the 5,700 AFY natural surface water recharge as the Basin-wide sustainable yield. (See, GSP, pp. 3-20, 3-21 ["All of the simulations are based on the target pumping rate of 5,700 AFY being achieved in year 20 of GSP implementation."]; Exhibit 6, 2019 Thomas Harder Letter Report, p. 7; Exhibit 5, April 26, 2019, Transcript, p. 54:1-11 [Dudek ran one model scenario stepping down current pumping to 5,700 afy over 20 years].) The **GSA model run** for the "sustainable yield" of 5,700 AFY shows that operation of the Basin in that amount is **well below the maximum quantity of water that can be operated without undesirable result**. (GSP, p. 3-20, Figure 3-3-2.) Establishing the GSP "sustainable yield" at 5,700 AFY would add between 35,000 and 70,000 acre-feet over a 35-year period (about 1,000 to 2,000 AFY) to storage instead of being sustainably used without undesirable result. (GSP, Figure 3-3-2; See, Exhibit 6, 2019 Thomas Harder Letter Report, p. 4 [quantifying the amount of storage gain]; Exhibit 3, 2019 Wagner & Bonsignore Letter Report, p. 2.)

AAWARE questions the GSA's approach in formulating a desired sustainable yield result and then rationalizing that conclusion after-the-fact. However, that is what happened in this case. The Dudek Model Update selectively accepts only the information supporting the GSA's decision to limit pumping to the 5,700 AFY natural surface water recharge, and rejects or ignores the data, laws and guidance contradicting that decision. No mention is made of the USGS Scenario 6 target production level of 7,824 AFY or any undesirable result that would occur at that level. The predictable result is that the County Board of Supervisors and District Board of Directors (as the GSA decision maker in this case) and DWR (as the oversight agency) will receive a one-sided analysis of the Basin's sustainable yield. **The GSP's self-serving analysis of sustainable yield is arbitrary and capricious, particularly where the GSA has at its disposal the 2015 USGS Borrego Valley Hydrologic Model that was developed in cooperation with the District over a 6-year period at significant expense for the express purpose of testing alternative management scenarios**. (See, Exhibit 2, 2015 USGS Model Report, p. 1.)

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Contrary to the requirements of SGMA and the scope of work outlined in the County/Dudek GSP contract, the GSA **failed to conduct model runs at any number between 5,700 AFY natural surface water recharge and the 2015 USGS Model Report's sustainable yield Scenario 6 model result of 7,824 AFY that the GSP ignores and effectively rejects**. (See, 2015 USGS Model Report, p. 122 (Table 20, Scenario 6).) The GSA should provide at least a model run evaluating production at the combined average annual natural recharge amount of 7,100 AFY. (23 Cal. Code Regs., § 354.26(c) [**requirement to consider multiple minimum thresholds to determine point at which undesirable result occurs**]; Exhibit 2, 2015 USGS Model Report, p. 129; Exhibit 3, Wagner & Bonsignore Letter Report, p. 2; Exhibit 6, Thomas Harder Letter Report, p. 7.)

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2. The GSP's Incorrect Adoption of Natural Surface Recharge as the "Sustainable Yield" Violates SGMA's Intent to Preserve Common Law Water Rights.

The GSA's adoption of the Basin's natural surface recharge of 5,700 AFY as the "sustainable yield" **violates common law water rights** as protected by the California Constitution (Art. X, Sec. 2) to **maximum reasonable and beneficial use of the Basin sustainable or safe yield**, and thus violates both the California Constitution and SGMA. (Wat. Code, §§ 10720.1(b), 10720.5(a), (b); Cal. Const., Art. X, Sec. 2; *California American Water v. City of Seaside* (2010) 183 Cal.App.4th 471, 480-481 ["The solution must not, of course, unreasonably or adversely affect the existing legal rights and respective priorities of the parties."].) Most of the groundwater rights adjudications in California (if not all) use a definition of the basin yield that includes 3 components:

1. Natural yield, which is the amount of the total recharge including underflow that would exist under pre-development conditions. In the Basin, this amount is about 7,100 AFY;
2. Developed yield, which is the amount of water that is developed from pumping the groundwater basin and includes changes in storage and reductions in basin outflow and evapotranspiration; and
3. Return flow from pumping.

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(See, Exhibit 3, Wagner & Bonsignore Letter Report, p. 2.) The GSA's arbitrary rejection of USGS Scenario 6 effectively takes usable water out of production by regulation, adversely affecting the AAWARE members' water rights and land use. By requiring water users to **operate so significantly under the Basin's total average natural recharge (which is less than sustainable or safe yield under the Basin's developed condition)**, the GSP constitutes a **major change in overlying parties' water rights**, in violation of SGMA. (Wat. Code, §§ 10720.1(b), 10720.5(a), (b); *Peabody v. City of Vallejo* (1935) 2 Cal.2d 351, 376 [requiring water to be unused and flow to the bay in order to make insubstantial contribution to underground supply of land held to be a great waste for small benefit].)

3. The GSP's Incorrect Adoption of Natural Surface Recharge as the "Sustainable Yield" Violates SGMA's Requirement to Consider All Beneficial Uses and Users.

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SGMA requires that the GSP "consider the interests of all beneficial uses and users of groundwater," including holders of overlying rights. The requirement was amended last year to expressly require the GSA to consider the interests of farmers holding overlying groundwater water rights. (Water Code section 10723.2(a)(1), as amended by Assembly Bill 321, effective January 1, 2018.) The GSP **fails to consider or even mention the interests of private overlying farmers or other private groundwater users** in its explanation of why it sets the "sustainable yield" significantly below the Basin's combined average annual natural recharge of approximately 7,100 AFY:

> Recharge in the basin is bimodal, with the majority of recharge occurring on decadal basis in a few very wet years. Most years have significantly less natural recharge than the average. Given that this bimodal pattern introduces a level of uncertainty regarding the actual amount of recharge that could occur over the next 20 years, the GSA has determined that a target pumping rate of 5,700 AFY by 2040 would be consistent with the GSP sustainability goal (discussed in Chapter 3). (GSP, p. 2-81.)

The "bimodal recharge" pattern is a function of desert environments. Multiple successive wet years will provide more than average recharge, and multiple successive dry years will provide less than average recharge. With no supplemental source of water, water users in the Basin (including overlying agriculture) will necessarily rely upon infrequent large recharge events to provide a steady source of banked supply during the more frequent dry seasons. Over a long period of time, wet and dry cycles will produce an average recharge. The USGS's full model simulation considered a 60-year period, 1929 to 2010. (See, Exhibit 2, 2015 USGS Model Report, p. 79.) The average annual natural recharge estimates from Appendix A of the Dudek Model Update are based on an 80-year period of record (7,040 AFY) and 65-year period of record (6,881 AFY), which are more than sufficient to account for hydrologic cycle variability. (See, Exhibit 6, 2019 Thomas Harder Letter Report, p. 4.)

The GSP's statement about bimodal recharge fails to explain the undesirable result, if any, that would result from a pumping target based upon the 7,100 AFY combined average annual natural recharge or the 7,824 AFY USGS Scenario 6 pumping target. **By omitting a very significant amount of natural underflow into the Basin (1,400 AFY, which is 20% of the Basin's total 7,100 AFY average natural recharge), the GSP fails to rely on the best available information and science about the Basin's natural recharge in both the USGS model and the Dudek Model Update**. (23 Cal. Code Regs., § 354.18(e).) The USGS's evaluation of sustainable yield (Scenario 6, which evaluates total production of 7,824 AFY), appropriately relies on the best available science, taking into account not only the natural surface recharge and underflow, but also return flows from irrigation. **The GSA ignores and effectively rejects USGS Scenario 6 without substantial evidence or explanation, arbitrarily reducing the sustainable yield and taking usable water out of production by regulation.**

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B. THE GSA FAILED TO ALLOW FULL PARTICIPATION BY PRIVATE WATER USERS INCLUDING AGRICULTURAL USERS AND FAILED TO CONSIDER THEIR INTERESTS IN PREPARING THE GSP.

1. The GSA Did Not Involve Beneficial Users in the Development of the GSP's Sustainability Measures.

SGMA requires that the GSA provide a written statement that commits to the manner in which interested parties may participate in the development and implementation of the GSP. (Wat. Code, § 10727.8(a).) The GSA must follow the commitment set forth in that statement for involvement of beneficial users. (23 Cal. Code Regs., § 354.10.) Given the mandate that the GSA consider the interests of all beneficial users and uses of groundwater (including farmers) (Wat. Code, § 10723.2(a)(1)) and the legislative intent to preserve water rights in the development and implementation of the GSP (Wat. Code, §§ 10720.1(b), 10720.5(a), (b), this commitment is crucial.

Beneficial user input into the development of GSP sustainability measures is critical to the GSP process and to the protection of overlying water rights. (Wat. Code, §§ 10720.5, 10723.2, 10727.8(a); 23 Cal. Code Regs., §§ 354.10, 354.26(b)(3), 354.28(b)(4).) Contrary to the requirements of SGMA and the Advisory Committee Bylaws (GSP, Appendix BA, p. 1), development of the GSP was reduced to a top-down process where GSP proposals were developed by the Core Team and selectively reported to the Advisory Committee members and affected private water users. In some cases, relevant information was withheld from the Advisory Committee and the affected water users (including AAWARE members), depriving them of a meaningful opportunity to evaluate potential impacts to their interests and provide input into the GSA's decisions such as the GSP management proposals. (23 Cal. Code Regs., § 354.10.) Specifically, the GSA failed to comply with the process required to develop the GSP by:

- Witholding the Dudek Model Update until after publication of the draft GSP and failing to timely provide related information required for the Advisory Committee, the affected water users and their technical consultants' meaningful comment on the technical foundation of the GSP;
- Witholding key documents cited in GSP even after publication of the GSP under the "deliberative process privilege" exemption, including the Planning, Permitting and Ordinance Review Technical Report (referenced at GSP p. 4-38) and Working Draft Financing Plan (referenced at GSP pp. 5-9, 5-10);
- Relying on 2018 ENSI Report that miscalculates the Basin's combined annual natural recharge, and misrepresenting to the Advisory Committee and affected water users that the total yield is 5,700 AFY;
- Failing to post agenda materials, including but not limited to information about the proposed contents of the GSP, in advance of Advisory Committee meetings;
- Failing to respond to comment letters submitted by private water users during the Advisory Committee process;

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- Proposing management programs that target agricultural land and water use without input by the affected agricultural water users; and
- Proposing financing mechanisms that are not feasible and will have the effect of eliminating beneficial agricultural use.

In the months preceding publication of the draft GSP, the technical consultants advising the GSA repeatedly misinformed the Advisory Committee members, the public and the private water users' technical consultants that the average annual natural recharge of the Basin totals 5,700 AFY. The District's consultant, Environmental Navigation Services, Inc. ("ENSI"), incorrectly represented the total 65-year average natural recharge to the Basin to be 5,700 AFY per the 2015 USGS Report, comprised of 1,400 AFY groundwater inflow and 4,300 AFY surface water recharge. (See, Exhibit 17, September 2018 report entitled "Methodology to Examine Future Groundwater Overdraft in Terms of the Overall Hydrologic Water Balance Considering Recharge Variability and Parameter Uncertainty" ("2018 ENSI Report"), p. 7.) To the contrary, the 2015 USGS Model Report estimated the total average natural recharge to the Basin at approximately 7,100 AFY, comprised of 1,400 AFY underflow into the Basin **plus** 5,700 AFY surface recharge. (See, Exhibit 2, 2015 USGS Report p. 2; GSP pp. 2-80 – 2-81; See also, Exhibit 3, Wagner & Bonsignore Letter Report, p. 2; Exhibit 6, Thomas Harder Letter Report p. 7.) **ENSI mistakenly *subtracted* the 1,400 AFY underflow from the 5,700 AFY surface recharge instead of *adding* the two together.** (Exhibit 17, 2018 ENSI Report, p. 7.) **As a result, the ENSI Report misrepresents the Basin's total average natural recharge to be 20% lower than the 2015 USGS Model Report.**

The misleading information on the Basin's average natural recharge was particularly impactful given that the purpose of ENSI's examination was to address concerns about potential impacts on the District's ability to produce drinking water and related increase in water production costs should the target pumping rate fail to achieve the SGMA-mandated sustainability goals. (Exhibit 17, 2018, ENSI Report, p. 1.) The 2018 ENSI Report further explains that "subsequent analyses are in process that will build from this Report to examine the effect of overdraft on BWD supply well production rates and water quality". (Exhibit 17, Cover letter to the District's General Manager.) The GSP relies on the incorrect 2018 ENSI Report for the Plan Area and Basin Setting and Sustainability Management Criteria (see GSP pp. 2-87, 3-48), and includes a subsequent ENSI study dated December 7, 2018, entitled "Water Quality Review and Assessment: BWD Water Supply Wells" that may have been one of the "subsequent analyses" that built upon the incorrect 2018 ENSI Report (see, GSP Appendix D2). **The Advisory Committee members and the public were incorrectly informed that the pumping levels in the 2015 USGS model's Scenario 6 would so far exceed the Basin's natural recharge that it would not meet SGMA's sustainability requirements. (See, for example, Exhibit 11, August 2018 Advisory Committee Minutes, p. 3; Exhibit 17, 2018, ENSI Report, p. 18.)**

The GSA relied in part on the incorrect ENSI analysis in picking the 5,700 AFY target pumping rate as the Basin's sustainable yield and effectively rejecting the USGS Scenario 6. (See, GSP pp. 2-87, 3-48, 3-49.) At the August 31, 2018, technical meeting among the technical consultants advising the GSA, AAWARE and T2 Borrego, the GSA incorrectly said that the Dudek Model Update was using the 2015 USGS model and assumptions and was only updating

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Cont.

the model to the period beyond 2010. However, the draft GSP published months later disclosed that, in setting the sustainable yield at 5,700 AFY, the Dudek Model Update excluded the 1,400 AFY average natural underflow recharge that had been included in the 2015 USGS Model inputs. (See, Exhibit 2, 2015 USGS Model Report p. 118; GSP pp. 2-80 – 2-81; see also, Exhibit 3, Wagner & Bonsignore Letter Report, p. 2; Exhibit 6, Thomas Harder Letter Report p. 7.) **The erroneous information was unable to be discovered by the affected water users and unable to be corrected during the Advisory Committee process because the GSA purposely withheld the Dudek Model Update from public review until the draft GSP was published.**

The August 2018 technical meeting was held at the request of AAWARE and T2 Borrego so that the GSA's engineering consultants could provide them with information needed for AAWARE and T2 Borrego to provide meaningful information for the Dudek Model Update, its inputs and the sustainability criteria. At a subsequent Advisory Committee meeting, the GSA announced that what it provided at the technical meeting was merely information that could be found on the GSA website, and not the technical information that had been requested. (See, Exhibit 11, October 4, 2018, Advisory Committee Minutes, p. 2.)

The GSA also withheld the Dudek Model Update from public review until the draft GSP was published for public comment, claiming the "deliberative process" exemption from the Public Records Act. Upon publication of the draft GSP, AAWARE and T2 Borrego scheduled two technical meetings for the technical consultants to discuss the model, data and model runs with the GSA during the public comment period. (See, Exhibit 12, March 22, 2019, email exchange to schedule technical meetings during GSP public comment period.) The information learned from the subsequent technical meetings and from the GSP is that the GSA had a predetermined result to use the USGS natural surface recharge number of 5,700 AFY as the "sustainable yield," and that the GSA only performed model runs at that 5,700 AFY number. No other forward projection runs were performed at higher pumping rates. (See, GSP pp. 3-20, 3-21 ["All of the simulations are based on the target pumping rate of 5,700 AFY being achieved in year 20 of GSP implementation."], 3-61 (Figure 3.3-2); Exhibit 3, 2019 Wagner & Bonsignore Letter Report, pp. 1-2; Exhibit 6, 2019 Thomas Harder Letter Report, p. 7.) Because the GSA only studied its pre-determined result of a 5,700 AFY "sustainable yield", the Advisory Committee and the affected water users cannot evaluate the maximum pumping that can occur in the Basin without undesirable results, and neither can the County Board of Supervisors or District Board of Directors (in their role as the GSA decision maker) or Department of Water Resources (in its role as the oversight agency). The GSP process was not conducted in a manner to obtain any meaningful input from beneficial users as to sustainable yield components, in violation of SGMA requirements for beneficial user participation in the development of those sustainable yield components. (Wat. Code, §§ 10723.2, 10727.8; 23 Cal. Code Regs. §§ 354.10, 354.26(b)(3), 354.28(b)(4).)

Dudek told AAWARE's technical consultants that it was prevented from modeling other target pumping rates for the Basin due to budget and scoping constraints. (See, Exhibit 3, Wagner & Bonsignore Letter Report, pp. 1-2.) However, as discussed above, the County/Dudek GSP contract tasked Dudek with running predictive simulations to determine sustainable yield for the Basin. **In order to comply with SGMA requirements to use the best available science and**

O2-4 Cont.

information (23 Cal. Code Regs., § 354.18(e)), the GSP should provide at least one additional model run at the 7,100 AFY combined average annual natural yield.

Additionally, the Advisory Committee process was reduced to a top-down process with the Core Team developing GSP components and reporting only some of them to the Advisory Committee. A review of the agendas for the GSA reveal **only two items that came up for Advisory Committee input, neither of which were GSA sustainability measures**: (1) metering of agricultural wells; and (2) allocation of base production rights. (See, Exhibit 7, November 27, 2017 Advisory Committee Agenda Excerpts.) As shown by the GSA website, the **GSP sustainability measures were rolled out to the Advisory Committee for review only at the very end of the Advisory Committee Process in October 2018, after the GSA's consultant had completed their model testing and developed the sustainability measures**. (See, Exhibit 8, website screenshot page 4; Exhibit 9, Advisory Committee Agenda Reports for GSP Rollout Oct. 2018, Nov. 2018 and Jan. 2019.) As discussed above, at that time, the Advisory Committee members were misinformed as to the Basin's natural recharge.

Additionally, the Advisory Committee agendas published in advance of the meetings did not contain attachments. The substance of the GSP text was not provided to the Advisory Committee members prior to the meetings, but instead Advisory Committee members were simply presented with a power point presentation on the spot at the meetings, with no opportunity to meaningfully review, consider and provide input into the GSP's contents. The power point presentations were not posted on the GSA's website until several days following the meeting, generally only in time for the subsequent meeting, thereby preventing timely and meaningful input by the affected water users into the GSP's development. (See, Exhibit 11, August 29 and October 3, 2019 letters to Jim Bennett and Geoff Poole.)

After publication of the Draft GSP, information necessary for AAWARE's technical consultants to understand and comment on the Dudek Model Update during the 60-day public comment period was requested at the April 26, 2019 technical meeting. (See, Exhibit 5, April 26, 2019, Transcript, pp. 13:18-25, 25:23 – 26:3.) The GSA committed to provide the requested information at the May 10, 2019 technical meeting. (See, Exhibit 5, Transcript, p. 69:24 – 70:5.) However, the information was not provided at the May 10 meeting. The requested information was provided at the close of business on May 16, 2019, **just two business days before the close of the comment period on the draft GSP**. (See, Exhibit 16, May 16, 2019, Calibration Wells Correspondence and Documents.)

Additionally, the GSA continues to withhold information cited in the GSP upon which the proposed management programs are based, including the Planning, Permitting and Ordinance Review Technical Report (referenced at draft GSP p. 4-38) and the Working Draft Financing Plan (referenced at GSP pp. 5-9, 5-10). (See, Exhibit 10, March 29, 2019, email denying AAWARE's request for these documents.) Additionally, the GSP references Le Sar Development Consultants' work on matters including economic impacts (GSP p. 2-30), but there is no report included in the GSP.

O2-4 Cont.

The GSA did not provide the Advisory Committee or beneficial users "balanced objective information" in a timely manner as necessary to assist in their understanding the Dudek Model "Update" to the USGS model, water budget or development of sustainability measures, did not involve or collaborate with the Advisory Committee in determining which sustainability measures to include in the GSP, and did not consult with the Advisory Committee or agricultural users targeted by the sustainability measures. **In fact, the GSA provided incorrect information about the Dudek Model Update and withheld Dudek's model report dated December 2018 from public disclosure until the GSP was published months later**.

The requested information should be provided to the public, and the public comment period should be reopened to allow a meaningful opportunity to review the information as necessary to comment on the Dudek Model Update.

Additionally, to avoid future dissemination of misinformation and ensure that the affected private water users receive relevant information about GSA matters potentially affecting their interests in a timely manner, AAWARE urges the GSA to establish a permanent Technical Advisory Committee process as part of the GSA's governance structure with authority to analyze and make recommendations on matters including specific yield, mountain front underflow and flux into the Basin across the Coyote Creek fault, and agricultural and recreational irrigation return flows; evaluating the feasibility of importing groundwater; advising on development of any Water Quality Optimization, Intra-Basin Water Transfers and General Plan Update proposed in the draft GSP; sustainable yield; scope of work and budget for technical work; rampdown; and any other matters to be approved by the GSA.

O2-4 Cont.

2. The Manner in Which the GSP Was Developed Violates the AAWARE Members' Constitutionally-Protected Substantive and Procedural Due Process Rights.

The GSA's failure to objectively evaluate sustainable yield scenarios violates the AAWARE members' Constitutionally-protected substantive and procedural due process rights by withholding from the Advisory Committee, County Board of Supervisors, District Board of Directors and DWR relevant information that is contrary to the GSA's arbitrary decision that the sustainable yield should be equal to the natural surface water recharge.

Further, the GSA's withholding relevant information cited to and relied upon in the GSP denies the AAWARE members a meaningful opportunity to evaluate the potential impacts to their interests from the GSP's incorrect determination of sustainable yield included in the draft GSP during the public comment period. These errors and omissions preclude the GSA from considering the agricultural water users' interests in violation of SGMA. (Wat. Code, § 10723.2.)

O2-5

C. THE BASIN SETTING CONTAINS IMPROPER ANALYSES CONTRARY TO BEST AVAILABLE DATA AND SCIENCE.

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1. The Analysis of How Groundwater Sustainability Will Affect General Plans is Flawed and Improperly Favors Expanding Municipal Use Over Existing Agricultural Use.

SGMA requires that the GSP provide a description of the consideration given to general plans and an assessment of how the GSP may affect those plans. (Wat. Code, § 10727.2(g).) The GSP describes how the current General Plan allows for as many as 11,689 total housing units, which would equate to 5,844.5 AFY for just residential use. (GSP, p. 2-19) Thus, without any subdivision permitting, the residential water use alone would exceed the GSP's "sustainable yield" of 5,700 AFY. The GSP concludes that the existing General Plan land use designations and policies allow for growth and promote agricultural conservation in a manner that may be inconsistent with the sustainability criteria, pumping reduction program and agricultural land fallowing program described in Chapters 3 and 4. (GSP, p. 2-20.) Of course, the GSA needs to consider all beneficial users, and not favor any particular class of beneficial use. (Wat. Code, 10723.2.)

One of AAWARE's concerns is the statement in the GSP that "Supporting continued agricultural operations in Borrego Valley may be inconsistent with the goal of reducing groundwater demand". (GSP, p. 2-22, Table 2.1-6; See also p. 2-23.) The data presented in the GSP indicates that a significant reduction in agricultural water use is needed, and AAWARE's members are already undertaking measures to reduce their water production. However, there is no evidentiary support in the GSP for the conclusion that agricultural operations must be eliminated in order to achieve groundwater sustainability. In fact, the 2015 USGS study concluded that sustainability can be achieved with a 60% reduction in then-current agricultural pumping (13,162 AFY). (See, Exhibit 2, 2015 USGS Model Report, pp. 4, 122, Table 20 (Scenario 6).) (Using the USGS methodology, the required reduction would be slightly higher under the GSP totals of 15,729 AFY total agricultural Baseline Pumping Allocation, and 14,767 AFY total current agricultural production. (See, GSP p. 2-26, Table 2.1-7).)

Because the GSP cites to a "Planning, Permitting and Ordinance Review Technical Report" (referenced at draft GSP p. 4-38), AAWARE requested a copy of that document as necessary to evaluate and comment on the GSP's analysis of how the General Plan's agricultural policies and land use designations would be affected. However, the GSA denied AAWARE's request for a copy of the report. (See, Exhibit 10, March 29, 2019 [email denying AAWARE's request for the report].) **By withholding relevant information relied upon in the GSP about how it would affect the General Plan's agricultural policies and land use designations, the GSA has deprived AAWARE members of a meaningful opportunity to provide input on whether and how the purported General Plan inconsistencies and potential amendments could affect their interests. Additionally, the GSP's General Plan discussion evidences the GSA's intentions to disfavor agricultural uses in implementing the GSP. As a result, the County Board of Supervisors and District Board of Directors (in their role as the GSA) are unable to carry out their obligation to consider the interests of agricultural water users in violation of SGMA. (Wat. Code, § 10723.2.)**

O2-6

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2. The Basin's Groundwater Quality Does Not Violate Sustainability Indicators, and the GSP's Extensive Groundwater Quality Monitoring Does Not Appear to be Warranted.

SGMA authorizes GSAs to adopt programs to avoid undesirable results, not to "optimize" water quality. SGMA only requires water quality monitoring as a component of a GSP "as applicable to the basin." (Wat. Code, § 10727.2(d).) SGMA indicates that water quality monitoring may only be necessary where groundwater quality degradation is created by extraction of groundwater or will affect the supply and beneficial uses of groundwater. (Wat. Code, § 10727.2(d)(2); 23 Cal. Code Regs., § 354.16(d).)

The GSP discussion on groundwater quality concludes: "In general, water quality has historically been good within BWD's wells with TDS at concentrations of less than 500 mg/l." (GSP, p. 2-62.) Wells with nitrate issues are located down gradient from Rams Hill and percolation ponds at the BWD water treatment plant. (GSP, p. 2-63.) There are no discernable trends of water quality degradation of any constituent. (GSP, p. 2-62 to 2-63.) The primary concern is that decreased groundwater levels could induce flow of poor quality water. (GSP, p. 2-63.) That concern can be addressed more appropriately by minimum thresholds for groundwater levels already in place to address chronic lowering of groundwater levels. (23 Cal. Code Regs., § 354.28(d).)

Additionally, the GSP includes incorrect information about exceedances of nitrates. The GSP incorrectly says that "historical exceedances of nitrate concentration have occurred in five wells in the vicinity of Henderson Canyon Road in the northern part of the valley, adjacent to areas of agricultural use"; that one District well in the northern area shows an increasing nitrate trend; and that four wells in the northern area had to be taken out of potable service due to elevated nitrate. (GSP, pp. 2-57, 2-62, 3-12.) In response to AAWARE's question for additional information, the GSA responded that only one of the District's wells (ID4-4) is located in the northern management area and was drilled deeper to avoid nitrate. (See, Exhibit 10, March 29, 2019, email and Attachment A.) Additionally, the December 7, 2018 ENSI report entitled "Water Quality Review and Assessment: BWD Water Supply Wells" (GSP Appendix D2, p. 66) says that nitrate occurs in all of the active BWD wells at varying concentrations **well below the maximum contaminant level ("MCL") for nitrate**. The GSP should be corrected accordingly.

The data simply does not indicate a potential undesirable result supporting the expansive "Water Quality Optimization Program" as part of the GSP. The GSA's $124,000 cost to develop the program elements (not including the implementation costs) should be reviewed through the Technical Advisory Committee process. Without a publicly-available itemization of the GSA's costs, program elements such as the new District well and pipeline referenced in the Water Quality Optimization Program (GSP p. 4-32) give the appearance of being District transmission system upgrades inappropriately subsidized by private well owners who are not connected to the District's system.

O2-7

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The GSP's Water Quality Optimization Program, its potential impacts on the interests of agricultural water users and its costs should be evaluated through the Advisory Committee and Technical Advisory Committee before the GSP is approved.

Also, in addition to noting agricultural amendments and septic systems as potential sources of nitrates in the Basin (GSP pp. 2-56, 2-57, 3-12), the GSP should discuss the District's sewage spreading ponds. (Wat. Code, § 10727.4.) Sewage collected by the District is treated at the Ram's Hill Waste Water Treatment Plant ("WWTP") and then spread to evaporation/percolation ponds. Sludge from the WWTP is discharged to on-site drying beds for stabilization and removed every four to five years for off-site disposal. (See, Exhibit 18 [excerpts from the District's website, October 2007 San Diego County Local Agency Formation Commission Borrego Valley Municipal Service Review & Sphere of Influence Update, and August 2017 Colorado River Basin Regional Board Water Quality Control Plan].) **The GSP's steps to fill data gaps (GSP p. 3-47) should objectively evaluate all potential sources of nitrates in the Basin, not focus on agricultural fertilizer application alone.**

O2-7 Cont.

3. The Dudek Model Update and Water Budget Calculations Are Not Based on Best Available Science and Ignore Information That Contradicts the Pre-Determined Result.

The foundation of the basin setting is a description of groundwater conditions in the basin and a water budget that is based on the best available information and best available science. (23 Cal. Code Regs., § 354.16.) The Dudek Model Update begins with a description of water demand for the last ten years that outflows are 20,000 AFY and inflows are 5,000 AFY. That description is contradicted by the best available science and information set forth in the GSP, as follows:

- Groundwater inflow across the Coyote Creek fault was estimated to be as high as 3,200 AFY based on a scientific electrical resistivity study, but was dismissed because it was based on "limited data" and "inconsistent with the BVHM model assumption" of a no flow boundary. (GSP, p. 2-42) The GSP's stated reasoning for dismissing the scientifically demonstrated inflow and not accounting for any of it is not based in science: "The GSA does not consider this a critical data gap because historical groundwater levels and trends suggest the flux would be into the Subbasin rather than out of the Subbasin." (GSP, p. 2-42.)
- Despite actual testing of return flows from irrigation at 22% and golf course at 14% (GSP, p. 2-46), assumptions are made regarding efficiency and a dry saturated zone (despite years of continual watering) to reduce those amounts in the incorrect 2018 ENSI Report discussed above. (GSP, p. 2-75; and Exhibit 17.)
- A mere six year period was used to "validate" the Dudek Model Update. (GSP, p. 2-72.)
- The Dudek Model Update, using only six years of data, finds only 3,905 AFY of surface recharge to the Basin (GSP, p. 2-73), yet the water budget agrees with the 2015 USGS Report's surface recharge amount of 5,700 AFY rather than the Dudek Model Update amount. (GSP, p. 2-80.) The 2015 USGS Report, based on 70 years of data, is the best available scientific data to use.

O2-8

- The Dudek Model Update confirms natural underflow recharge to the Basin averages 1,400 AFY in addition to the 5,700 AFY surface recharge. (GSP, p. 2-76.) Yet, the GSP throughout claims that only 5,700 AFY is available for natural recharge and incorrectly calculates overdraft and loss in storage based solely on the 5,700 AFY amount. (GSP, pp. ES-3, 2-34, 2-80, Tables 2.2-9A, 2.2-9B; See also, Exhibit 17, p. 7.) The GSP effectively ignores the underflow as part of the "sustainable yield" despite the science substantiating this information. (GSP, p. 2-61.)
- The Dudek Model Update results "underestimate hydraulic heads," which "may be the result of the model simulating too much pumping compared to actual usage, or underestimating storage values like specific yield for the upper aquifer, or underestimating the amount of recharge to the BVGB, or a combination of all three." (GSP, p. 2-79.)

To summarize, the GSP fails to take into account demonstrated Coyote Creek inflow, demonstrated recharge from underflow and demonstrated irrigation return flows. The GSP uses a much different sustainable yield number than from the accepted scientific methods of the USGS Report, with the effect of overestimating overdraft, underestimating sustainable yield and underestimating groundwater in storage. This violates the SGMA requirements for water budgets. (23 Cal. Code Regs., §§ 354.18(b) [estimates based on direct measurements or data], (c)(3) [projected hydrology to utilize 50 years of historical information for estimating future hydrology].)

O2-8 Cont.

The Basin Setting also should include information about the significant amount of groundwater in storage in the Basin. The District previously relied upon that storage as a basis for tempering drought water restrictions and cutbacks. (See, GSP Appendix D2, p. 10; see also, District's report to State Water Resources Control Board at https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/conservation_reporting.html#smallsupplier under January 5, 2016 State Water Resources Control Board Small Supplier Report Dataset, Row 131, Column Q [Basin contains at least a 50 year supply of groundwater in the uppermost of three aquifers].)

D. THE SUSTAINABILITY MEASURES ARE NOT SUPPORTED BY DATA FROM THE BASIN SETTING AND DO NOT CONSIDER BENEFICIAL USES.

1. The Minimum Thresholds are Not Justified by Supporting Information in the Basin Setting and are Without Input and Consideration of Beneficial Interests and Property Owners.

O2-9

Minimum thresholds must be based on supporting information in the basin setting and data and models and must consider the effect on beneficial users and property interests. (23 Cal. Code Regs., § 354.28(b)(1) & (4).)

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For the chronic lowering of groundwater sustainability indicator, the minimum threshold must be a groundwater level based on the historical rate of groundwater decline for projected water use and type. (23 Cal. Code Regs., § 354.28(c)(1).)

For the reduction of groundwater in storage sustainability indicator, the minimum threshold should be the total volume of water that can be withdrawn from the Basin without undesirable results, as supported by the sustainable yield of the Basin, but groundwater levels may be a proxy. (23 Cal. Code Regs., § 354.28(c)(2), (d))

For water quality sustainability indicator, the minimum threshold should be the degradation of water quality, but groundwater levels may be a proxy. (23 Cal. Code Regs., § 354.28(c)(4), (d).)

The GSP selects as the minimum thresholds for all three sustainability indicators: "maintaining groundwater levels above saturated screen intervals for pre-existing municipal wells during an anticipated multi-year drought circumstance". (GSP, p. 3-17; GSP, p. 3-23 ["use of GWEs at the cross section of wells outlined in Table 3-4 and Table 3-5, are also appropriate minimum thresholds for the following sustainability indicators: groundwater storage, groundwater quality degradation, and depletion of interconnected surface waters"].) There is no explanation of how those well levels are based on the historical rate of groundwater decline for projected water use and type. (23 Cal. Code Regs., § 354.28(c)(1).)

Those groundwater levels appear not to be based upon the point at which groundwater decline would halt, but instead are based upon the Dudek Model Update model run of the pre-determined "sustainable yield" of 5,700 AFY which, as previously explained, is not the maximum quantity in which the Basin can be operated given current inflows and operation of the Basin. (GSP, pp. 3-20, 3-21 ["All of the simulations are based on the target pumping rate of 5,700 AFY being achieved in year 20 of GSP implementation"].)

At least one additional model run should be provided to evaluate target pumping at the total natural recharge of 7,100 AFY to determine whether sustainable yield can be reached at or above that level, as indicated by the data in the 2015 USGS Report and Dudek Model Update. (23 Cal. Code Regs., § 354.26(c).) The groundwater levels chosen according to pre-determined "sustainable yield" were made without consideration of whether the overlying agricultural use can sustain the impact of reducing production well below the Basin's natural recharge. (Wat. Code, § 10723.2; 23 Cal. Code Regs., § 354.28(b)(4).)

O2-9 Cont.

2. <u>The GSP Reversed the SGMA Process of Determining Undesirable Results Based Upon Exceedances of Minimum Thresholds and Instead Pre-Determined the Undesirable Results to Back Into Minimum Thresholds Through Modeling of the Incorrect "Sustainable Yield".</u>

O2-10

As minimum thresholds are developed for particular uses and locations, the exceedance of those minimum thresholds in a quantitative manner that causes significant and unreasonable effects in

the Basin (taking into account potential effects on beneficial users and property owners) is what should be determined as the unreasonable result. (23 Cal. Code Regs., § 354.26(b)(2)-(3).)

The GSP carries out this process in reverse. It works backwards to establish what is the "sustainable yield" and then conducts model runs accordingly. (GSP, pp. 3-10 to 3-12.) There is no discussion in the GSP about how the undesirable results were obtained by a quantitative analysis of "minimum threshold exceedances (i.e., groundwater levels) that cause significant and unreasonable effects in the basin." (23 Cal. Code Regs., § 354.26(b)(2).)

O2-10 Cont.

3. The GSP Mischaracterizes and Confuses the Sustainability Goal by Treating the Goal as Sustainable Yield; The GSP Mischaracterizes and Treats Natural Recharge of Surface Water as the "Sustainable Yield".

The sustainability goal refers to the implementation measures targeted to ensure that the Basin is operated within its sustainable yield. (Wat. Code, § 10721(u).) "**SGMA does not incorporate sustainable yield estimates directly into sustainable management criteria. Basinwide pumping within the sustainable yield estimate is neither a measure of, nor proof of, sustainability**. Sustainability under SGMA is only demonstrated by avoiding undesirable results for the six sustainability indicators." (DWR, Draft Sustainable Management Criteria, p. 32 [emphasis added].) "The key to demonstrating a basin is meeting its sustainability goal is by avoiding undesirable results." (DWR, Draft Sustainable Management Criteria, p. 33 [emphasis added].)

In direct contradiction of the DWR guidance and SGMA definition for sustainability goal, the GSP adopts as one of its sustainability goals groundwater use within the sustainable yield. (GSP, p. 3-4.) As explained previously, the GSP errs in treating only natural surface water recharge (5,700 AFY) as the "sustainable yield" without any supporting evidence and despite conceding that the combined natural recharge (including underflow) is 7,100 AFY. **The GSP incorrectly establishes a sustainability goal at far less than the sustainable yield based on an incomplete natural recharge rate that neglects to include 1,400 AFY of underflow into the Basin.**

As discussed above, the GSP's sustainability goal with respect to groundwater quality exceeds the GSA's authority under SGMA by seeking to maintain or improve groundwater quality for transition to future municipal use (GSP, p. 3-4), rather than protect against groundwater quality degradation that impairs water supplies (Wat. Code, § 10721(x)(4)).

O2-11

4. The GSP Measurable Objectives Violate SGMA by Using Different Metrics From Those Used to Define the Minimum Thresholds and by Failing to Provide a Reasonable Margin of Operational Flexibility.

SGMA requires that measurable objectives be based on quantitative value using the **same metrics and monitoring sites** as are used to define the minimum thresholds. (23 Cal. Code Regs., § 354.30(b).) The measurable objectives must provide a reasonable margin of operational

O2-12

flexibility under adverse conditions which take into account historical water budgets, seasonal and long-term trends and periods of drought commensurate with levels of uncertainty. (23 Cal. Code Regs., § 354.30(c).)

The GSP violates SGMA by creating a new measurable objective of production reductions that was not the metric used to define the minimum thresholds and does not use the monitoring sites that are used to measure the minimum thresholds. (GSP, pp. 3-31 to 3-34.) The GSP attempts to justify the different measurable objective by claiming that the linear reduction of production was the input for the Dudek Model Update, as if that linear input somehow defines sustainable yield or somehow displaces the metric of groundwater levels. (GSP, pp. 3-31 to 3-32.)

Far from providing a reasonable margin of operational flexibility, by ratcheting down production to a level significantly below the Basin's natural recharge, the proposed production reductions of 74% of current production will needlessly impair the interests of water users. Production reductions should be triggered by failure to meet groundwater elevation measurable objectives, and unless the GSA demonstrates undesirable results would occur, should have the operational flexibility of the sustainable yield, which the 2015 USGS Report estimated at 7,824 AFY.

O2-12 Cont.

E. THE GSP's PROJECTS AND MANAGEMENT ACTIONS EXCEED SGMA AUTHORITY TO ACHIEVE THE SUSTAINABILITY GOAL FOR THE BASIN.

Project and management actions must achieve the sustainability goals for the Basin. (23 Cal. Code Regs., § 354.44(a).) The GSP must quantify the measurable objectives under the sustainability components that the projects and management actions are expected to meet. (23 Cal. Code Regs., § 354.44(b)(1).)

The GSP must describe the circumstances under which the projects and management actions must be implemented (i.e., the criteria that triggers implementation and termination of the projects and management actions). (23 Cal. Code Regs., § 354.44(b)(1)(A).)

If overdraft conditions exist, the GSP must describe management actions (and quantify the demand reduction they will achieve) to mitigate overdraft. (23 Cal. Code Regs., § 354.44(b)(2).)

O2-13

Because the sustainability goal statement inappropriately uses "sustainable yield" as a sustainability goal, it creates additional confusion when evaluating whether projects and programs will achieve the sustainability measures. The sustainability goal must match the sustainability measures, which for all of the sustainability indicators are groundwater levels. Thus, in order to qualify as GSP projects or management actions, they must achieve quantifiable sustainability objectives. (23 Cal. Code Regs., § 354.44(b)(1).)

Management Action No. 1—Water Trading Program. The high cost of developing the Water Trading Program ($122,000 for "planning level development") is unreasonable in light of the fact that there are only a few dozen non-de minimis well owners in the Basin. **To minimize costs, the Technical Advisory Committee process should be used to solicit bids from**

qualified engineering firms to act as a clearinghouse for willing buyers and sellers before GSP approval.

Management Action No. 2—Water Conservation Program. The GSP's Water Conservation Program would consist of separate components for the agricultural, municipal and recreation sectors. The primary element of the agricultural conservation program will be water audits to be performed by the GSA or third party contractors which may have the following components:

- Pre-audit analysis of historical water use, topography, climate data and land use;
- Analysis of distribution uniformity (amount of water supplied by irrigation system to each plant), crop density and crop types;
- Analysis of irrigation efficiency (amount of water used beneficially by crop compared to total water applied);
- Analysis of soil grain size and texture, agronomic soil suitability including salinity, drainage and water retention properties;
- Analysis of irrigation system water use efficiency, pressure and maintenance;
- Pesticide and fertilizer application and use;
- A report containing recommendations for improving efficiency and crop yield; and
- Follow up analysis of measures implemented actions/practices and savings obtained.

(GSP pp. 4-11 – 4-12.) The estimated agricultural water savings totals 365 AFY. (GSP p. 4-15.) The estimated cost to develop the program is approximately $130,000. (GSP p. 4-19.) **The Agricultural Water Conservation Program should be evaluated through the Technical Advisory Committee process after water meters are installed and the level of agricultural water savings to date is evaluated. The program as described would be highly intrusive and must be voluntary.**

O2-13
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Management Action No. 3—Pumping Reduction Program. The Pumping Reduction Program (GSP pp. 4-20 – 4-24) would require each well owner to incrementally reduce Baseline Pumping Allocations to reach the estimated sustainable yield (currently, 5,700 AFY) by 2040. The GSA will consider the adoption of fees and penalties for violations of pumping allowance and/or reporting during the GSA implementation period. Meters would be installed within 90 days of GSP adoption. The area of irrigated land and crop types should also be directly tracked to monitor program effectiveness. It would cost the GSA $82,000 to develop the Pumping Reduction Program. The Pumping Reduction Program would be implemented once CEQA review of the GSP is completed.

Again, the program amounts to over-regulation. SGMA calls for water users to file an annual statement with the GSA setting forth the total extraction in acre-feet of groundwater during the previous water year. (Wat. Code, § 10725.8(c).) Additionally, AAWARE members who do not already have meters proposed to install their own meters and to have the usage data remotely reported to the GSA. The agricultural well owners are awaiting the GSA's approval of alternative meter technologies and would like to install meters as soon as possible, in advance of GSP approval. (See, Exhibit 15.)

Also, as discussed above, because the Pumping Reduction Program relies upon an incorrect "sustainable yield" that is only the amount of the surface water recharge to the Basin, the program exceeds the GSA's authority under SGMA and interferes with overlying water rights to the sustainable yield. (Wat. Code, §§ 10720.1(b), 10720.5(a)-(b).)

Furthermore, the proposed Pumping Reduction Program describes no criteria that trigger its implementation and termination. (23 Cal. Code Regs., § 354.44(b)(1)(A).) The program must be tied to groundwater level targets, and pumping levels should be set without further reductions once groundwater levels are stabilized. **The Pumping Reduction Program should be developed through the Technical Advisory Committee process before the GSP is approved.**

Finally, while the GSA recognizes that the pumping reduction program is subject to review and approval under the California Environmental Quality Act ("CEQA," GSP, p. 4-20), the GSA prematurely commits to part of the program in advance of CEQA review, in violation of CEQA. (14 Cal. Code Regs., §§ 15004(b)(2)(B), 15352; *Save Tara v. City of West Hollywood* (2008) 45 Cal.4th 116, 130-131.)

Management Action No. 4—Voluntary Fallowing of Agricultural Land. The Voluntary Fallowing of Agricultural Land Program would facilitate the conversion of high water use irrigated agriculture to low water use open space, public land or other development on a voluntary basis. Factors that will be considered for the fallowing program include the current extent of agriculture land and water use, the intended land and water use after fallowing, and the potential environmental impacts associated with fallowing (airborne emissions through wind-blown dust, introduction or spread of invasive plant species, and changes to the landscape that could adversely affect visual quality).

It will cost the GSA $103,000 to develop the fallowing program. Site stabilization is estimated at $1,000-5,000 per acre; passive restoration to habitat is estimated at $10,000-25,000 per acre; active restoration to habitat in a relatively short period of time is estimated at $25,000-50,000 per acre. (GSP pp. 4-24 – 4-29.)

The proposed voluntary fallowing program does not directly achieve groundwater level reduction, and its description does not quantify any measurable groundwater level objective under the sustainability components, therefore it does not qualify as a GSP project or management action. Voluntary fallowing in the statute means voluntary and not coerced to make privately owned land suitable for future uses (GSP, p. 4-26 [contemplated conversion of fallowed land to stormwater runoff infiltration project]). (Wat. Code, §§ 10726.2(c), 10720.1(b), 10720.5(a)(b).) A voluntary fallowing program under SGMA would require funding by the GSA as consideration for fallowing the land and covenanting to have it remain fallow, not a penalty in the form of costs to bring the land up to standards for future benefit of others.

Site stabilization for the purposes of avoiding blight associated with dead agricultural vegetation and to reduce potential air quality impacts from wind-blown dust is a County land use concern, not a function of the GSP. Site stabilization on private land should simply consist of destroying the crop on the fallowed portion (e.g., chipped or burned) and

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Cont.

stabilizing the soil (e.g. mulched with the resulting tree crop clippings or ash). The GSA should not obligate private property owners to carry out habitat restoration without just compensation. Any further consideration of the Voluntary Fallowing of Agricultural Land should be conducted through the Technical Advisory Committee process.

Management Action No. 5—Water Quality Optimization Program. As discussed above, the Water Quality Optimization Program has nothing to do with sustainability measures, but instead seeks to benefit future land uses by "optimizing" water quality, for example, by upgrading the District's transmission system with a new well and pipelines in the Northern Management Area (GSP, p. 4-32) to the detriment of overlying agricultural water user interests. (Wat. Code, §§ 10720.1(b), 10720.5(a)(b), 10723.2.) **The GSP's Water Quality Optimization Program and its costs should be vetted through the Technical Advisory Committee, and its potential impacts on the interests of agricultural water users should be evaluated before the GSP is approved.**

Management Action No. 6—Intra-Subbasin Water Transfers Program. The GSP's Intra-Subbasin Water Transfers Program would convey sub-potable water pumped in one management area to another for sub-potable use. For example, groundwater pumped in the North Management Area, with potentially elevated nitrate levels from irrigation return flow, might be beneficially used to irrigate golf course turf in the Central or South Management Area. If a sizeable area of land were fallowed in the North Management Area, there is the potential to use existing wells to supply water to the Central or South Management Area. It will cost the GSA $90,000 to develop this program. (GSP pp. 4-34 – 4-38.)

The proposed Intra-Subbasin Water Transfers Program is another example of private water users subsidizing programs that benefit others. The cost of any such transfers should instead be borne by those benefitting from the transfer. As discussed above, there is no data evidencing elevated nitrate levels close to MCL. (See, December 7, 2018, ENSI report entitled "Water Quality Review and Assessment: BWD Water Supply Wells" [nitrate levels in all of the active District are **well below the MCL for nitrate**.) **The GSP's proposed Intra-Subbasin Water Transfers Program could impair the interests of agricultural water users and should be evaluated through the Technical Advisory Committee process before GSP approval.**

O2-13 Cont.

F. THE ADMINISTRATIVE AND PROGRAM COSTS FAR EXCEED WHAT IS CONTEMPLATED BY SGMA FOR A SMALL BASIN WITH FEW PUMPERS AND INCLUDE COSTS THAT THE DISTRICT IS RESPONSIBLE FOR.

The GSP estimates 20-year implementation costs of $19.2 million, ***not including:*** $652,000 estimated costs required to ***develop*** (not carry out) the management programs, plus unspecified amounts to pay the District for "internal management and administration" and to reimburse the District "for some of its GSA creation and GSP development related expenses". (GSP, p. 5-8.) The letter from District Director Brecht indicates that the District will seek reimbursement of as much as $6 million. (See, Exhibit 13, April 4, 2019 letter, p. 1, footnote 1.) **The GSP**

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implementation and estimated costs far exceed the ability of the few dozen Borrego Valley well owners to pay.

Of course, it was never the intent of SGMA that the responsibility to pay for public water service provider tasks would be reallocated to private pumpers who are not connected to the water system. It is precisely for those reasons that SGMA expressly places the onus on the public agencies comprising the GSA to meet the costs, and where there are new GSP costs, to fund those costs through pumping assessments. (23 Cal. Code Regs., § 354.6(e).) Many of the District's SGMA-related costs that it seeks to have reimbursed (described in Director Brecht's letter, Exhibit 13) are not properly recoverable under SGMA. (Wat. Code, §§ 10730, 10730.2.) A 2015 memorandum from the District's legal counsel allocates many of those same costs to the District and the County. (See, Exhibit 14, Borrego Water District Board Package October 20, 2015, pp. 5-8.)

The GSP management and administration costs are similarly duplicative of existing District management costs. There is no explanation as to why the District would need to hire two additional full-time engineers when it already has engineering staff. The scope of work required for additional technical staff required to administer the GSP should be developed through the Technical Advisory Committee process to provide input into cost-saving measures. For example, SGMA calls for private well owners to self-report their production to the GSA, so there is no need for the GSA to incur the cost of reading private meters or inspecting private property to confirm acreages and crop types planted. GSA monitoring of groundwater production can be done remotely (see, Exhibit 15, April 26, 2019, Letter to Borrego Valley GSA regarding SWIIM meter systems), and water quality testing and reporting is already undertaken by the District.

SGMA authorizes the GSA to enter into private agreements with private water users to implement the GSP. The Projects and Management Actions shown in Table 5-4 can be met through private agreements with water users.

The infeasibility of the GSP costs is evident when compared with the decision by the GSA members to reject as economically infeasible a $3.4 million water importation project that would bring substantial amounts of supplemental water to the Basin, compared with the $20+ million cost of GSA implementation that would be spread among a few dozen well owners.

The infeasibility of the cost is compounded by the GSP's proposed funding structure (GSP p. 5-10) that would impose:

- Monthly fixed charge based on well meter size (i.e., specific "meter fee" based on meter pipe diameter: 0-2 inches, 2-4 inches, 4-6 inches, 6-8 inches, and more than 8 inches), regardless of water usage; and

- Variable pumping fees based on the volume of groundwater extracted (expected to be up to $50/AF on the initial Baseline Production Allocation) to cover just administrative costs during the first 10 years, not including additional potential fees required for specific projects and management actions to implement the GSP. Because of the steep reduction

O2-14 Cont.

in groundwater pumping required to achieve sustainability, the per acre-foot fee will necessarily increase just as sharply to pay the $20+ million cost.

There is a serious risk that, unless the GSA's costs are checked, the GSP's fixed well meter charges and variable pumping fees will result in the elimination of agricultural land and water use due to inability to pay the needlessly inflated costs.

The method of allocating the GSP costs also was not vetted through the Advisory Committee process and is patently unreasonable for such a small number of water users. In an effort to evaluate the proposal and its potential impacts on beneficial users, AAWARE asked the GSA for a copy of the draft Financing Plan. The GSA rejected AAWARE's request based on the "deliberative process" exemption of the Public Records Act. (See, Exhibit 10, March 29, 2019 email rejecting AAWARE's request.) The GSA's withholding of relevant information prevents a meaningful opportunity for affected private well owners to comment on the GSP's financing plan proposal and evidences the GSA's failure to include AAWARE members and other private water users as part of the deliberative process in violation of SGMA.

Before approving the GSP, it is incumbent upon the GSA to disclose: (1) costs for tasks already covered by the District as the water service provider, and (2) costs beyond the authority of the District and GSA to have reimbursed under SGMA; to deduct those costs from the total; and to coordinate with water users to identify cost-saving measures for the remaining implementing actions. As the 2018 ENSI Report explains, the District is primarily concerned with its ability to produce drinking water and related increase in its water production costs. (Exhibit 17, 2018 ENSI Report, p. 1.) Therefore, the County's active and objective oversight of the administration and program costs is required.

AAWARE asks the GSA to convene the Technical Advisory Committee to provide information on how the funding program affects their interests and recommendations for cost-saving measures to reduce the exorbitant GSP implementation costs.

O2-14 Cont.

III. AAWARE COMMENTS ON BASELINE PUMPING ALLOCATIONS.

Certain individual AAWARE members have confidentially submitted groundwater production information pertaining to their individual properties under separate cover letters. Further adjustments and corrections to their respective Baseline Pumping Allocations should be made in accordance with the information submitted by individual AAWARE members. Additionally, all confidential information reported by private water producers must be kept confidential and not disclosed without the well owner's written consent. (Gov. Code, § 6254; Wat. Code, § 10730.8(b) [personal information submitted under SGMA has the same protection from public disclosure as utility customers, including name, address, telephone number and usage data].)

O2-15

The GSA's Baseline Pumping Allocations are not based on the best available data. According to GSP Appendix F, the GSA calculated agricultural Baseline Pumping Allocations using an Annual Water Use Factor equation. (Appendix F, p. F-3.) AAWARE questions the components of the equation. For example, the equation includes a plant factor determined by the Water Use

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Classification of Landscape Species IV methodology which, as its name discloses, is geared toward ***landscape*** trees rather than commercial agricultural crop-producing trees. (GSP Appendix F, p. F-2, Table F-1.)

Certain AAWARE members with meters have submitted their metered groundwater production data to the GSA in confidence. The metered data provides local water duty information for mixed citrus and for lemon crops. The GSA is using similar maximum annual metered groundwater production data to calculate Baseline Production Allocations for municipal and recreational producers. Direct measurement of groundwater production with flow meters is highly accurate and the preferred method under SGMA. (Wat. Code, § 10725.8(a); DWR Water Budget BMP, p. 35.) Furthermore, the California Constitution (Article X, § 2), California legislative water policy (Wat. Code, § 100.5), and SGMA (Wat. Code, §§ 10720.1(b), 10720.5(a)) all require that local uses and production practices, among other factors, be taken into account in considering the water use by the AAWARE members and other water users.

Certain other AAWARE members without meters have separately submitted additional groundwater production information for their individual operations to the GSA in confidence. **A more accurate measure of maximum annual water production by AAWARE members can be obtained by using water meter readings for AAWARE members who have meters, and by using local crop irrigation information discussed in data provided to the GSA for AAWARE members who do not have meters.**

In some cases, the maximum irrigated agricultural acreage estimated by the GSA as part of the Baseline Production Allocation does not correspond with the actual irrigated crop acreage reported to the GSA by AAWARE members. The GSA's error may be the result of its use of aerial imagery only from the years 2010, 2012 and 2014, excluding two years of the GSA's five-year baseline pumping period of 2010-2015.

Also, the GSA's Baseline Production Allocation calculations do not account for beneficial uses of water by AAWARE members besides irrigation use, such as domestic use, frost protection or supplemental irrigation required due to low soil moisture retention.

Unless a particular Baseline Pumping Allocation is agreed to in writing, each AAWARE member reserves the right to contest its respective Baseline Pumping Allocation. AAWARE respectfully asks the GSA to convene technical meetings among the water producers who will be subject to the GSP and their respective technical consultants to finalize the calculation of the water producers' Baseline Pumping Allocations. This is an important first step toward cooperative basin management, particularly where the GSA's information and proposals differ so significantly from the 2015 USGS model report. (The GSP calls for a mandatory 74% reduction in groundwater pumping based on an incorrectly calculated sustainable yield of 5,700 AFY, while the 2015 USGS report concluded that sustainability can be achieved with a 60% reduction in then-current agricultural pumping (13,162 AFY), and 50% reduction in municipal (1,006 AFY) and recreational (4,113 AFY) pumping to achieve sustainability at total production of 7,824 AFY). (See, GSP p. 4-20, Section 4.4.1; 2015 USGS Report pp. 4 and 122, Table 20 (Scenario 6).) AAWARE also supports the proposal made

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Cont.

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previously by T2 Borrego LLC, for facilitated efforts to mediate the Baseline Pumping Allocation question using a qualified facilitator.

O2-15 Cont.

AAWARE urges the GSA to reopen the comment period on the GSP as necessary to continue constructive dialog to resolve the concerns addressed in this letter and reach a workable solution to the GSP.

Sincerely,

Michele A. Staples

Michele A. Staples

MAS/BLH:dt
Enclosures (see attached Exhibit List)

cc: Jim Seley, AAWARE*
Geoff Poole, Borrego Water District*
Matthew Zimmerman, Department of Water Resources*
Boyd L. Hill, Esq., for AAWARE*

*via email only

EXHIBIT LIST

"Hard copies" of Exhibits delivered with original letter. Electronic copies of Exhibits posted at: https://sharefile.jacksontidus.law/wl/?id=H2lcpnHVFl2x6XJrcHnLpAySefoKnfDt

1. 11/02/18 Joint T2 Borrego/AAWARE Letter to Jim Bennett re Borrego Springs Groundwater Model and Proposal
2. Hydrogeology, Hydrologic Effects of Development, and Simulation of Groundwater Flow in the Borrego Valley, San Diego, California
3. 5/16/19 Wagner & Bonsignore Letter Report
4. Dudek GSP Scope of Work excerpts
5. 4/26/19 Transcript of Technical Meeting
6. 5/17/19 Thomas Harder & Co. Letter Report
7. 11/27/17 Advisory Committee Agenda Excerpts
8. GSA website screen shot
9. Advisory Committee Agenda Reports for GSP Rollout Oct 2018, Nov 2018 and Jan 2019
10. 3/29/19 Email providing some requested technical documents and withholding disclosure of others
11. August and October 2018 Advisory Committee Minutes re technical meeting process
12. 3/22/19 Email exchange to schedule technical meetings during GSP public comment period
13. 4/4/19 BWD Director Brecht Letter re GSP Costs
14. 9/24/15 Downey Brand Memorandum to Borrego Water District Board of Directors re Procedure for Imposition of Regulatory Fees Under SGMA
15. 4/26/19 Letter to Borrego Valley GSA
16. 5/16/19 Calibration Wells Correspondence and Documents
17. 9/12/18 ENSI Report
18. Excerpts re septic systems and District sewage ponds

Letter O2

Commenter: Michele Staples, Jackson Tidus – A Law Corporation, on behalf of the Agricultural Alliance for Water and Resource Education (AAWARE)
Date: May 20, 2019

The Groundwater Sustainability Agency (GSA) recognizes the Agricultural Alliance for Water and Resource Education (AAWARE) sustained participation towards sound groundwater management of the Subbasin and looks forward to constructively working with AAWARE's members to achieve a path toward long-term sustainability of the Subbasin.

O2-1 The U.S. Geological Survey (USGS) specifically states that in Scenario 6, which evaluates target pumping rate of 7,824 acre-feet per year (AFY) cited in the comment, "agricultural, recreational, and municipal pumping continue at rates greater than recharge, drawdown and storage losses continue in the areas where this pumping occurs" and that "in the long run, groundwater levels would continue to decline" (USGS 2015 at page 124).[4] This means that the target pumping rate of 7,824 AFY presented in Scenario 6 is greater than the sustainable yield of the basin, and does not meet the sustainability requirements set forth under the Sustainable Groundwater Management Act (SGMA).

The initial sustainable yield estimate used in the Draft Groundwater Sustainability Plan (GSP) of 5,700 AFY was based on the U.S. Geological Survey (USGS) *pre-development scenario* that estimated natural inflows to the boundary of the Borrego Valley Hydrologic Model (BVHM) for the period 1945 through 2010. The *pre-development scenario* was used as the initial sustainable yield estimate recognizing the adaptive management approach of SGMA and iterative process of updating the sustainable yield estimate at each 5-year check-in period during GSP implementation. Additionally, the USGS referenced approximately 1,400 AFY that enters the basin as underflow from adjacent basins but did not clarify the outflow components used in the pre-development scenario. Since calculations of sustainable yield must include both inflow and outflow components, a water budget from the GSP modeling update is presented to confirm the validity of using 5,700 AFY as the initial sustainable yield. A discussion of historical water budget and sustainable yield is provided below.

[4] It is noted that both the USGS and the model update prepared for the GSP repeat the historical climate for evaluation of future climate scenarios. This assumption presents a "what if" scenario that may not represent actual future conditions in the Subbasin.

The USGS' Groundwater Model is based on an overall long-term water budget consisting of all inflows and outflows that contribute to developing the sustainable yield. Overall, the average annual water budget can be expressed in terms of three inflow values and three outflow values summarized in Table O2-1. It should be noted that several non-substantive edits were made in the Draft GSP and the USGS Model Report to ensure consistent terminology and definitions for each water budget component.

Table O2-1
Summarized Historical Water Budget

Water Budget Components (Units in Acre-Feet per Year)	Original USGS Model (1945-2010)	Model Update (1945-2016)	Most Recent 20 Years (1997-2016)	Most Recent 10 Years (2007-2016)
Inflows				
Stream Recharge	4,028	3,905	2,749	1,865
Unsaturated Zone Recharge [a]	1,486	1,497	1,635	1,505
Underflow (Inflow from Adjacent Basins)	1,367	1,367	1,367	1,367
Total Average Annual Inflows	**6,881**	**6,770**	**5,751**	**4,737**
Outflows				
Pumping	10,128	10,597	16,466	16,856
Evapotranspiration [b]	3,032	2,815	759	498
Underflow (Flow out of Southern End)	522	522	520	523
Total Average Annual Outflow	**13,682**	**13,934**	**17,745**	**17,877**
Average Annual Deficit				
Change in Storage	**-6,801**	**-7,164**	**-11,994**	**-13,140**

Source: USGS 2015, GSP Appendix D1
Notes: USGS = U.S. Geological Survey.

a. Consists of flow from the unsaturated zone into groundwater. Includes direct precipitation recharge (negligible), leakage from some streams within the model domain, and irrigation return flows (Distributed Recharge).

b. Consumptive use of water calculated by the Farm Process Package for all land use type; primarily represents evapotranspiration.

The inflow and outflow terms listed in Table O2-1 are defined as follows:

- *Stream Recharge* is the primary source of groundwater recharge. It comes from surface water that flows into the valley from adjacent watersheds and infiltrates within stream channels.

- *Unsaturated Zone Recharge* is water that infiltrates through soils within the valley and is primarily associated with irrigation return flows. Rainfall within the valley does little to contribute to groundwater recharge.
- *Underflow* is groundwater that enters or leaves the valley aquifer system as subsurface flow at the edges of the groundwater model.
- *Evapotranspiration* refers to water losses from non-irrigated plants. Evapotranspiration has decreased over time because groundwater levels declined many decades ago to a level no longer supporting a viable Honey Mesquite bosque habitat. For instance, evapotranspiration decreased from an average of 3,032 AFY for the period 1945 to 2010 to 498 AFY for the most recent 10-year period (Table O2-1). The 498 AFY includes evapotranspiration from both native and non-native vegetation in the Subbasin, most of which is currently comprised of non-native tamarisk that were traditionally used as wind breaks throughout the Subbasin. Based on GSA mapping, there is estimated to be 211 acres on non-native Tamarisk in the Subbasin, which is thought to use between 359 and 1,361 AFY. Appendix D4 of the GSP has been revised to include this information.

The USGS water budget developed using the BVHM for the years 1945 through 2010 and updated by Dudek for the years 2011 through 2016 indicated that the average total inflow, which includes groundwater subsurface inflow (specified flows), stream leakage, and unsaturated zone recharge (UZF recharge), is 6,900 AFY (rounded) for the period 1945 to 2010 and 6,800 AFY (rounded) for the period 1945 to 2016 (Table O2-1).

The twenty-year and ten-year averages for the most recent periods are 5,800 AF (rounded) and 4,700 AFY (rounded), respectively. These recent periods were comprised mostly of a drier climatic period compared to the longer scenarios beginning in 1945 that included both wet and dry periods. Future recharge from the unsaturated zone is likely to be less than historical estimates because of diminishing irrigation return flows due to pumping rampdown over the GSP implementation period and/or the potential effects of climate change on recharge within the basin.

Historical inflows from 1945 to 2016 were compared to recent (past 10 years) groundwater outflows from the BHVM model update to estimate the initial sustainable yield of the basin. Average inflows from the entire run of the model update provide a reasonable estimate of potential basin inflows because they capture a wide variety of climatic conditions. Outflows from the most recent 10 years were considered to be more representative of potential basin outflows than

the entire historical model period because the loss of native phreatophytes has decreased outflow from evapotranspiration in the basin. Using these assumptions, the surplus of inflows over outflows in the basin is estimated to be approximately 5,750 AF (rounded; Table O2-2).

Table O2-2
Estimated Surplus of Inflows Over Outflows

Water Budget Components (Units in Acre-feet per Year)	Acre-feet/Year
Inflows (Model Update 1945-2016)	
Stream Recharge	3,905
Unsaturated Zone Recharge	1,497
Underflow (Inflow from Adjacent Basins)	1,367
Total Inflows	**6,770**
Outflows Besides Pumping (Most Recent 10 Years, 2007-2016)	
Evapotranspiration	498
Underflow (Flow out of Southern End)	523
Total Outflows	**1,021**
Surplus of Inflows over Outflows	**5,749**

Source: USGS 2015, Dudek 2018, Dudek 2019

The text on page 2-81 of the Draft GSP is incorrect as the total inflow components of the BVHM is not additive to the total. As such, the GSP has been corrected to fix this error and clarify the difference between the estimate of natural inflow under the *pre-development scenario* and the estimate of inflows under the *developed scenario*. It should be emphasized that the historical estimates of recharge do not take into account diminishing irrigation return flows that will occur as result of pumping rampdown over the GSP implementation period or potential effects of climate change.

O2-2 The GSA notes your assertion that the proposed adoption of the Subbasin's planning level estimate of sustainable yield violates common law water rights. Your comment calls for a legal conclusion to which the GSA is not required to respond.

O2-3 The GSA notes your assertion that the GSP fails to consider or even mention private overlying farmers or other private groundwater users in evaluating the sustainable yield of the Subbasin. Your comment calls for a legal conclusion to which the GSA is not required to respond. For responses to comments regarding sustainable yield, please refer to response to Comment O2-1.

O2-4 The GSA notes your dissatisfaction with the GSP preparation process and assertion that the GSA failed to allow full participation to consider all interests in preparing the GSP. For responses to comments regarding sustainable yield, please refer to response to Comment O2-1.

The remainder of the comment apart from the sustainable yield does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

O2-5 The GSA notes your assertion that the manner in which GSP was developed violates your members' constitutionally protected substantive and procedural due rights process and that the Basin Setting contains improper analyses contrary to best available science. Your comment calls for a legal conclusion to which the GSA is not required to respond.

O2-6 The GSA understands your concern that the analysis of how groundwater sustainability will affect the General Plan is flawed and improperly favors expanding municipal use over existing agricultural use. The GSP merely points out that the current General Plan allows for potentially more development at current water use factors than what may be available given supply constraints under sustainability. Historical and current market conditions suggest that new development is unlikely to achieve the growth rate required to substantially expand municipal use in the near-term. Additionally, the GSP points out that the *current* agricultural water use in the Subbasin may not be compatible with the goal of reducing groundwater demand. This statement is not meant to suggest a bias toward favoring expanding development over *current* agricultural water use. GSP Table 2.1-6 has been clarified to indicate that "Supporting continued agricultural operations *at current groundwater extraction rates* may be inconsistent with the goal of reducing groundwater demand." For the comments pertaining to sustainable yield, please see response to Comment O2-1.

O2-7 The GSA notes your assertion that the GSPs extensive water quality monitoring does not appear to be warranted. The GSP states, "historical exceedances of nitrate concentration have occurred in five wells in the vicinity of Henderson Canyon Road in the northern part of the valley, adjacent to areas of agricultural use (USGS 2015)." Table O2-3 lists the five wells and results for which historical nitrate concentrations are reported to exceed the drinking water standard of 10 mg/L as nitrogen (as N); (45 mg/L as NO_3).

Table O2-3
Historical Nitrate Exceedances in the Vicinity of Henderson Canyon Road

No Wells	State Well ID	Sample Date	Latitude[a]	Longitude[a]	Analyte	Result (mg/L)[b]
1	010S006E15D004S	01/04/2012	33°18'34.88"	116°20'59.25"	Dissolved nitrate	37.3 as N
2	010S006E21A001S	08/03/1955	33°18'01.30"	116°21'03.65"	Dissolved nitrate	155
3	010S006E21B001S	04/08/1952	33°18'00"[c]	116°21'10.1"[c]	Dissolved nitrate	29
	010S006E21B001S	01/01/1953	33°18'00"[c]	116°21'10.1"[c]	Dissolved nitrate	90
	010S006E21B001S	4/12/1955	33°18'00"[c]	116°21'10.1"[c]	Dissolved nitrate	66
	010S006E21B001S	05/26/1963	33°18'00"[c]	116°21'10.1"[c]	Dissolved nitrate	87
4	10S0006E21B002S	9/29/1954	33°17'52"[c]	116°21'16.1"[c]	Dissolved nitrate	10
	10S0006E21B002S	10/3/1956	33°17'52"[c]	116°21'16.1"[c]	Dissolved nitrate	44
	10S0006E21B002S	12/31/1975	33°17'52"[c]	116°21'16.1"[c]	Dissolved nitrate	240
	10S0006E21B002S	Date redacted	33°17'52"[c]	116°21'16.1"[c]	Dissolved nitrate	99.2
5	010S006E17J001S	04/28/1952	33°18'16"[c]	116°22'00"[c]	Dissolved nitrate	26[c]

Notes:
[a] Latitude and Longitude NAD83 unless noted otherwise.
[b] Result reported as nitrate as NO_3 unless otherwise noted.
[b] Latitude and Longitude NAD 27
[c] This result appears to be reported as nitrate as NO_3, which would be below the drinking water standard of 45 mg/L as NO_3 (10 mg/L as N). Additional historical water quality data has not been located for this well to verify the exceedance repotted in the USGS study (USGS 2015).
Source: USGS 2015 (Figure 26 on page 66)

The District wells that show statistically increasing nitrate concentrations are wells ID4-11 near the boundary of the Central Management Area (CMA) and North Management Area (NMA), ID4-18 in the NMA, and ID1-8 in the South Management Area (SMA).[5] It is noted that the current concentration in all of these wells is below one-half the drinking water standard for nitrate; however, these wells should be monitored regularly to track nitrate concentrations and trend. The wells that have been taken out of service due to elevated nitrates include Improvement District (ID) Four (4) wells 1 and 4 (original well ID4-4 later re-drilled and screened deeper), Borrego Springs Water Company Well No. 1 (located at the BWD office),

[5] Includes historical water quality data though Fall 2018 and statistical analysis performed using the Mann-Kendall test at significance level of 0.05 or confidence level of 95%.

the Roadrunner Mobile Home Park and Santiago Estates wells. Section 2.2.2.4 of the Draft GSP has been revised to clarify the location of wells taken out of service and the current concentration of wells (at less than one-half the MCL) exhibiting increasing nitrate concentrations.

The GSA notes your concern that the water quality data do not indicate a potential undesirable result supporting the expansive Water Quality Optimization Program as part of the GSP. The GSA also notes your concern that it should objectively evaluate all potential sources of nitrate in the Basin, not just on agricultural fertilizer application alone. The GSA informs you that the District is currently conducting a study of the treated effluent from the Rams Hill Waste Water Treatment Facility to evaluate its impact on groundwater. The goal of the study is to determine the fate and transport of nitrogen and total dissolved solids originating from the discharge of the water treatment facility to the evaporation/percolation ponds, as per the recent amendment of the Waste Discharge Requirements of the California Regional Water Quality Control Board Colorado River Basin Region Plan (R7-2019-0015). The new District well, under construction as of June 2019, is funded by the District and grant funding obtained under Proposition 1. This new well is not being subsidized by private well owners. The GSA notes your position that the Water Quality Optimization Program, its potential impacts on the interests of agricultural water users and its costs should be evaluated through the Advisory Committee and Technical Advisory Committee before the GSP is approved. The GSA emphasizes that cost to develop the Water Quality Optimization Program is a planning level estimate and that program design and development would occur through a stakeholder process, if required.

O2-8 The GSA notes your assertion that "The Dudek model update and water budget calculations are not based on best available science and ignore information that contradicts the pre-determined result." The model update was never intended to be a reworking and recalibration of the USGS numerical model. As such, it was infeasible to try to add additional inflows to the model, as any additional inflows would cause the model to be uncalibrated and a costly and time-consuming recalibration of the model would have to take place with little to no data available to calibrate added inflows (i.e., limited duration of additional years of observed groundwater level data, limited additional production data and no additional physical data to constrain subsurface inflows/outflows at the model boundary).

The six year period for the model update was based on available data at the time of the model update. The original USGS model was run through the year 2010, and the model update was completed in Summer 2017, meaning that the only data

available to update the model was for years 2011 through 2016. The USGS chose not to use a validation period during their initial model run, so the six year validation period was the only period available at the time the update was completed. It should be noted that the model update includes all of the calibrated USGS model, it just appends data from the years 2011 through 2016 to the calibrated USGS model.

The number 3,905 AFY as presented on page 2-73 of the GSP represents only stream leakage in the model, and is not the equivalent of the 5,700 AFY presented in the USGS report. Stream leakage in the initial USGS model run was 3,995 AFY, which is consistent with the average from the model update. As the model update concludes with the drought period of 2011 through 2016, the average stream leakage for the period 1945 through 2016 is slightly lower than the original stream leakage for the period from 1945 through 2010. Again, as noted above, the original period of the USGS model (1945 through 2010) was included in all calculations of average flows for the model update (which includes the years 1945 through 2016).

As another point of clarification, both the original USGS model and the model update start in the year 1929. However, the period from 1929 through 1944 is considered to be a "spin-up" period for the model, and the data for these years is considered less reliable. Therefore, in all calculations made by the USGS in their original report and by Dudek in the model update, data from 1929 through 1944 is excluded.

The 1,400 AFY of underflow from adjacent basins is a number that the USGS calculated as part of model calibration. There are no physical measurements in the area of this inflow to confirm or verify this number. The model update did not attempt to change this number, as this would have changed model conditions such that the model would have become uncalibrated. The model update was not an attempt to recalibrate the USGS model, but rather to update the model with data that had become available since the model was published to extent the period of the model run.

The Basin Setting Section indicates that, "The aquifer holds a large amount of groundwater in storage, estimated to be approximately 1.6-million acre-feet of usable groundwater. However, this amount of remaining storage says nothing about its cost of extraction or potability or available use for irrigation purposes. Section 2.2.2.2 Estimate of Groundwater in storage provides additional information regarding the significant groundwater in storage.

O2-9 The GSA notes your assertion that the minimum thresholds are not justified by supporting information in the Basin Setting and are without input and consideration of beneficial interests and property owners. The GSA points out that the minimum thresholds for chronic lowering of groundwater levels shall be *supported by* historical trends, water year type, projected water use in the basin, and potential effects on other sustainability indicators.

The development of the minimum thresholds for chronic lowering of groundwater levels included review of the hydrogeologic conceptual model, climate, current and historical groundwater conditions including groundwater level trends and groundwater quality, land subsidence data, groundwater-surface water connections and the water budget. The chronic lowering of groundwater levels minimum threshold explicitly takes into account historical loss of groundwater in storage and corresponding decline in groundwater levels.

Development of the minimum threshold includes projected water use in the Subbasin based on annual rampdown in pumping each year from the current estimated pumping to achieve the sustainable pumping target by 2040. The BVHM simulated groundwater levels uses the assumptions that historical climate repeats and projected water use under annual rampdown were implemented to assist with the development of the interim milestones, measurable objective and compared to the chronic lowering of groundwater levels minimum threshold to provide for operational flexibility.

The chronic lowering of groundwater levels minimum threshold takes into account the potential for highly variable future recharge based on the historical record. Rather than simply apply DWR climate change factors to projected groundwater levels based on the above scenario, the GSA developed a minimum threshold based on the potential for a dry climatic period during GSP implementation. As such, the minimum threshold is developed based on the 20th percentile Monte Carlo uncertainty analysis performed to evaluate the effect of time-varying recharge. Under this scenario based on the historical variability in recharge, 80% of the time conditions will be wetter, and 20% of the time conditions will be drier. Development of the chronic lowering of groundwater levels minimum threshold using the Monte Carlo uncertainty analysis provides greater operational flexibility to the Subbasin.

O2-10 The GSA notes your comment that the Draft GSP reversed the SGMA process of determining undesirable results based upon exceedances of minimum thresholds and instead pre-determined the undesirable results to back into minimum thresholds

through modeling of the sustainable yield. The GSA emphasizes that as a critically overdrafted basin, the sustainability goal for groundwater in storage is to "halt the overdraft condition in the Subbasin by bringing the groundwater demand in line with sustainable yield by 2040." Similarly, the sustainability goal for chronic lowering of groundwater levels is, "for groundwater levels to stabilize or improve and to ensure groundwater is maintained at adequate levels for key municipal wells" (Draft GSP page ES-4). That is, it is *significant and unreasonable* for continued chronic lowering of groundwater levels and corresponding reduction of groundwater in storage beyond 2040. Thus, absent undesirable results to the other relevant sustainability indicators, such as water quality, or direct impacts to beneficial users of groundwater absent mitigation, the planning level estimate of sustainable yield may be used to guide development of sustainable management criteria.

O2-11 The GSA notes your assertion that the Draft GSP mischaracterizes and confuses the sustainability goal by treating the goal as sustainable yield; the Draft GSP mischaracterizes and treats natural recharge of surface water as the "sustainable yield. SGMA and the DWR, Draft Sustainable Management Criteria indicate that a GSA may decide what significant and unreasonable conditions are and translate them into quantitative undesirable results.

The sustainability goal for groundwater in storage is to "halt the overdraft condition in the Subbasin by bringing the groundwater demand in line with sustainable yield by 2040." Similarly, the sustainability goal for chronic lowering of groundwater levels is, "for groundwater levels to stabilize or improve and to ensure groundwater is maintained at adequate levels for key municipal wells" (Draft GSP page ES-4). The GSA completed extensive analysis of sustainability indicators and determined that based on best available data, continued extraction of groundwater does not directly affect three of the sustainability indicators: seawater intrusion, land subsidence, and depletions of interconnected surface water.

Additionally, limited data suggests some deterioration of water quality as a result of extraction of groundwater (e.g., increasing arsenic concentration noted in one well in the South Management Area [SMA]); however, available data suggest that existing regulatory standards are sufficiently protective of municipal, domestic, and agricultural (including golf course irrigation) beneficial uses. As such, the primary sustainability indicators that apply to the Subbasin are chronic lowering of groundwater levels and reduction of groundwater in storage. Significant and unreasonable undesirable results for these sustainability indicators could include dry wells, loss in well production yield, and depletion of supply to meet beneficial uses. All of these undesirable results have historically occurred in the Subbasin,

which has necessitated fallowing, drilling deeper wells and shifting the location of groundwater extraction to meet water demands. Groundwater level declines indicating a significant and unreasonable depletion of supply, if continued over the SGMA planning and implementation horizon, can occur in several ways in the Subbasin. Depletions leading to a complete dewatering of the Subbasin's upper aquifer in the Central Management Area (CMA) would be considered significant and unreasonable because beneficial users rely on this aquifer for water supply.

Groundwater level declines would be significant and unreasonable if they are sufficient in magnitude to lower the rate of production of pre-existing groundwater extraction wells below that needed to meet the minimum required to support the overlying beneficial use(s), and that alternative means of obtaining sufficient groundwater resources are not technically or financially feasible. To the extent lowering groundwater levels impact de-minimis pumpers, significant and unreasonable impacts to those pumpers could be avoided. For example, alternative means of obtaining water for de-minimis and domestic pumpers who can no longer pump may include connection to the municipal water system (i.e., BWD), groundwater well maintenance or rehabilitation (e.g., well pump lowering), or for some beneficial users, well redevelopment or deepening. However, use of these alternative means of supply, by themselves, do not necessarily offset undesirable results for lowering groundwater levels in the context of the Subbasin as a whole (as opposed to individual uses or users), because the ultimate source of supply remains groundwater pumped from the Subbasin, even if from another location.

Undertaking an evaluation for one particular use or user depends on the overlying beneficial use(s), the location within the basin, and the characteristics of the well(s) currently in use. Should a groundwater level decline cause the production rate of pre-existing groundwater wells to be insufficient for the applicable beneficial use, an undesirable result may be avoided for that particular user through the alternative means. Certain beneficial users have greater flexibility and financial capacity to address lowering groundwater levels than others. For example, the BWD, as the municipal water system, has the ability to manage production from multiple extraction wells across its service area, normally distributes the cost for well maintenance and development to its pool of customers, and can obtain grants for such work, if available. In contrast, domestic and de-minimis users can have geographic and financial constraints that may make well redevelopment and/or new well construction infeasible.

Given the considerations previously outlined, domestic well users who are not in close proximity to existing BWD water service lines have the greatest sensitivity to

and are consequently the most likely to experience the adverse effects of continued declining groundwater levels. Because many of the domestic groundwater users not connected to BWD rely on continued access to the upper aquifer or upper portions of the middle aquifer, an important objective in this GSP is that access to the upper aquifer or upper middle aquifer be maintained, as much is practicable, in areas with de minimis and other domestic wells not currently served by municipal supply.

Overall, there are 77 domestic wells in DWR's well completion report database. The difference between the average well depth and the average groundwater level is less than 50 feet in seven township and range sections, representing 20 domestic wells, which indicates a high likelihood that some may lack access to adequate water in existing wells. With groundwater levels expected to continue to decline early in the GSP implementation period, domestic users are currently experiencing undesirable results, which will be alleviated by 2040. The majority of the wells in this situation are close to the BWD water distribution system. The undesirable results of chronic lowering of groundwater levels is expected to continue to occur absent management action to counteract the current trend, until the Subbasin water budget is brought into balance.

BWD has had to abandon and re-drill wells in the past and expects to continue to do so within the GSP's implementation timeframe to continue to provide adequate groundwater access. For example, BWD Well ID1-10 is being replaced and relocated in 2019 due to declining groundwater levels and production rate loss. The exact number of agricultural and domestic wells that have been abandoned and re-drilled deeper and/or relocated due to production rate loss from declining groundwater levels is not known. However, anecdotal information and field observations have confirmed that inactive wells exist throughout the Plan Area. In addition to thresholds for BWD key indicator wells, the GSA has set thresholds for key indicator wells throughout the Subbasin which are intended to be protective of beneficial uses and users of groundwater.

O2-12 The GSA notes your assertion that the Draft GSP measurable objectives violate SGMA by using different metrics from those used to define the minimum thresholds and by failing to provide a reasonable margin of operational flexibility. The USGS specifically states that in Scenario 6, which evaluates target pumping rate of 7,824 AFY cited in the comment, "agricultural, recreational, and municipal pumping continue at rates greater than recharge, drawdown and storage losses continue in the areas where this pumping occurs" and that "in the long run, groundwater levels would continue to decline" (USGS 2015 at page 124). Additionally the comment fails to recognize the GSPs adaptive management

strategies including 5-year outlook for proposed pumping reductions and annual review of the pumping allowance in terms of achieving sustainability goals.

O2-13 The GSA notes your comment that the Draft GSP's Projects and Management Actions exceed SGMA authority to achieve the sustainability goal for the basin and your assertion that the sustainability goal statement inappropriately uses "sustainable yield" as a sustainability goal. The primary sustainability indicators that apply to the Subbasin are chronic lowering of groundwater levels and reduction of groundwater in storage that are inextricably linked to balancing the inflows and outflows into the Subbasin over the long-term or the "sustainable yield." The cost of developing a Water Trading Program is an estimate and actual costs could be less considering multiple available water trading accounting options. The GSA further acknowledges your concern regarding the cost, potential overregulation, and/or implementation of the water trading program, water conservation program, pumping reduction program, voluntary fallowing of agricultural land, water quality optimization program, and intra-subbasin water transfers program. The GSA will take these comments into consideration when projects and management actions are developed after GSP adoption in coordination with the Subbasin stakeholders.

O2-14 The GSA notes your comment that the administrative and program costs far exceed what is contemplated by SGMA for a small basin with few pumpers and include costs that the District is responsible for. The GSA will take this comment into consideration when considering imposing fees to fund GSP implementation.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

O2-15 The GSA notes your comments on the Baseline Pumping Allocation and acknowledges receipt of additional comments by pumpers in the Subbasin. The GSA developed Baseline Pumping Allocations based on the best available science and data and has provided each pumper letters with final baseline pumping allocations. For responses to comments regarding sustainable yield, please refer to response to Comment O2-1.

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Comment Letter O3

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Re: T2 Borrego, LLC's Comments Regarding the Draft Groundwater Sustainability Plan for the Borrego Springs Subbasin

Dear Jim:

This letter presents comments on the draft groundwater sustainability plan for the Borrego Springs Subbasin ("Subbasin") on behalf of T2 Borrego LLC and T2 Holding LLC (collectively, "T2 Borrego"). T2 Borrego owns the Rams Hill Golf Club and the surrounding residential development ("Rams Hill"), which wholly overlies the Subbasin. Rams Hill is comprised of approximately 3,200 acres including an award-winning golf course designed by legendary architect Tom Fazio.[1] The golf club employs approximately 38 full time employees and an additional 40 or more seasonal employees annually. The club is open to the public and includes a clubhouse and restaurants. There are 326 existing homes within the development, which are owned by others, and the development has land use entitlements for 1,244 additional residential dwelling units, various resort amenities, and an additional golf course. Entitlements also provided for the public dedication of sites for a water recycling plant, health clinic, and fire station. At its reopening in 2014, Rams Hill acquired and fallowed sufficient agricultural uses to offset water pumped for the golf course, upgraded the irrigation system, landscaped with native plants, and has since added a 1MW solar array to provide a renewable energy source to support its operation.

Representatives of T2 Borrego have attended numerous meetings and conference calls over the course of several years in support of efforts to achieve compliance with the Sustainable Groundwater Management Act ("SGMA") and to resolve groundwater challenges within the Subbasin. T2 Borrego remains optimistic that a compromise can be reached to implement

[1] Bradley S. Klein, *Golfweek* Senior Writer, opined that "Our course-ratings panel has taken a shine to Rams Hill. It already sits at No. 34 on *Golfweek's* Best Resort Courses list in the U.S., and trails only Pebble Beach Golf Links and Spyglass Hill among resort courses in California."

O'Melveny

sustainable management of the Subbasin in a consensus-based fashion. To that effect, there are several aspects of the GSP that will need to be addressed by the groundwater sustainability agency ("GSA"), as discussed herein.

Overarching Comments

1. Sustainable-Yield and Rampdown

As you are aware, the hydrologeologic experts representing T2 Borrego (Aquilogic, Inc.) and AAWARE (Wagner & Bonsignore, CCE) have reviewed the technical work performed by the GSA's consultant, Dudek, in support of the Sustainability Criteria set forth in Chapter 3. They are concerned that Dudek's estimate of the Subbasin's sustainable yield (5,700 acre-feet per year) is inaccurate and too conservative because Dudek failed to consider substantial data gaps or revise the earlier USGS model despite USGS's explicit acknowledgment of such data gaps and recommendations for refinements, and because the 5,700 AFY estimate does not include significant contributions to the replenishment of the Subbasin.[2] (See comment letter from Aquilogic, Inc. attached hereto as Exhibit A). We are concerned that the sustainable yield estimate is inaccurately low, and thus the projected requisite long-term rampdown in BPA is too great.

However, T2 Borrego would support adopting the 5,700 AFY safe-yield estimate as a starting point for the GSP if the GSP also established a collaborative process to assess and resolve the technical uncertainties over time. As we have discussed, we recommend the formation of a technical advisory committee ("TAC") to foster such adaptive management. The TAC should include diverse technical representation from interested stakeholders, which should be charged with addressing the proposed task list set forth in the attached letter from Aquilogic, Inc. With such a process, the stakeholders could put aside their disagreements over the adequacy of the present technical findings, commence with rampdown to set the valley on a path to groundwater sustainability, improve technical understandings of the Subbasin over time in a collaborative manner, and recalibrate safe-yield estimates and rampdown projections, if appropriate, as better technical information is obtained.

To avoid a contest at this stage concerning the safe-yield estimate and attendant rampdown, the GSP should be modified to expressly provide for the creation of the TAC and to set forth the recommended initial work plan for technical undertakings during the first five years of the GSP's operation.

O3-1

2. BPA

Unless a comprise is reached concerning the Baseline Pumping Allocation ("BPA") established for each pumper within the Subbasin and the other material provisions for Subbasin

O3-2

[2] "The 5,700 AFY safe-yield estimate failed to include an annual average of 1,400 AFY of underflow from adjacent watersheds, which the GSP acknowledges is replenishing the Subbasin, but not included within the 5,700 AFY safe-yield estimate." (GSP p. 2-81.)

2

management, T2 Borrego objects to: (i) the quantity of BPA proposed to be granted to Rams Hill, specifically; and (ii) the method applied to calculate BPA throughout the Subbasin, generally. These objections are based on legal, factual, and equitable grounds.

By letters to the County of San Diego, care of Jim Bennett, dated August 13, 2018, October 18, 2018, and February 8, 2019, we explained that the BPA proposed to be allocated to Rams Hill was inappropriately understated because of the GSA's failure to consider numerous factors including significant weather differences between Rams Hill and the weather station data used by the GSA to calculate evapotranspiration (ETo at Rams Hill is approximately 31% higher than at CIMIS Station 207), salt leaching requirements, historical demand, assumption of HOA irrigated acreage, voluntary conservation, and disparate and unjustified differences in the crop factors used to calculate evapotranspiration between agricultural crops and turf. Please refer to these letters for additional details concerning T2 Borrego's objections concerning the BPA calculation for Rams Hill, which are attached hereto as Exhibit B.

T2 Borrego further objects to the method applied throughout the Subbasin to determine BPA in that the methodology is inconsistent with common law water right priorities for several reasons. First, the GSP allocates BPA to the BWD based on its highest historical use of groundwater during the five-year base period from January 1, 2010 through January 1, 2015. There are multiple infirmities with the BWD allocation. These include: (i) BWD is an appropriator, which under the common law, is junior in priority to overlying landowners unless prescriptive rights have been proven, which have not been proven in the Subbasin;[3] (ii) if prescriptive rights were proven, the amount of prescriptive right that may be established by the BWD would be limited by the overlying rights retained by landowners as a result of "self-help" pumping;[4] (iii) the maximum prescriptive right that could be established by the BWD would be the maximum continuous quantity of extraction during the prescriptive base period (i.e., the lowest annual pumping during any of the five years during the prescriptive period, not the highest);[5] (iv) the GSP does not include a recordation of the BWD's pumping in each of the years within the five-year prescriptive period (it should); and (v) during the prescriptive period, the BWD was delivering a large quantity of groundwater to Rams Hill for golf course irrigation, which demand is now the responsibility of Rams Hill and must now be satisfied exclusively from T2 Borrego's Rams Hill BPA (the BWD should not receive BPA as a result of these deliveries).

Second, the BPA allocated among landowners also does not follow the common law. Allocations among overlyers are not exclusively determined based upon historical use, highest or otherwise, but rather are based upon various considerations oriented toward reasonableness and equity.[6] The GSP's approach of simply calculating each landowner's five-year, maximum

O3-2 Cont.

[3] *City of Barstow v. Mojave Water Agency* (2000) 23 Cal. 4th 1224, 1241.
[4] *See City of Santa Maria v. Adam* (2012) 211 Cal.App.4th 266, 279.
[5] *Id* at 291; *California Water Service Co. v. Edward Sidebotham & Son* (1964) 224 Cal.App.2d 715, 726 (prescriptive rights must be established in relation to the highest *continuous annual production* of water from the basin during a period of five successive years)
[6] *See Tehachapi-Cummings County Water District v. Armstrong* (1975) 49 Cal.App.3d 99249 Cal.App.3d at 1001-1002; see also *Prather v. Hoberg* (1944) 24 Cal.2d 549, 560 (discussing

historical use, while refusing to consider reasonable and equitable factors, like those raised in the aforementioned letters submitted to you from T2 Borrego, fundamentally conflicts with these common law principles.

Finally, the GSP does not disclose the BPA proposed to be allocated to individual users. Instead, it just lists the gross BPA allocated among six categories of users (agriculture, municipal, water credits, domestic users, and de minimis users) at Table 2.1-7. The lack of disclosure of individual BPA renders it impossible for any individual user to determine whether the BPA granted to others is fair or accurate (even assuming arguendo that the five-year maximum pumping approach was appropriate). This concern is further amplified by the fact that half of the GSA is constituted by the BWD, which is a competitive water user and recipient of BPA. Thus, as a matter of equity and transparency, a chart of each user's BPA, including the type of use and magnitude of use (e.g., quantity of irrigated acres) should be included in the GSP.

In addition to the legal infirmities respecting the methods used to calculate BPA, the GSA has not afforded adequate stakeholder input concerning the BPA calculation method. While there was some discussion at the Advisory Committee concerning the base period to be used and whether to apply an average or highest annual use during the base period, the GSA refused to consider other methodologies, such as conformance to common law water right priorities. Instead, the method for calculating BPA was chosen by the GSA, largely without informed stakeholder input or pumper consensus. This decision therefore failed to conform to SGMA's requirement that the GSA consider the interests of all beneficial users of groundwater, including holders of overlying groundwater rights.[7]

Notwithstanding T2 Borrego's concerns regarding the calculation of BPA, T2 Borrego may be willing to accept the proposed BPA calculation methodology and the individual grants of BPA if a comprehensive agreement can be reached concerning a complete management plan for the Subbasin. We anticipate that such agreement would take the form of a stipulated judgment, of which a modified version of the GSP would be attached or otherwise incorporated therein. However, in the event a comprehensive agreement among the stakeholders cannot be reached, T2 Borrego raises these concerns to avoid any premise that T2 Borrego has waived these objections.

O3-2 Cont.

3. Conversion of Water Credits to BPA

In addition to the BPA calculation concerns noted in the preceding section, T2 Borrego joins other holders of water credits in urging the GSA to modify the GSP to explicitly provide for (a) the conversion of water credits to BPA using the same consumptive use factors applied to

O3-3

division of supply among riparian rights (analogous to overlying rights), citing Wiel on Water Rights (3d ed.) p. 820, § 751").

[7] Water Code § 10723.2; see also Senate Bill 1168, § 1(b)(4) (declaring the legislature's intent in adopting SGMA "[t]o respect overlying and other proprietary rights to groundwater").

calculate BPA for agricultural acreage during the baseline period, and (b) the issuance of BPA to water credit holders at the same time that BPAs are issued for all pumpers in the Basin.

Although the Sustainable Groundwater Management Act provides that it is not intended to alter groundwater rights, nor is an allocation issued pursuant to a GSP to be deemed a determination of water rights,[8] the proposed management actions concerning BPA (i.e., Pumping Reduction Program) (PMA No. 3 in the GSP) and the Water Trading Program (PMA No. 1 in the GSP) will effectively determine and control all opportunities afforded by a water right. This includes the amount of groundwater that may be pumped, the cost of pumping, how and when groundwater rights may be transferred, etc. Thus, to remain equitable, lawful, and immune from successful legal challenge, BPA *must* be granted to water credit holders on the same terms (consumptive use factors) established to set BPA for existing irrigators and issued at the same time as all BPAs. Doing so will treat all similar pumpers equally and will avoid disadvantaging land owners who voluntarily reduced water usage early in an effort to help the Basin.

Conversion of water credits to BPA will also streamline management of the Basin by applying a single "currency" of water rights. For example, the BWD could develop a policy that requires a dedication to the BWD of BPA in exchange for extension of service for new developments (or an equivalent payment in lieu of BPA dedication). This would thereby avoid applying two BWD programs--one for water credit holders and one for BPA holders--that may result in disparate and unfair treatment of those pumpers that voluntarily worked with the BWD to advance water management in comparison to those that have not.[9] Without such conversion, other pumpers who are granted BPA would be afforded greater water use opportunities and advantages, including opportunities to accrue carryover, lease of allocation, and transfer and use of allocation to support groundwater production on different parcels, as compared to similarly-situated pumpers that were granted water credits. Such disparate treatment would render the BPAs and Pumping Reduction Program ripe for legal challenge pursuant to a groundwater basin adjudication[10] or other litigation.

This concern can be readily remedied by modifying the GSP to provide for the conversion of water credits to BPA for all water credit holders pursuant to the same consumptive use factors set forth in Appendix F, the elimination of the existing water credits program, and the issuance of such BPA when all BPAs are issued. The GSP could explain that the BWD would soon develop a new dedication program for extension of new water service based exclusively on BPA.

O3-3 Cont.

[8] See Water Code sections 10720.5(b)), 10726.4(a)(2), and 10726.8(b).

[9] The BPA calculation methodology set forth in Appendix F would result in a grant of more BPA per acre than has been granted in water credits for the same crop grown with the same method of irrigation and during the same time period. Thus, to deny a conversion of water credits to BPA at the same consumptive use factors would result in disparate treatment unless the BWD were to maintain two dedication programs with different dedication ratios respective of BPA and water credits, which would be unnecessarily complex.

[10] See Code of Civil Procedure sections 830 et seq.

Water credits are not presently included in the total calculation of BPA. (Table 2.1.7, f.n. f.) Thus, when water credits are converted to BPA applying the same consumptive use factors applied to calculate BPA for agricultural acreage during the baseline period, the total BPA will increase by roughly 2,124 AFY (based on a conversion quantification presented by the County) to a total BPA of approximately 24,087 AFY. This would therefore increase the projected rampdown, based on a safe yield estimate of 5,700 AFY, from the present estimate of 74 percent (see GSP, page ES-4) to about 76.4 percent. If BPA remains as calculated in Table 2.1-7 (e.g., pursuant to a comprehensive agreement - see discussion above), the total BPA and the projected rampdown will need to be updated where stated throughout the GSP.

O3-3 Cont.

Pursuant to such changes to the GSP and a new BWD dedication program, we agree that the water credits-to-BPA conversion satisfies all obligations of the BWD pursuant to the water credits program such that the BWD would not bear any potential liability for breach of contract, or otherwise, relating to the water credits program.

Specific Comments

The specific comments set forth below are organized in relation to each section of the GSP. Unless otherwise noted, underlined text is requested to be added and strike-through text is to be deleted.

1. Title of GSP

The GSP is titled "Groundwater Sustainability Plan for the Borrego Valley Groundwater Basin." The GSP, however, is only a plan for the Borrego Springs Subbasin of the broader Borrego Valley Groundwater Basin. SGMA defines the basin, for which a GSP is to be prepared, as "a groundwater basin or subbasin identified in Bulletin 118…" The area for which the GSA has elected to undertake GSA responsibilities is only the Subbasin (DWR, Bulletin 118 Basin No. 7.024.01), and accordingly, the title of the GSP should be revised to the "Groundwater Sustainability Plan for the Borrego Springs Groundwater Basin."

O3-4

2. Executive Summary

A. The GSP provides at page ES-2 and ES-3 that "[i]n the Subbasin, the most critical aspect of water quality is ensuring that available supplies at municipal well sites are and remain in compliance with drinking water standards. Groundwater quality provided by BWD water supply wells is currently good and meets California drinking water maximum contaminant levels without treatment. Arsenic concentrations were increasing in multiple BWD water supply wells until 2014, but have since decreased."

The SGMA regulations do provide that in setting minimum thresholds for degraded water quality, the GSA shall consider local, state, and federal water quality standards. However, the GSP should also acknowledge that in balancing beneficial uses and interests in the Subbasin, some future impairment of water quality may occur and that treatment or other mediation may be required, particularly in relation to naturally occurring contaminants within the Subbasin.

O3-5

B. At page ES-3 edit the following paragraph as follows: "Total dissolved solids and sulfate are presently the only water quality constituents that show increasing concentrations with simultaneous declines in groundwater levels. Overall, the long standing overdraft has resulted in changes of water quality in the Subbasin over time. High salinity, poor quality connate water is thought to occur in deeper formational materials in select areas of the aquifer as well as shallow groundwater in the vicinity of the Borrego Sink in the southern portion of the Subbasin. The BWD does not operate wells in the vicinity of the Borrego Sink. The GSA monitors water quality from a groundwater quality network consisting of 30 wells."

O3-6

C. At page ES-4 edit the following statement as follows: "The primary management tool to eliminate the overdraft is to require aggressive pumping cut-backs to a level that does not exceed the Subbasin's estimated sustainable yield of 5,700 AFY before 2040." This edit will render the statement consistent with the text on page ES-5, which states "That [baseline pumping] allocation [under PMA No. 3] will be reduced incrementally as necessary over the GSP implementation period such that the total extraction from the Subbasin will be *equal to* the estimated sustainable yield (5,700 AFY) by 2040." (emphasis added)

O3-7

3. Chapter 2

A. At page 2-4, the text states that there are 2,624 acres of irrigated agriculture and 600 acres of fallowed acreage. The text also suggests that the SANGIS 2017 calculation incorporates these 600 fallowed acres within the total agriculture figure of 2,624 acres. However, Table 2.1.3 states that there was 3,474 acres of agricultural land as of 2015. It appears that either the text or table is incorrect, or if not, this apparent discrepancy should be clarified.

O3-8

B. At page 2-15, the text states that "[t]he County is also currently conducting compliance and enforcement evaluations related to the credits issued by the BWD program. At a later date, existing water credits associated with the WCP may be converted to a Baseline Pumping Allocation using the groundwater consumptive use factors developed by the GSA, as further discussed in Section 4.4, Pumping Reduction Program."

We are unsure what is meant by the County is "conducting compliance and enforcement evaluations related to the credits issued by the BWD program," and request that this statement be clarified. Also, as discussed above, the WCP should be converted to BPA based on the same BPA calculation formula as other agriculture at the time the GSP is adopted and the BPA granted in lieu of water credits at the same time as other BPA is granted. The GSP should clarify that this will occur. Table 2.1.7 and its footnotes on pages 2-26 through 2-17 should likewise be amended consistent with the conversion of water credits to BPA.

O3-9

C. At page 2-8, edit the following text as follows: "[O]ther than agriculture, recreation, and tourism, there is no major industry or source of high-quality employment

O3-10

within the Plan Area likely due to its remote location." While the drafters may be lumping recreation into tourism, that is unclear from the language here and the context provided otherwise in this report. The recreation sector employs more people than the agriculture sector and is a significant employer in Borrego Springs. Rams Hill alone employs approximately 80 full-time equivalent employees on a year-round or seasonal basis.

O3-10 Cont.

D. Table 2.2 – 1 lists CIMIS Station 207 as active only until 2015. Our understanding is that CIMIS station 207 is still in use. Please clarify.

O3-11

E. At Table 2.2 – 4 and elsewhere in the GSP, change references to ID1-1 and ID1-2 to RH-1 and RH-2, respectively, to avoid confusion because these wells were sold to Rams Hill in 2014 and are no longer owned or operated by the BWD. Also, on page 2-58 there is an inappropriate concern raised by the statement: "Wells exhibiting an increasing trend [in TDS] include BWD ID1-1 and ID1-8 in the SMA." BWD does not own or operate ID1-1 and it is not a municipal supply well for which higher TDS would compromise municipal water supplies. A similar clarification is needed for the statement on page 2-59, which states: "The only well exhibiting an increasing trend [in arsenic] is BWD Well ID1-2 in the SMA." BWD does not own or operate ID1-2 and it is not a municipal supply well for which higher arsenic would compromise municipal water supplies.

O3-12

F. At page 2-63, the reference to the Rams Hill/BWD Long-Term Cooperation Agreement should be deleted because it has since been amended, and it is outside the scope of the GSP to discuss private agreements between the BWD and developers. Further, the GSP will require groundwater quality monitoring throughout the basin so this information is not helpful or insightful to readers.

O3-13

4. Chapter 3

T2 Borrego's comments respective of Chapter 3 are set forth in the technical comment letter from Aquilogic, Inc. attached hereto as Exhibit A.

O3-14

5. Chapter 4

A. At page 4-4, the GSP states: "The water trade review process by the GSA is intended to be structured to prevent unintended consequences, such as hoarding, collusion, or speculation. For example, to prevent hoarding, the GSA could cap the number of 'water shares' held by an individual at a maximum percentage of total shares." T2 Borrego is highly concerned with such restrictions on water transfers and the review process, and it particularly objects to the notion of limiting transfers on the basis of hoarding or speculation. A cap on the amount of allocation that may be transferred does not further any principle of sustainable groundwater management set forth in SGMA and could prevent legitimate water planning for significant and economically beneficial projects, like Rams Hill. Such limitations could also chill the benefits that may be achieved from the transfer program including the reallocation of limited water supplies from lower to higher valued uses and incentives for water users to conserve water in

O3-15

8

support of transfers. Our concerns are further amplified by the fact that half of the GSA is constituted by the BWD, which is a competitive water user, and thus there is potential for restrictions to be placed on the transfer program under a veiled intent to benefit the BWD at the expense of other water users in the Subbasin. Indeed, the only appropriate restrictions on the transfer program are those necessary to avoid adverse impacts to hydrogeologic conditions in the Subbasin that would cause or exacerbate undesirable results. The text on page 4-4 should be revised accordingly and should also explicitly provide for engagement by private pumpers in the development of the program and an opportunity for robust public review and comment on the proposed program before adoption by the GSA.

O3-15 Cont.

B. At page 4-6, the GSP states that "an area of origin pumping requirement (i.e., North Management Area) may be required for trades. PMA No. 6 -- Intra-Subbasin Transfers is being evaluated to address and optimize the distribution of pumping in the Subbasin as a result of implementation of the PMAs." Consistent with the comment immediately above, this text should be revised to explain that any restrictions on transfers will be designed for the sole purpose of avoiding adverse impacts to hydrogeologic conditions that would cause or exacerbate undesirable results.

O3-16

C. With respect to the Water Conservation Program (PMA No. 2), T2 Borrego notes that if a robust water trading program is implemented (PMA No. 1), private holders of BPA will be incentivized to conserve and to make investments in conservation to either preserve their economic enterprise supported by the BPA (which will become increasingly more difficult as rampdown occurs), avoid the costs of purchasing BPA from others, or render BPA available for transfer as either permanent sale or lease in exchange for payment. In other words, the market economics inherent in the transfer program will cause private users to make conservation efforts that are economically justified. The text describing PMA No. 2 should recognize this natural economic principle. The elaborate scope and costs of the management action are also not justified for the same reason (the market will appropriately incentivize conservation) and because conservation measures internal to BWD customers should be funded by BWD (with grant funding if available), not other groundwater users.

O3-17

D. With respect to the Pumping Reduction Program (PMA No. 3), T2 Borrego urges the GSA to modify the underlying accounting principles and terminology used. Rather than providing that each pumper will possess a "share" of the estimated sustainable yield (page 4-19), the program should be founded in BPA and an annual authorized "Pumping Percentage," that being the percent of each party's BPA that is authorized to be extracted in any particular year. Through this approach, the "currency" that controls pumping and that is transferable is BPA, which in any particular year authorizes a given quantity of production. That quantity will be driven by the Pumping Percentage then in effect, and the Pumping Percentage may be adjusted up or down as necessary consistent with improved understandings of the Subbasin, progress in meeting sustainability goals, and other aspects of adaptive management. By contrast, the establishment of a "share" of the estimated sustainable yield in addition to BPA would be

O3-18

an unnecessary and confusing additional denomination of pumping right which will result in increased costs for basin management in the future.

O3-18 Cont.

E. With respect to the Voluntary Fallowing of Agricultural Land (PMA No. 4), T2 Borrego notes that the fallowing program does not further any principle of sustainable groundwater management set forth in SGMA. T2 Borrego also requests specific clarification of the fallowing requirement and scope of authority that it intended to be vested in the GSA. The text on page 4-25 suggests that the GSA may require different degrees (and expense) of fallowing based on intended post-fallowing land use. For example, the text states that "there could be differing levels of site stabilization or restoration needed or required *based on the land use intended post- fallowing*. . . A passive restoration approach *may be applied* if the goal is for the property to eventually return to native habitat, and active restoration *may be applied* for relatively near-term restoration to native habitat with *the goal of providing open space, parks, or public trails*." (emphasis added)

All similarly-situated land owners must be treated the same, and different levels of fallowing or site stabilization for properties with the same historical use are inappropriate, as this would favor certain properties or property-owners above others, which is inequitable. Fallowing standards must be consistent and equally applied to all properties There is no circumstance where it would be appropriate to *require* some fallowing participants to engage in significant and expensive active restoration to establish open space, parks, or public trails where others are not required to achieve such result. Stated differently, the fallowing program should not be used by the GSA to achieve desired end land uses at the expense of, and without the consensual agreement of and compensation to, the landowner. Rather, the fallowing program should be designed to avoid significant adverse environmental impacts (e.g., significant and unreasonable fugitive dust and visual blight) in a manner that is as inexpensive and unobtrusive as possible. Additionally, the GSA should recognize that some of its desired goals are already regulated, for example by the County's well destruction policy. Anything further may be unlawful (particularly if there is disparate treatment of similarly situated landowners); counter to the policy of using a water transfer market to achieve groundwater sustainability in the valley in a manner that is least economically disruptive; and would increase costs to all pumpers in the Subbasin through costs incurred defending legal challenges . The text at pages 4-25, 4-28, and elsewhere should be modified accordingly.

O3-19

F. Clarification is also needed concerning the scope of costs, and responsibility for payment of costs, related to the fallowing program. At page 4-28, the text states that "[p]otential sources of funding for the Voluntary Fallowing of Agriculture Program components include state grants, pumping fees, water rates, parcel taxes, and other mechanisms as described in Section 5.1.7, Funding Sources." The following paragraph states that the ongoing program costs "are related to the conformance inspections, economic value of fallowed land, the cost for site stabilization, and restoration. Additionally, wells that will no longer be used will have costs to be properly destroyed."

O3-20

The only program costs that are appropriate to be borne by the GSA (i.e., funded by groundwater users at large) are the cost of developing the standards and ensuring compliance with the standards. There is no legitimate purpose for the GSA to fund economic valuations of fallowed land, or the costs of site stabilization, restoration, or well destruction. These costs should be borne exclusively by the owner of the land and seller of BPA made available on the basis of agricultural fallowing. The text at page 4-28 should be modified accordingly. O3-20 Cont.

G. At page 4-29, concerning Water Quality Optimization, the opening paragraph of this section should be revised as follows: "For irrigation wells, water quality should generally be suitable for agriculture and recreation uses." O3-21

H. At page 4-30 please clarify that the BWD is not currently required to treat water from any of its wells as follows: "In general, the groundwater quality in the Subbasin is good and meets California drinking water maximum contaminant levels without the need for treatment and the BWD is not currently required to treat water from any of its wells." O3-22

I. At page 4-31, the text should be clarified to explain that mitigation actions may not be the responsibility of the GSA (i.e., pumpers at large) to fund. If treatment (direct or indirect) is required, the costs of such treatment should be borne by the impacted party unless the degraded water quality is a direct result of Subbasin management decisions made with the intention to mitigate a water quality effect from such management decision. As the GSP acknowledges, much of the potential water quality concerns in the Subbasin are naturally occurring. Like in other areas of the state, the cost of making use of water with such naturally occurring contaminants must be borne by the individual user. O3-23

J. At p. 4-35, the GSP explains that the wells in different management areas have different end uses. Given that recreation is a significant pumper in the CMA (for example, Borrego Springs Resort is located in the CMA), the language should be modified to state, "…whereas wells in the Central Management Area (CMA) primarily serve recreational and municipal uses…" O3-24

6. Chapter 5

A. T2 Borrego is alarmed by the high costs of implementing the GSP that are projected in Chapter 5. There is insufficient information disclosed in support of these high projections. Although the scope of the tasks listed in Table 5-1 as Operating and Monitoring Costs are generally described in Section 5.1.1.1, there is no information presented regarding how the figures in Table 5-1 were generated (e.g., hours required, percentage of full time employee, consultant budget estimates etc.) The GSP should set forth such detailed information and estimates. Similarly, Section 5.1.2. 2 does not provide any detail regarding (i) the scope of work that would be required for two full time employees, (ii) why $120,000 per full time employee per year is an accurate estimate, (iii) how the line items in Table 5-2 for Management, Administration, and Other Costs O3-25

were generated, and (iv) if any of these estimated costs would also include later work once the PMAs are developed and in place. The GSP should set forth such detailed information and estimates.

O3-25 Cont.

B. The same is true for Table 5-3 (GSP 5-Year Update Costs) and Table 5-4 (Projects and Management Actions Development Costs). Each line item is just a figure set forth without any further discussion or support. The GSP should set forth such detailed information and estimates.

O3-26

C. It is also not clear why there is additional, but uncalculated, costs for "internal management and administration" by BWD projected (page 5-9) when the GSA is intending to hire two full time employees. The roles and responsibilities between the GSA's full time employees and the BWD's internal management and administration should be calculated and the expense estimated.

O3-27

D. Beyond the costs of GSP implementation ($19.2 million for the 20-year period and the $652,000 of Projects and Management Actions Development Costs), the GSP states at page 5-9 that the BWD intends to request reimbursement for GSA creation and GSP development related expenses. Water Code section 10730 authorizes the imposition of regulatory fees for GSP development and Water Code Section 10730.2 authorizes the adoption of an extraction fee for plan implementation. However, it is not clear that a plan implementation extraction fee, adopted pursuant to section 10730.2, may be used to retroactively reimburse a single member of a GSA for previously-incurred expenses. Further, before any reimbursement is made, there would need to be a detailed accounting and review by all stakeholders to determine the legitimacy and fairness of the requested reimbursement (e.g., to determine that the BWD is not seeking reimbursement for expenses that they would have been incurred regardless of GSP development or expenses that are oriented toward the protection of the BWD's interests and favor rather than basin-wide benefit). Additionally, the GSP acknowledges that grants from DWR have funded the majority of the GSP costs to date. Thus, an accounting and review process is also necessary to ensure that the BWD does not request reimbursement for a cost already funded/reimbursed through grant funding. Presently, there is absolutely no detail concerning the expenses for which the BWD intends to request reimbursement. The GSP should provide that a detailed accounting and review process will be afforded before any reimbursement is made.

O3-28

E. The GSP provides at pages 5-9 through 5-10 that the GSA intends to apply extraction charges, including monthly fixed charges and variable pumping fees, as well as assessment/parcel taxes and grants, to fund GSP implementation. As the GSP recognizes, Propositions 218 and 26 apply to these fees and assessments. Proposition 218 (Article XIII D) provides at section 6, subdivision (b) that the amount of a property-related fee charged to any individual parcel cannot exceed the proportional cost of providing service to that parcel. The GSP should expressly provide that the amount of extraction charge borne by any particular pumper shall be proportional to the cost of providing the GSP benefits respective of the individual pumper. This is particularly important in light of the GSA's intent to apply monthly fixed charges by well meter size,

O3-29

O'Melveny

which may run afoul of Proposition 218's proportionality requirement. Additionally, since well meters were sized by private pumpers before the potentiality of GSP extraction fees, a monthly fixed meter charge is an inappropriate and arbitrary way to charge GSP fees as there is not a clear nexus between fees and benefits. The suggestion of a monthly fee has also not been vetted publicly before release of the draft GSP. T2 Borrego requests that the GSP be modified to either remove reference to fixed meter charges, or modified to include an explanation of the relationship and nexus between fees and benefits, along with a process that involves the pumpers in development of necessary fees.

O3-29 Cont.

F. With respect to the costs of groundwater level monitoring discussed at page 5-4, the costs for field monitoring of groundwater levels may be reduced by automated reporting of water levels from transducers through telemetrically delivered readings. The GSP should provide that the potential for such cost savings will be evaluated.

O3-30

Thank you for the opportunity to comment on the draft GSP.

Sincerely,

Russell McGlothlin

Enclosures:
Exhibit A: Comment Letter from Aquilogic, Inc.
Exhibit B: Letters to County of San Diego re Rams Hill BPA

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EXHIBIT A

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May 21, 2019

Mr. Jim Bennett
County of San Diego Planning & Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123

sent via email to:
PDS.LUEGGroundWater@sdcounty.ca.gov

Subject: Draft Groundwater Sustainability Plan for the Borrego Valley Groundwater Basin, Dated March 2019

Dear Mr. Bennett:

This letter provides technical comments pertaining to the above referenced Draft Groundwater Sustainability Plan (GSP), which is prepared on behalf of T2 Borrego LLC and T2 Holding LLC (collectively, T2 Borrego), owners of the Rams Hill Golf Club, by **aquilogic, Inc**. (**aquilogic**). To facilitate the County of San Diego's (County) review and response, we have divided these comments into two categories: General Comments and Specific Comments. Comments provided herein apply to the Draft GSP at large (i.e., text, figures, tables, and appendices). Without these requested changes we believe the GSP is deficient and inaccurate.

General Comments

1. Technical Advisory Committee: Over the past year, we have appreciated the opportunity to work with your consultant, Dudek, and other technical consultants to stakeholders in the Borrego Springs Groundwater Subbasin (Subbasin) to support the development of a GSP consistent with the requirements of by the Sustainable Groundwater Management Act (SGMA). In particular, the technical meetings requested by T2 Borrego and other stakeholders have facilitated a better understanding of groundwater conditions in the Subbasin, and how groundwater sustainability could be achieved in the future. To that end, we recommend that a Technical Advisory Committee (TAC) be established in the GSP and convened to move forward as a Project Management Action (PMA). The GSP would establish that the TAC would meet regularly to assist and advise the Groundwater Sustainability Agency (GSA), County, or other future responsible agency, on technical issues related to the sustainable management of groundwater resources of Subbasin. The TAC would address technical issues in all three currently identified individual management areas (North [NMA], Central [CMA], and South [SMA]). The responsibilities of the TAC would include, but not be limited to, the following:
   - Use best available science and engineering, considering all relevant data, in its technical deliberations and recommendations;

O3-14a

- Assess and update the water budget and sustainable yield for the Subbasin at least every five (5) years during the first 20-year GSP implementation period;
- Evaluate the potential for Undesirable Results, as defined SGMA, and whether they are significant and unreasonable;
- Analyze whether the minimum thresholds and measurable objectives can be met and are sufficient to prevent Undesirable Results;
- Assess and recommend any additional actions to avoid Undesirable Results;
- Evaluate the effectiveness of management actions and projects defined in the final GSP and, where necessary, make recommendations to revise or supplement the actions and/or projects.

We request that you make this update to the GSP in order to ensure participation and review by technical experts to the stakeholders. Please also note that this letter includes additional items for review by the TAC in later comments.

O3-14a Cont.

2. Low Sustainable Yield: As you are aware, the hydrogeologic experts representing T2 Borrego (**aquilogic**) and AAWARE (Wagner & Bonsignore and Tom Harder Company et al.) have previously provided technical concerns to the GSA's consultant (Dudek) related to the accuracy of the key hydrogeologic components utilized in the GSP as it pertains to the USGS numerical groundwater model. Chief among these is the preliminary estimate of 5,700 AFY for the sustainable yield (SY) for the Subbasin. Estimates of baseline SY prepared independently by ourselves and separately by Wagner & Bonsignore, are on the order of 7,100 AFY, or approximately 20% higher than the current conservative figure of 5,700 AFY being used for planning by the GSA during the initial 5-year reassessment period. This artificial and arbitrarily low value for SY appears to be the result of Dudek and the GSA inexplicably omitting 1,400 AFY of subsurface inflow from adjacent mountain fronts and watersheds. Indeed, Dudek states in the GSP that; "*The average annual natural recharge of water reaching the saturated zone, which includes stream leakage and infiltrating water through the unsaturated zone, was 5,700 AFY for the full model simulation period from 1929 to 2010 (USGS, 2015). In addition to natural recharge from stream leakage and infiltrating water (mostly from irrigation return flows), the Subbasin received underflow originating from adjacent watersheds at an average annual rate of 1,400 AFY. Therefore, the combined average annual natural recharge to the BVGB is approximately 7,100AFY...* " (Chapter 2, section 2.2.3.6, page 2- 80). Based on these facts, we are concerned that the current estimate of SY is inaccurately low, and thus the projected requisite long-term demand reduction (pumping) rampdown is also unnecessarily conservative (i.e. too high). We therefore request that the preliminary SY be corrected to 7,100 AFY and that the proposed rampdown percentages and schedule be revised accordingly, along with all other related information and data presented in the GSP.

O3-14b

3. USGS Model Inaccuracies: The USGS recognized the inherent inaccuracy and uncertainty in their numerical groundwater model which was used by the GSA as the hydrogeologic foundation for the Subbasin and by Dudek to prepare the Borrego Valley Hydrogeologic Model (BVHM). At the September 2018 technical meeting with **aquilogic** and Wagner & Bonsignore, Dudek characterized current USGS model uncertainty at approximately 20%. On page 115 of the attached United States Geological Survey (USGS) Scientific Investigation Report 2015-5150 (USGS 2015 [Exhibit A]), the USGS experts state; *"In summary, some potential components that could improve the accuracy and reduce uncertainty of the simulation could include, but are not limited to the following:*
   - Improved temporal estimates of land use,
   - Improved estimation and application of crop and irrigation properties,
   - Improved mapping of density, temporal distribution, and areal extent of natural vegetation, particularly phreatophytes,
   - Improved estimates of ungauged steam inflows through linkage to a daily precipitation-runoff model that simulates routed stream flow,
   - Improved estimates of hydraulic properties through field tests,
   - Improved texture estimates at depth,
   - Improved simulation of multi-aquifer wells to account for well pumping capacities,
   - Improved simulation of wet-year winter runoff within the FMP, and
   - Inclusion of antecedent soil moisture in the FMP".

   The nine items listed above by the USGS for improved model accuracy track closely with the data gaps we have recommended for closure during the first 5-year reassessment period and must be identified in the GSP and reevaluated immediately. (These specific items are detailed in Specific Comments # 2 and 3, below.) These important data gaps must be closed or the model will continue to perpetuate inaccurate simulations, which has significant management impacts for property owners and pumpers in the Borrego Springs Valley. We are therefore requesting the GSP be revised to list and acknowledge the nine USGS items and that there is inherent inaccuracy and uncertainty in the current USGS model that will be redressed during the first 5-year reassessment period.

O3-14c

4. USGS Model Preliminary: Given the inherent inaccuracy and uncertainty in the current USGS numerical flow model that was utilized as the foundation for the hydrogeologic findings and recommendations in the GSP, it is especially important to clarify in the GSP text that the model is preliminary and that findings and conclusions derived by Dudek from use of the incomplete model, such as the value for SY, are also preliminary and subject to change. We therefore request that Chapter 2 and Chapter 3 be clarified by the addition of introductory text to each Chapter that expressly states that the numerical model, and by extension the information pertaining to the occurrence and condition of groundwater in the Subbasin, is preliminary and will be revised as new data becomes available. For example, references to the BVHM in Chapter 2 and elsewhere in the GSP should be revised to expressly state the

O3-14d

data is preliminary and subject to refinement, and that the BVHM and USGS model will be revisited and updated at a minimum every 5 years. These same corrections for clarity in the GSP text should also be made as needed in Chapter 3, especially in all those sections (for example section 3.3.2.6) that discuss the proposed Minimum Thresholds (MTs) and Measurable Objectives (MOs) related to groundwater elevations in wells. It is important to make these changes now so it is evident to all stakeholders that the data is preliminary and is subject to reexamination and change.

O3-14d Cont.

5. Majority of Groundwater is for Non-potable Use: State law requires that water delivered to customers for potable use must meet certain standards. The text in Section 2.2.4 of the GSP currently compares raw ground water quality to treated (potable) water standards, without explicitly explaining that a majority of the groundwater in the Subbasin is used for recreational and agricultural irrigation (i.e., non-potable use) that does not have to meet potable standards. Please further clarify that groundwater provided by the Borrego Water District (BWD) for municipal use must, and currently does, meet Title 22 Drinking Water Standards in order to be served to the public, as required by the State Water Resources Control Board's (SWRCB) Division of Drinking Water (DDW). In addition, please clarify that meeting established safe concentrations for the constituents of concern (COCs) in drinking water is the responsibility of the BWD, and that treatment of groundwater is a standard procedure for a majority of municipal drinking water systems in the State, and therefore it is not appropriate for funding by the GSA. Hydrogeologic data from all the Subbasin management areas (NMA, CMA, and SMA) are needed to fully characterize groundwater conditions and potential implications, if any, for sustainable management of the Subbasin in the future. Water from lower layers of the aquifer is not necessarily poorer quality water than that from higher layers of the aquifer, and the GSP needs to clearly state this and remove contradictory conclusions based on preliminary information. Additionally, the text in this section (2.2.2.4) needs to be updated to match data provided in Table 2.2-6 on p. 2-63, the majority of which shows no trend in constitutes of concern many of which are naturally occurring.

O3-14e

6. Water Quality is Good: Section 2.2.4 of the GSP shows that water quality is good, even without treatment, but the text in this section doesn't match the tables presented. Out of the 15 entries in Table 2.2-6, 11 wells are identified as having no trend, and only five are identified as showing a "trend". Of these five, two are noted as having a decreasing trend. Most notably one entry in the NMA for Nitrate that is currently listed as "Increasing" appears to be actually decreasing (or no trend) based on the data presented in the table. In the SMA, sulfate and TDS are listed as increasing, but both constituents are below their respective MCLs. Based on this data the paragraph below the table which discusses potential future water quality impacts seems highly speculative without additional data. Indeed in the next following paragraph titled "Data Gaps" the GSP states that; "*The lateral*

O3-14f

distribution of the wells in the monitoring network that measure groundwater quality is limited and does not extend to the outer portions of each management area". The subject paragraph goes on to state there are deficiencies in monitoring data in the SMA and elsewhere in the Subbasin primarily caused by high variability in the data and concludes with this statement:" *Based on the inconsistent analytical suites between wells and monitoring periods, this variability represents a significant data gap."* Given the uncertainty related to data availability and data quality we request that the GSP remove speculative statements about poor or decreasing water quality and increasing trends of constituents of concern until representative data has been collected and analyzed. Additionally, we request that the subject table be corrected as noted.

O3-14f Cont.

7. Well Ownership: There are places in the text, for example page 2-59, that erroneously credit ownership of T2 BORREGO-owned wells ID1-1 and ID1-2 to ownership by the BWD. Please correct all such references. Further, any implication that water quality from these wells affects drinking water is also incorrect and requires revision.

O3-14g

Specific Comments

1. Section 2.2, page 2-35, Table 2.2-1, CIMIS Station 207 is listed as "Active" in this table, but the "Period of Record" is presented as 2008-2015. Please check the status of the Period of Record in the subject table (i.e., 2008-present?) and revise, as needed.

O3-14h

2. Section 2.2.3.4, page 2-80 states, "*As **future funding allows*** (emphasis added), *the GSA intends to conduct aquifer tests at wells screened **only in the upper aquifer and only in the middle aquifer*** (emphasis added) *to obtain site-specific estimates of hydraulic conductivity and specific yield for each aquifer unit. This information **may be** (emphasis added) used to enhance the calibration of the model to these hydraulic properties and our understanding of storage in the BVGB (Subbasin).*" This work, along with the items listed in #3 below and the nine items recommended by the USGS to further reduce the inaccuracies in the numerical model, should be done immediately and be prioritized for funding and collection during the first 5-year reassessment period. The data should be incorporated in the existing numerical groundwater model. The attached United States Geological Survey (USGS) Scientific Investigation Report 2015-5150 states, "*Specific yield typically is orders of magnitude larger than specific storage and is volumetrically the dominant storage parameter in the valley*" (USGS, 2015, p. 86). As such, it is one of the most sensitive components of the current Subbasin numerical model and critical to a more representative water budget. We request that all qualifiers in the GSP pertaining to the timing, and collection of these data be removed. Data from all three aquifer layers and management areas (NMA, CMA, and SMA), not just the upper and middle, are needed to close these important data gaps and obtain a complete picture of the Subbasin's hydrology and a more useful and accurate numerical

O3-14i

groundwater model. We therefore request that the GSP's current text be revised accordingly and these additional tasks completed.

O3-14i Cont.

3. In addition to collection of representative specific yield estimates for use in the numerical groundwater model for the three aquifer layers identified in the Subbasin, we also recommend that the text in Section 2.2.3.4 be modified to identify and prioritize the subject hydrologic data for funding and collection during the first 5-year reassessment period as follows, which should be reviewed by the TAC:
   - Specific yield estimates for the three aquifer layers identified in the existing USGS model;
   - Collection of data and more detailed analysis of mountain front underflow in the Subbasin at large;
   - Collection of additional depth-related water quality data, for improved Mann-Kendall Trend analysis;
   - Water optimization measures for further study;
   - Agricultural and recreational return flows;
   - Completion of a detailed feasibility and cost/benefit analysis for intra-management area water transfers;
   - Based on the new data, an analysis of projected changes in groundwater storage over time when 2030 climate change predictions are included, and
   - Any other matters approved by the pumpers, including but not limited to; items required to comply with SGMA, meet the objectives of the County General Plan Update, and matters listed in Section 5 of the Rampdown Provisions

   These data and improvements are all necessary to reduce current inherent inaccuracies and data gaps in the USGS numerical model in order to help refine the hydrogeologic components used to estimate the Subbasin water budget and its various components. These components include, but are not limited to, the SY for the Subbasin, the GSP Minimum Thresholds (MTs) and Measurable Objectives (MOs) related to groundwater, and by extension, the proposed rampdown schedule over the long-term. In the most-recent technical meeting [on May 10, 2019], all experts, including Dudek, concurred with the importance of conducting this additional analysis and evaluation during the first five-year assessment period. The GSP should be modified to include this language.

O3-14j

4. Section 3.3.1.4, Table 3-6 on page 3-24 identifies the proposed rampdown schedule and percentages for demand reduction (i.e., pumping reduction) in the Subbasin for each of the 5-year reassessment periods though 2040. Yet, in Section 4.4, PROJECTS AND MANAGEMENT ACTION NO. 3 – PUMPING REDUCTION PROGRAM, there is no mention of the rampdown percentages provided in Table 3-6. We request that the text in Section 4.4 be revised to incorporate this important information pertaining to the proposed rampdown schedule and percentages utilizing a SY of 7,100AFY. Further, we request clarification to the

O3-14k

GSP text that to the extent that in the future if the SY or other Subbasin hydrogeologic components are revised consistent with the TAC analysis, the rampdown percentages and schedule will be revised accordingly. O3-14k Cont.

5. Please clarify if the groundwater well level MTs described in Tables 3-4 and 3-5, pages 3- 19 and 3-22 are based on data derived from the BVHM, and are therefore preliminary and subject to change. Please also add text to state that the identified "key wells" could be added or replaced for the purpose of MT compliance monitoring by the TAC as new data becomes available. The GSP appears to be using the top of the well screen interval as the MT for groundwater levels. Several BWD wells on the subject table have an "N/A" entered in the column titled "Minimum Threshold/Top of Well Screen (feet:bgs)", yet in the adjacent column the well screen intervals are actually listed. Please clarify and revise the MT column and the column titled "Existing Minimum Threshold Exceedance "as needed. These changes are necessary based on previously expressed concerns about the inaccuracy of the Subbasin SY (which is the basis of MTs and MOs for rampdown and sustainability over the GSP implementation period), all of which has significant impacts on pumpers and must be based on the best available science. O3-14l

6. In Chapter 3, Table 3-4, page 3-19, please add a column titled "Surface Elevation" and provide the relevant topographic surface data for each well on the table. O3-14m

7. In Chapter 3, Table 3-5, page 3-22, please remake this table to resemble Table 3-4 (i.e. all the same columns and data), including surface elevation. Without this information it is difficult to understand the proposed preliminary MTs for the individual management areas. Further supporting data is needed to verify the appropriateness of the proposed MTs for the various individual management areas and the SMA in particular. O3-14n

8. Chapter 5, PLAN IMPLEMENTATION, Revise as needed, Tables 5-1 through 5-5 to reflect the inclusion and funding (costs) for conducting the collection and analysis of the data described in this comment letter during the first 5-year reassessment period. Please clearly identify which tasks are related to the initial and later 5-year reassessment periods, and which tasks are ongoing annually (e.g., is model updated annually or on a 5-year reassessment schedule). We request that the groundwater numerical model be updated a minimum of every 5 years. O3-14o

9. Chapter 5, page 5-4, with respect to the costs of groundwater elevation monitoring, the costs for field monitoring of groundwater levels may be reduced by automated reporting of levels from transducers through telemetrically delivered readings. The GSP should provide that the potential for such savings will be evaluated. O3-14p

aquilogic

re: Comments to Draft GSP for the Borrego Valley Groundwater Subbasin, dated March 2019

The T2 Borrego team appreciates the opportunity to provide these comments to the Draft GSP. We also look forward to working cooperatively with all the key stakeholders and agencies to adaptively manage groundwater in the Subbasin to achieve sustainability of this vital resource. We respectfully request that the above-listed corrections and text revisions be made before the GSP is finalized and that the identified data gaps are addressed either immediately or by the TAC during the first 5-year reassessment period. Please do not hesitate to contact the undersigned should you have any questions regarding the comments provided herein.

Regards
aquilogic, Inc.

Thomas Watson, PG
Principal Geologist
tom.watson@aquilogic.com

Enclosure: USGS Scientific Investigation Report 2015-5150

cc: Cathy Milkey, Rams Hill Golf Course
Shannon Smith, Rams Hill Golf Course
Russ McGlothlin, O'Melveny & Meyers
Anthony Brown, **aquilogic, Inc.**

8

Letter O3

Commenter: Russel McGlothlin, O'Melveny & Myers LLC, on behalf of T2 Borrego LLC and T2 Holding LLC (T2 Borrego, or Rams Hill)
Date: May 21, 2019

O3-1 The Groundwater Sustainability Agency (GSA) welcomes the T2 Borrego LLC's comments on the Draft Groundwater Sustainability Plan (GSP) and sustained participation in development of the GSP. The GSA notes your concern that the sustainable yield estimate is "inaccurate and too conservative" and " thus the projected requisite long-term rampdown in BPA [Baseline Pumping Allocation] is too great." The GSA also notes that T2 could support adopting the 5,700 AFY planning level sustainable yield estimate if a technical advisory committee is formed to foster adaptive management to assess and resolve technical uncertainties. The GSA will take this comment into consideration as it develops governance for implementation of the GSP.

O3-2 The GSA acknowledges your objection to the quantity of BPA proposed to be granted to Rams Hill and method used to determine BPA throughout the Subbasin. The commenter is referred to the Master Response on the BPA. The GSA also acknowledges your willingness to accept the BPA through an agreement in the form of a stipulated judgment.

O3-3 The GSA acknowledges your request to include conversion of water credits to BPA using the same methodology used to calculate BPA for agricultural acreage during the baseline period and issuance of BPA to water credit holders at the same time as BPAs are issued for all pumpers in the Basin. The GSA also acknowledges that the total BPA and the projected rampdown would need to be updated should water credits be converted to BPA.

O3-4 The GSA will change the title of the GSP to the "Groundwater Sustainability Plan for the Borrego Springs Groundwater Subbasin."

O3-5 The GSP states,

> Degraded water quality is significant and unreasonable if the magnitude of degradation at pre-existing groundwater wells precludes the use of groundwater for existing beneficial use(s), including through migration of contaminant plumes that impair water supplies, where alternative means of treating or otherwise obtaining sufficient alternative groundwater resources are not

technically or financially feasible. At a minimum, for municipal and domestic wells, water quality must meet potable drinking water standards specified in Title 22 of the CCR. For irrigation wells, water quality should generally be suitable for agriculture use. The Basin Plan has not established numerical objectives for groundwater quality in the Plan Area but recognizes that in most cases irrigation return flows return to the aquifer with an increase in mineral concentrations such as TDS and nitrate (Colorado River RWQCB 2017). The Basin Plan objective is to minimize quantities of contaminants reaching the aquifer by establishing stormwater and irrigation/fertilizer use best management practices (Draft GSP Section 3.2.5; page 3-13).

O3-6 The GSA has made an edit to page ES-3 of the Draft GSP to state, "[t]he BWD does not operate wells in the vicinity of the Borrego Sink."

O3-7 The GSA has made an edit to page ES-4 of the Draft GSP.

O3-8 The GSA has verified the estimate of irrigated acreage and fallowed land stated at page 2-4 and Table 2.1.3 as being correct. The acreage provided in Table 2.1-3 is for 2015 and from San Diego Association of Governments' (SANDAG's) database, whereas the acreage determined by the GSA's own mapping is for 2018, as stated in the Draft GSP. The 2018 estimate of 2,624 acres should be considered the most accurate estimate for current conditions.

O3-9 The GSA has made the requested edit to page 2-15 of the Draft GSP. Again, the GSA, recognizes your request to convert water credits to BPA**.**

O3-10 The GSA has made the requested edit to page 2-8 of the Draft GSP. The GSA also acknowledges that the recreation sector provides employment in the community**.**

O3-11 The CIMIS Station remains active. The GSP has been revised to indicate as such.

O3-12 References in the GSP to ID1-1 and ID1-2 have been changed to reference new well names. While these wells are non-potable wells and not subject to drinking water standards, increasing trends for water quality constituents are important to track Subbasin-wide. The GSA will consider adding a clarifying statement that the wells are non-potable and the current concentrations do not limit beneficial use for irrigation.

O3-13 The GSA has edited the GSP to remove reference to the Rams Hill/BWD Long-Term Cooperation Agreement.

O3-14a The GSA notes your recommendation that a Technical Advisory Committee be established in the GSP and convened to move forward as a Project Management Action and meet regularly to assist and advise the GSA on technical issues related to the sustainable management of groundwater resources of Subbasin.

O3-14b The GSA acknowledges your comment pertaining to the preliminary estimate of sustainable yield. The commenter is referred to the Master Response on sustainable yield and to response on Comment O2-1.

O3-14c The GSA notes your comment pertaining to model uncertainty. The GSA clarifies that Dudek represented informally the uncertainty with the sustainable yield estimate may be around +/-20% 5,700 AFY but did not formally document uncertainty of the USGS model by this comment. The GSA acknowledges the USGS's summary of ways to reduce uncertainty in the model. In fact, the GSA presented model uncertainty to the public at the October 26, 2017, Advisory Committee Meeting and discusses model uncertainty in Draft GSP Section 2.2.3.4, Discussion of Model Validation, Uncertainties, and Recommendations for Improvement. The GSA acknowledges the nine items you list from the USGS report and will consider prioritization of the items that could improve the accuracy and reduce uncertainty of the model.

O3-14d The GSA acknowledges your comment that the Draft GSP should be clarified to indicate that the model is preliminary and that findings and conclusions derived from the model, such as the value for specific yield, are also preliminary and subject to change. The GSA also notes your request that Chapter 2 and Chapter 3 be clarified by the addition of introductory text to each Chapter that expressly states that the numerical model, and by extension the information pertaining to the occurrence and condition of groundwater in the Subbasin, is preliminary and will be revised as new data becomes available. You request to expressly state the data is preliminary and subject to refinement, and that the BVHM will be revisited and updated at a minimum every 5 years. You ask for these same corrections for clarity in the GSP text should also be made as needed in Chapter 3, especially in all those sections (for example Section 3.3.2.6) that discuss the proposed Minimum Thresholds (MTs) and Measurable Objectives (MOs) related to groundwater elevations in wells. The GSA has reviewed your request and incorporated changes to the text where appropriate.

O3-14e The GSA acknowledges your comment that the Draft GSP does not explicitly explain that a majority of the groundwater in the Subbasin is used for recreational and agricultural irrigation (i.e., non-potable use) that does not have to meet potable

standards in the text of Section [2.2.4] of the Draft GSP. The GSA points out this specific comment is addressed in the minimum threshold for degraded water quality. The GSA notes that

> Degraded water quality in the Subbasin, as discussed in Section 3.2.4, Degraded Water Quality – Undesirable Results, is significant and unreasonable if it is sufficient in magnitude to affect use of preexisting groundwater wells such that the water quality precludes the use of groundwater to support the overlying beneficial use(s), and that alternative means of obtaining sufficient groundwater resources are not technically or financially feasible. For municipal and domestic wells, this means water quality that meets potable drinking water standards specified in Title 22 of the CCR. For irrigation wells, water quality should generally be suitable for agriculture [and recreational] use. As indicated in the Basin Plan, irrigation return flows and septic recharge returns to the aquifer with an increase in mineral concentrations such as TDS and nitrate. (Draft GSP page 3-29)

The GSA has added a sentence to further clarify that most groundwater pumped in the Subbasin is used for non-potable purposes.

We also note your comment requesting clarification that, ". . . meeting established safe concentrations for the constituents of concern (COCs) in drinking water is the responsibility of the BWD, and that treatment of groundwater is a standard procedure for a majority of municipal drinking water systems in the State, and therefore it is not appropriate for funding by the GSA." The GSA notes your comment that "Water from lower layers of the aquifer is not necessarily poorer quality water than that from higher layers of the aquifer, and the GSP needs to clearly state this and remove contradictory conclusions based on preliminary information." You also indicate that the text in Section 2.2.2.4 Groundwater Quality needs to be updated to match Table 2.2-6, Management Area Background Water Quality. The GSA reviewed the text and clarified as necessary the analysis used to provide the narrative in the text.

O3-14f The GSA notes your requested revisions to clarify trends of constituents of concern and revisions to Table 2.2-6. The GSA also notes your request to remove speculative statements about poor or decreasing water quality and increasing trends of constituents of concern until representative data has been collected and analyzed.

O3-14g The GSA notes your comment regarding well ownership of Rams Hill wells and implications toward water quality. The GSA has corrected references to ownership of Well ID1-1 (RH-1) and ID1-2 (RH-2). While the GSA acknowledges that these wells are currently used for irrigation and that they are not required to meet potable water quality standards, increasing trends in wells do have potential implications to beneficial use for surrounding users such as for District wells or domestic wells.

O3-14h The CIMIS Station remains active. The period of record in Table 2.2-1 has been revised to indicate as such.

O3-14i The GSA notes your comment pertaining to prioritizing filling data gaps to incorporate in to the BVHM. Specifically you request aquifer testing of the upper, middle and lower aquifers, and the nine items recommended by the USGS to further reduce the potential inaccuracies in the numerical model, should be done immediately and be prioritized for funding and collection during the first 5-year reassessment period.

O3-14j The GSA notes your request that that the text in Section 2.2.3.4 be modified to identify and prioritize the subject hydrologic data for funding and collection during the first 5-year reassessment period, including: (1) specific yield estimates for the three aquifer layers identified in the existing USGS model; (2) collection of data and more detailed analysis of mountain front underflow in the Subbasin at large; (3) collection of additional depth-related water quality data, for improved Mann-Kendall Trend analysis; (4) water optimization measures for further study; (5) agricultural and recreational return flows; (6) completion of a detailed feasibility and cost/benefit analysis for intra-management area water transfers; (7) based on the new data, an analysis of projected changes in groundwater storage over time when 2030 climate change predictions are included; and (8) Any other matters approved by the pumpers, including but not limited to; items required to comply with SGMA, meet the objectives of the County General Plan Update, and matters listed in Section 5 of the Rampdown Provisions.

The GSA notes that you consider these data and improvements are all necessary to reduce current inherent inaccuracies and data gaps in the USGS numerical model in order to help refine the hydrogeologic components used to estimate the Subbasin water budget and its various components. These components include, but are not limited to, the specific yield for the Subbasin, the GSP MTs and MOs related to groundwater, and by extension, the proposed rampdown schedule over the long-term. The GSA also notes that you request the GSP to be modified to include

language to emphasize that this additional analysis should be conducted during the first 5-year period.

O3-14k The GSA acknowledges that you request that the text in Section 4.4 be revised to incorporate this important information pertaining to the proposed rampdown schedule and percentages utilizing a revised specific yield. In addition, the GSA notes your requested revision to the GSP text that to the extent that in the future if the specific yield or other Subbasin hydrogeologic components are revised, that the rampdown percentages and schedule will be revised accordingly.

O3-14l The GSA notes your comment to clarify if the groundwater well level minimum thresholds described in Tables 3-4 and 3-5 are based on data derived from the BVHM, and are therefore preliminary and subject to change. In addition, we note your suggestion to add text to state that the identified "key wells" could be added or replaced for the purpose of minimum threshold compliance monitoring as new data becomes available.

O3-14m The GSA notes your suggestion to add a column titled "Surface Elevation" to Table 3-4.

O3-14n The GSA notes your request to remake Table 3-5 to resemble Table 3-4 (i.e., all the same columns and data), including surface elevation. In addition, you indicate that further supporting data is needed to verify the appropriateness of the proposed minimum thresholds for the various individual management areas and the South Management Area (SMA) in particular but do not provide any information to what further supporting data is required.

O3-14o The GSA acknowledges your request to revise Tables 5-1 through 5-5 to reflect the inclusion and funding (costs) for conducting the collection and analysis of the data described in your comment letter during the first 5-year reassessment period. In addition, you request to clearly identify which tasks are related to the initial and later 5-year reassessment periods, and which tasks are ongoing annually. Finally, you request that the groundwater numerical model be updated a minimum of every 5 years.

O3-14p The GSA notes your recommendation to reduce costs by use of water levels from pressure transducers and telemetry systems. The GSA plans to evaluate use and cost of such equipment and technology.

O3-15 The GSA acknowledges your concern regarding structure of the water trading program and specifically a theoretical cap of the number of shares that an individual

could own. The GSA will take this comment into consideration as the water trading program is developed in coordination with the Subbasin stakeholders.

O3-16 The GSA acknowledges your comment regarding potential transfer of BPA and generally concurs that restrictions on transfer would likely be based on the premise of avoiding adverse impacts to hydrogeologic conditions that would cause or exacerbate undesirable results. Page 4-6 of the GSP has been edited to add this clarification.

O3-17 The GSA acknowledges your comment regarding market economics and its potential effect of incentivizing conservation. The Draft GSP clearly indicates that the scope of the Water Conservation Program is (PMA No. 2) is dependent upon the availability of funding provided by potential sources including state grant programs (Draft GSP page 4-19). The Water Conservation Program would be developed in concert with input from each of the water sectors (Agriculture, Municipal, and Recreation) and evaluate the costs and benefits of potential conservation measures. The GSA also notes your position that conservation measures internal to the BWD customers should be funded by the BWD. Conservation grant funding will be sought, and would be of benefit to all beneficial users of groundwater in the Subbasin.

O3-18 The GSP has been revised to clarify that the Pumping Reduction Program is planned to be based on BPA and use this consistent terminology.

O3-19 The Voluntary Fallowing of Agriculture Land (PMA No. 4) would require additional evaluation under the California Environmental Quality Act (CEQA) to determine actual fallowing standards. Previous fallowing under the water credits program included minimum fallowing requirements to address visual blight and fugitive dust. The GSA has revised the text on pages 4-25 and 4-28 to clarify that a uniform minimum fallowing standard would be established for all properties. Enhanced restoration would be for potential added value projects such as for direct mitigation projects (one project currently in the planning phase in the Subbasin), and mitigation banks.

O3-20 The GSA notes your request for clarification regarding the funding of the Voluntary Fallowing of Agriculture Land (PMA No. 4). The Draft GSP outlines an approach to developing the program including potential funding sources. The program would be developed in coordination with the Subbasin stakeholders. The GSA notes your position that the only costs that are appropriate to be borne by the GSA (i.e., funded by groundwater users at large) are the cost of developing the standards and ensuring compliance with the standards.

O3-21 The GSP has been revised to note that for irrigation wells water quality should be suitable for agriculture and recreation use.

O3-22 The GSA has revised the GSP page 4-30 with the suggested edit to further clarify that the BWD is not currently required to treat water from any of its wells.

O3-23 The GSA acknowledges your comment that mitigation actions may not be the responsibility of the GSA to fund unless the degraded water quality is a direct result of Subbasin management decisions.

O3-24 The GSP has been revised to indicate that the Central Management Area (CMA) primarily serves municipal and recreational uses.

O3-25 The GSA acknowledges that you are alarmed by the high costs of implementing the GSP, and that GSP should set forth detailed information and estimates regarding how costs were developed. The GSA will take this comment into consideration when considering imposing fees to fund GSP implementation.

O3-26 The GSA acknowledges your comment that Table 5-3, GSP 5-Year Update Costs and Table 5-4 Projects and Management Actions Development Costs should include detailed information and estimates.

O3-27 The GSA acknowledges your comment that the roles and responsibilities between the GSA's full time employees and the BWD's internal management and administration should be calculated and the expense estimated.

O3-28 The GSA acknowledges your comment regarding BWD reimbursement of GSA creation and GSP development related expenses and request for detailed accounting. The GSA concurs that prior to any charges being considered for reimbursement to the BWD, a detailed accounting process for verification purposes would be required.

O3-29 The GSA acknowledges your comment that the GSP should expressly provide the amount of extraction charge borne by any particular pumper shall be proportional to the cost of providing GSP benefits respective of the individual pumper. The GSA notes that the application of fees has yet to be determined.

O3-30 The GSA notes your recommendation to reduce costs by use of water levels from pressure transducers and telemetry systems. The GSA plans to evaluate use and cost of such equipment and technology.

Comment Letter O4

Tubb Canyon Desert Conservancy

May 21, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Re: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett,

I am writing to suggest that Groundwater Dependent Ecosystems (GDE's) be designated Beneficial Users of Water with a specified allocation in the Groundwater Sustainability Plan (GSP) that is being developed by the Groundwater Sustainability Agency.

In the draft GSP, GDE's have been excluded from consideration as a Beneficial User of water by a logic that defies credulity: GDE's existed in the Borrego Springs Sub-basin prior to 2015 but were all destroyed prior to 2015 and therefore are not required to be considered in the GSP. And those plant assemblages that were once GDE's and that survived the 2015 "SGMA cut-off" are not really groundwater dependent, but rather *now* derive their water from surface water. The fact of the matter is that natural processes are never as cut and dry as this argument suggests.

Even if the above argument were the case for some of the GDE's in the basin, it is certainly not the case for all of them. In particular, it is not the case for the GDE that exists in Tubb Canyon. While it is true that the water table no longer comes to the surface as it did until 20 years ago, the palms and ironwood trees (Olneya tesota) derive their water from the only source that has ever been available to them—the aquifer. The grouping of the ironwood trees from Tubb Canyon toward Borrego Sink (which is clearly visible from Montezuma Grade) attests to the fact that these trees are sustained by the underground recharge river that is a critical part of the Borrego Valley Groundwater Basin.

I urge the GSA to revise the GSP to include GDE's a Beneficial Users of Water with a specific allocation of water, just like all other identified Beneficial Users.

O4-1

Sincerely yours,

J. David Garmon, MD
President, TCDC

Tubb Canyon Desert Conservancy
8899 University Center Lane #170, San Diego, CA 92122 ✷ 858.535.9121 ✷ contact.tcdc@tubbcanyondesertconservancy.org
www.TubbCanyonDesertConservancy.Org

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Comment Letter O4

Tubb Canyon Desert Conservancy

May 21, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

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Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

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Even if the above argument were the case for some of the GDE's in the basin, it is certainly not the case for all of them. In particular, it is not the case for the GDE that exists in Tubb Canyon. While it is true that the water table no longer comes to the surface as it did until 20 years ago, the palms and ironwood trees (Olneya tesota) derive their water from the only source that has ever been available to them—the aquifer. The grouping of the ironwood trees from Tubb Canyon toward Borrego Sink (which is clearly visible from Montezuma Grade) attests to the fact that these trees are sustained by the underground recharge river that is a critical part of the Borrego Valley Groundwater Basin.

I urge the GSA to revise the GSP to include GDE's a Beneficial Users of Water with a specific allocation of water, just like all other identified Beneficial Users.

O4-1

Sincerely yours,

J. David Garmon, MD
President, TCDC

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Letter O4

Commenter: J. David Garmon, MD, President, Tubb Canyon Desert Conservancy
Date: May 21, 2019

O4-1 The GSA notes your comment suggesting that groundwater dependent ecosystems (GDEs) be designated beneficial users of water with specified allocation in the GSP. The GSA notes that you disagree with the conclusion that GDEs have become disconnected from the underlying aquifer. As evidence you point to the GDEs that exist in Tubb Canyon such as the palms and ironwood trees that derive their water from the only source that has ever been available to them—the aquifer. You point to the grouping of ironwood trees from Tubb Canyon toward the Borrego Sink as attesting to the fact that these trees are sustained by the underground recharge that is a critical part of groundwater basin.

The GSA directs you to Appendix D4 of the GSP that provides evaluation of potential GDEs. In particular, Section 1.2.7 of Appendix D4 discusses the Tubb Canyon watershed.

> Tubb Canyon is comprised of four subwatersheds referred to as Tubb Canyon, and Tubb Canyon Road North, Middle and South subwatersheds. The total Tubb Canyon watershed area is 3,095 acres. The maximum elevation of the watershed is 4,520 feet amsl [above mean sea level] and the minimum elevation (i.e., outlet) is about 920 feet amsl. Tubb Canyon watershed discharges through a narrow canyon to the Subbasin where it broadens into an alluvial fan (Figure 9). Three springs are mapped in the watershed and include Big Spring, Middle Spring and Tubb Canyon Spring (ABDSP 2017).

In the vicinity of Big Spring, seepwillow, catclaw, and mesquite have been identified (San Diego Reader 2010). The satellite color-infrared photography indicates green, healthy vegetation as the color red (high reflection of near-infrared wavelengths). In a desert environment, the green healthy vegetation could represent a potential GDE. A narrow band of habitat appears in the Tubb Canyon Creek channel primarily associated with the mapped springs. A band of vegetation is mapped by the NCCAG dataset where Tubb Canyon opens into the Subbasin near Dry and Culp Canyons." Where Tubb Canyon enters the valley it joins with several canyons, including Culp Canyon to form an alluvial fan. The NCCAG dataset maps vegetation on the alluvial fan that you indicate is composed of palms and ironwood trees. These potential GDEs are edge cases mapped in areas confined to the outer

fringes of the Subbasin boundary; their geographic confinement to the mountain front indicates that the vegetation communities are supported by surface water flows originating outside the Subbasin and not sustained by the regional groundwater table. Figure 21, Contributing Watersheds Hydrogeologic Conceptual Model, in Appendix D4 of the GSP displays how streams flow from outside the Subbasin transitions to disconnected streams that are not connected to the regional groundwater table by a fully saturated aquifer. These ephemeral streams lose water through a thick unsaturated zone. As such, pumping from wells screened in the regional groundwater table do not effect water available to these potential fringe GDEs. As such, a specified allocation was not assigned to these GDEs.

The commenter is referred to the GSA's master response on GDEs for further information.

Comment Letter O5

The Nature Conservancy
Protecting nature. Preserving life.
CALIFORNIA WATER | GROUNDWATER

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nature.org
GroundwaterResourceHub.org

21 May 2019

Jim Bennett
County of San Diego Planning & Development Services
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Submitted via email: PDS.LUEGGroundwater@sdcounty.ca.gov

Re: Concerns Regarding Draft Groundwater Sustainability Plan for the Borrego Valley

Dear Mr. Jim Bennett,

The Nature Conservancy (TNC) appreciates the opportunity to comment on the Draft Groundwater Sustainability Plan (GSP) for the Borrego Valley Basin being prepared under the Sustainable Groundwater Management Act (SGMA). We have significant concerns regarding the treatment of environmental beneficial users in the Draft GSP and submit this letter as a guidance to address the deficiencies prior to submission to the State.

TNC as a Stakeholder Representative for the Environment

TNC is a global, nonprofit organization dedicated to conserving the lands and waters on which all life depends. We seek to achieve our mission through science-based planning and implementation of conservation strategies. For decades, we have dedicated resources to establishing diverse partnerships and developing foundational science products for achieving positive outcomes for people and nature in California. TNC was part of a stakeholder group formed by the Water Foundation in early 2014 to develop recommendations for groundwater reform and actively worked to shape and pass SGMA.

Our reason for engaging is simple: California's freshwater biodiversity is highly imperiled. We have lost more than 90 percent of our native wetland and river habitats, leading to precipitous declines in native plants and the populations of animals that call these places home. These natural resources are intricately connected to California's economy providing direct benefits through industries such as fisheries, timber and hunting, as well as indirect benefits such as clean water supplies. SGMA must be successful for us to achieve a sustainable future, in which people and nature can thrive within Borrego Valley Basin and California.

We believe that the success of SGMA depends on bringing the best available science to the table, engaging all stakeholders in robust dialog, providing strong incentives for beneficial outcomes and rigorous enforcement by the State of California.

Given our mission, we are particularly concerned about the inclusion of nature, as required, in GSPs. The Nature Conservancy has developed a suite of tools based on best available science to help GSAs, consultants, and stakeholders efficiently incorporate nature into GSPs.

O5-1

These tools and resources are available online at GroundwaterResourceHub.org. The Nature Conservancy's tools and resources are intended to reduce costs, shorten timelines, and increase benefits for both people and nature.

Addressing Nature's Water Needs in GSPs

SGMA requires that all beneficial uses and users, including environmental users of groundwater, be considered in the development and implementation of GSPs (Water Code § 10723.2).

The GSP Regulations include specific requirements to identify and consider groundwater dependent ecosystems [23 CCR §354.16(g)] when determining whether groundwater conditions are having potential effects on beneficial uses and users. GSAs must also assess whether sustainable management criteria may cause adverse impacts to beneficial uses, which include environmental uses, such as plants and animals. The Nature Conservancy has identified each part of the GSP where consideration of beneficial uses and users are required. That list is available here: https://groundwaterresourcehub.org/importance-of-gdes/provisions-related-to-groundwater-dependent-ecosystems-in-the-groundwater-s. Please ensure that environmental beneficial users are addressed accordingly throughout the GSP. Adaptive management is embedded within SGMA and provides a process to work toward sustainability over time by beginning with the best available information to make initial decisions, monitoring the results of those decision, and using data collected through monitoring to revise decisions in the future. Over time, GSPs should improve as data gaps are reduced and uncertainties addressed.

To help ensure that GSPs adequately address nature as required under SGMA, The Nature Conservancy has prepared a checklist (**Attachment A**) for GSAs and their consultants to use. The Nature Conservancy believes the following elements are foundational for 2020 GSP submittals. For detailed guidance on how to address the checklist items, please also see our publication, *GDEs under SGMA: Guidance for Preparing GSPs*[1].

O5-1 Cont.

1. Environmental Representation

SGMA requires that groundwater sustainability agencies (GSAs) consider the interests of all beneficial uses and users of groundwater. To meet this requirement, we recommend actively engaging environmental stakeholders by including environmental representation on the GSA board, technical advisory group, and/or working groups. This could include local staff from state and federal resource agencies, nonprofit organizations and other environmental interests. By engaging these stakeholders, GSAs will benefit from access to additional data and resources, as well as a more robust and inclusive GSP.

2. Basin GDE and ISW Maps

SGMA requires that groundwater dependent ecosystems (GDEs) and interconnected surface waters (ISWs) be identified in the GSP. We recommend using the Natural Communities Commonly Associated with Groundwater Dataset (NC Dataset) provided online[2] by the Department of Water Resources (DWR) as a starting point for the GDE map. The NC Dataset was developed through a collaboration between DWR, the Department of Fish and Wildlife and TNC.

[1] GDEs under SGMA: Guidance for Preparing GSPs is available at: https://groundwaterresourcehub.org/public/uploads/pdfs/GWR_Hub_GDE_Guidance_Doc_2-1-18.pdf

[2] The Department of Water Resources' Natural Communities Commonly Associated with Groundwater dataset is available at: *https://gis.water.ca.gov/app/NCDatasetViewer/*

3. Potential Effects on Environmental Beneficial Users
SGMA requires that potential effects on GDEs and environmental surface water users be described when defining undesirable results. In addition to identifying GDEs in the basin, The Nature Conservancy recommends identifying beneficial users of surface water, which include environmental users. This is a critical step, as it is impossible to define "significant and unreasonable adverse impacts" without knowing *what* is being impacted. For your convenience, we've provided a list of freshwater species within the boundary of the Borrego Valley groundwater basin in **Attachment C**. Our hope is that this information will help your GSA better evaluate the impacts of groundwater management on environmental beneficial users of surface water. We recommend that after identifying which freshwater species exist in your basin, especially federal and state listed species, that you contact staff at the Department of Fish and Wildlife (DFW), United States Fish and Wildlife Service (USFWS) and/or National Marine Fisheries Services (NMFS) to obtain their input on the groundwater and surface water needs of the organisms on the GSA's freshwater species list. Because effects to plants and animals are difficult and sometimes impossible to reverse, we recommend erring on the side of caution to preserve sufficient groundwater conditions to sustain GDEs and ISWs.

4. Biological and Hydrological Monitoring
If sufficient hydrological and biological data in and around GDEs is not available in time for the 2020/2022 plan, data gaps should be identified along with actions to reconcile the gaps in the monitoring network.

The Nature Conservancy has thoroughly reviewed the Borrego Valley Groundwater Basin Draft GSP, and considers it to be inadequate under SGMA for the following main reasons:

1. Environmental beneficial uses and users are not adequately identified and considered
2. The Draft GSP permits groundwater conditions to worsen in this Critically Overdrafted Basin (beyond the 2015 SGMA benchmark date) over the 20-year SGMA timeline.

Our specific comments related to the Borrego Valley Groundwater Basin Draft GSP are provided in detail in **Attachment B** and are in reference to the numbered items in **Attachment A.** **Attachment C** provides a list of the freshwater species located in the Borrego Valley Basin. **Attachment D** describes six best practices that GSAs and their consultants can apply when using local groundwater data to confirm a connection to groundwater for DWR's Natural Communities Commonly Associated with Groundwater Dataset[2]. **Attachment E** provides an overview of a new, free online tool that allows GSAs to assess changes in groundwater dependent ecosystem (GDE) health using satellite, rainfall, and groundwater data.

Thank you for fully considering our comments as you finalize your GSP.

Best Regards,

Sandi Matsumoto
Associate Director, California Water Program
The Nature Conservancy

O5-1
Cont.

Attachment A
Considering Nature under SGMA: A Checklist

The Nature Conservancy is neither dispensing legal advice nor warranting any outcome that could result from the use of this checklist. Following this checklist does not guarantee approval of a GSP or compliance with SGMA, both of which will be determined by DWR and the State Water Resources Control Board.

GSP Plan Element*		GDE Inclusion in GSPs: Identification and Consideration Elements		Check Box
Admin Info	**2.1.5 Notice & Communication** *23 CCR §354.10*	**Description of the types of environmental beneficial uses of groundwater that exist within GDEs and a description of how environmental stakeholders were engaged throughout the development of the GSP.**		1
Basin Setting	**2.2.1 Hydrogeologic Conceptual Model** *23 CCR §354.14*	**Basin Bottom Boundary:** Is the bottom of the basin defined as at least as deep as the deepest groundwater extractions?		2
		Principal aquifers and aquitards: Are shallow aquifers adequately described, so that interconnections with surface water and vertical groundwater gradients with other aquifers can be characterized?		3
	2.2.2 Current & Historical Groundwater Conditions *23 CCR §354.16*	**Interconnected surface waters:**		4
		Interconnected surface water maps for the basin with gaining and losing reaches defined (included as a figure in GSP & submitted as a shapefile on SGMA portal).		5
		Estimates of current and historical surface water depletions for interconnected surface waters quantified and described by reach, season, and water year type.		6
		Basin GDE map included (as figure in text & submitted as a shapefile on SGMA Portal).		7
		If NC Dataset *was* used:	Basin GDE map denotes which polygons were kept, removed, and added from NC Dataset (Worksheet 1, can be attached in GSP section 6.0).	8
			The basin's GDE shapefile, which is submitted via the SGMA Portal, includes two new fields in its attribute table denoting: 1) which polygons were kept/removed/added, and 2) the change reason (e.g., why polygons were removed).	9
			GDEs polygons are consolidated into larger units and named for easier identification throughout GSP.	10
		If NC Dataset *was not* used:	Description of why NC dataset was not used, and how an alternative dataset and/or mapping approach used is best available information.	11
		Description of GDEs included:		12
		Historical and current groundwater conditions described in each GDE unit.		13
		Ecological condition described in each GDE unit.		14

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			Each GDE unit has been characterized as having high, moderate, or low ecological value.	15
			Inventory of species, habitats, and protected lands for each GDE unit with ecological importance (Worksheet 2, can be attached in GSP section 6.0).	16
	2.2.3 Water Budget *23 CCR §354.18*		Groundwater inputs and outputs (e.g., evapotranspiration) of native vegetation and managed wetlands are included in the basin's historical and current water budget.	17
			Potential impacts to groundwater conditions due to land use changes, climate change, and population growth to GDEs and aquatic ecosystems are considered in the projected water budget.	18
Sustainable Management Criteria	3.1 Sustainability Goal *23 CCR §354.24*		**Environmental stakeholders/representatives were consulted.**	19
			Sustainability goal mentions GDEs or species and habitats that are of particular concern or interest.	20
			Sustainability goal mentions whether the intention is to address pre-SGMA impacts, maintain or improve conditions within GDEs or species and habitats that are of particular concern or interest.	21
	3.2 Measurable Objectives *23 CCR §354.30*		**Description of how GDEs were considered and whether the measurable objectives and interim milestones will help achieve the sustainability goal as it pertains to the environment.**	22
	3.3 Minimum Thresholds *23 CCR §354.28*		**Description of how GDEs and environmental uses of surface water were considered when setting minimum thresholds for relevant sustainability indicators:**	23
			Will adverse impacts to GDEs and/or aquatic ecosystems dependent on interconnected surface waters (beneficial user of surface water) be avoided with the selected minimum thresholds?	24
			Are there any differences between the selected minimum threshold and state, federal, or local standards relevant to the species or habitats residing in GDEs or aquatic ecosystems dependent on interconnected surface waters?	25
	3.4 Undesirable Results *23 CCR §354.26*		**For GDEs, hydrological data are compiled and synthesized for each GDE unit:**	26
		If hydrological data *are available* within/nearby the GDE	Hydrological datasets are plotted and provided for each GDE unit (Worksheet 3, can be attached in GSP Section 6.0).	27
			Baseline period in the hydrologic data is defined.	28
			GDE unit is classified as having high, moderate, or low susceptibility to changes in groundwater.	29
			Cause-and-effect relationships between groundwater changes and GDEs are explored.	30
		If hydrological data *are not available* within/nearby the GDE	Data gaps/insufficiencies are described.	31
			Plans to reconcile data gaps in the monitoring network are stated.	32
			For GDEs, biological data are compiled and synthesized for each GDE unit:	33
			Biological datasets are plotted and provided for each GDE unit.	34
			Data gaps/insufficiencies are described.	35

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Cont.

		Plans to reconcile data gaps in the monitoring network are stated.	36
		Description of potential effects on GDEs, land uses and property interests:	37
		Cause-and-effect relationships between GDE and groundwater conditions are described.	38
		Impacts to GDEs that are considered to be "significant and unreasonable" are described.	39
		Known hydrological thresholds or triggers (e.g., instream flow criteria, groundwater depths, water quality parameters) for relevant species or ecological communities are reported.	40
		Land uses include and consider recreational uses (e.g., fishing/hunting, hiking, boating).	41
		Property interests include and consider privately and publicly protected conservation lands and opens spaces, including wildlife refuges, parks, and natural preserves.	42
Sustainable Management Criteria	**3.5 Monitoring Network** *23 CCR §354.34*	Description of whether hydrological data are spatially and temporally sufficient to monitor groundwater conditions for each GDE unit.	43
		Description of how hydrological data gaps and insufficiencies will be reconciled in the monitoring network.	44
		Description of how impacts to GDEs and environmental surface water users, as detected by biological responses, will be monitored and which monitoring methods will be used in conjunction with hydrologic data to evaluate cause-and-effect relationships with groundwater conditions.	45
Projects & Mgmt Actions	**4.0. Projects & Mgmt Actions to Achieve Sustainability Goal** *23 CCR §354.44*	Description of how GDEs will benefit from relevant project or management actions.	46
		Description of how projects and management actions will be evaluated to assess whether adverse impacts to the GDE will be mitigated or prevented.	47

* In reference to DWR's GSP annotated outline guidance document, available at:
https://water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/GD_GSP_Outline_Final_2016-12-23.pdf

O5-2
Cont.

Attachment B

TNC Evaluation of the
Borrego Valley Groundwater Basin Draft Groundwater Sustainability Plan

The Nature Conservancy has thoroughly reviewed the Borrego Valley Groundwater Basin Draft GSP, and considers it to be inadequate under SGMA. The deficiencies of the GSP are described in here, along with recommendations on how to reconcile them.

2.1.4 Beneficial Uses and Users of Groundwater (p. 2-26)

[Checklist item #1]: Please identify environmental users of groundwater, such as groundwater dependent ecosystems and other species that depend on interconnected surface water that exist in Borrego Valley Basin, and describe how representatives of these beneficial uses were included in the planning process. If Borrego Valley is asserting that no environmental beneficial users exist, please provide scientific rationale and data to support this claim. Based on science The Nature Conservancy has assembled on the basin, there is a strong case to be made that environmental beneficial users are very likely to exist and the GSP must therefore provide sufficient evidence to rebut this science, which includes starting with the following resources:

- Natural Communities Commonly Associated with Groundwater dataset (NC Dataset) - https://gis.water.ca.gov/app/NCDatasetViewer/
- The list of freshwater species located in the Borrego Valley Groundwater Basin in **Attachment C** of this letter. Please take particular note of the species with protected status.

Please also identify lands that are protected as open space preserves, habitat reserves, wildlife refuges, etc. or other lands protected in perpetuity and supported by groundwater or interconnected surface waters should be identified and acknowledged.

O5-3

2.2.2.6 Groundwater-Surface Water Connections (pp. 2-65 thru 2-68)
[Checklist items #4-6]:

- Please rename the Groundwater-Surface Water Connections section as the "Identification of interconnected surface water systems" to be consistent with DWR's GSP annotated Outline Guidance Document[3].
- On Figure 2.2-17, please add depth-to-groundwater data (derived from contoured groundwater elevation data and ground surface elevation from digital elevation model data; See Best Practice #5 in **Appendix D** of this letter for more specifications) near surface water systems in the Basin.

O5-4

- The regulations [23 CCR §351(o)] define interconnected surface waters (ISW) as "surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted". "At any point" has both a spatial and temporal component. Even short durations of interconnections of groundwater and surface water can be

O5-5

[3] DWR's Annotated Outline Guidance Document:
https://water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/GD_GSP_Outline_Final_2016-12-23.pdf

crucial for surface water flow and supporting environmental users of groundwater and surface water. Thus, only considering perennial portions of streams as ISWs does not meet the SGMA definition. **Please identify interconnected surface waters in the Basin by relying on groundwater elevation and stream gauge data, specifying any data gaps that exist so that they can be resolved in the monitoring network.**

O5-5 Cont.

2.2.2.6 Groundwater-Surface Water Connections - Groundwater Dependent Ecosystems (pp. 2-68 thru 2-72)
[Checklist items #7-16]:

- Groundwater Dependent Ecosystems (GDEs) are not only relevant under the Groundwater-Surface Water Connections section, especially in arid environments like the Borrego Valley Basin where GDEs can exist in the absence of ISW. Please create a new subsection (e.g., 2.2.2.7) for the identification of groundwater dependent ecosystems to be consistent with DWR's GSP annotated Outline Guidance Document[3].
- While historical groundwater level declines in the Borrego Valley have inevitably led to pre-SGMA adverse impacts to groundwater dependent ecosystems, please separate the identification of GDEs from the consideration of GDEs. We recommend identifying GDEs (mapping) and describing groundwater conditions in the basin setting section of the GSP (e.g., 2.2.2.7) and evaluating potential adverse impacts due to groundwater levels in the Sustainable Management Criteria section where undesirable results are described (e.g., significant and adverse impacts to beneficial users of groundwater). **Please identify (map) GDEs in the basin that are supported by groundwater, even groundwater from a perched aquifer. Management actions and decisions regarding the prevention of post-2015 adverse impacts are a separate issue and should be addressed when defining undesirable results in the basin.**
- SGMA defines GDEs as "ecological communities and species that depend on *groundwater emerging from aquifers or on groundwater occurring near the ground surface*". **We recommend that depth to groundwater contour maps are used to verify whether a connection to groundwater exists for polygons in the NC Dataset, instead of relying on watershed boundaries (especially for the polygons located on the fringe of the basin). Please refer to Appendix D of this letter for best practices for using groundwater data to verify a connection to groundwater.**
- Please add a map that clearly indicates which NCCAG polygons were kept or removed, as well as specify the rationale for removing each polygon (e.g., groundwater levels too deep). It was hard to follow Appendix D4 of the draft GSP and know which polygons are being identified as GDEs in the Borrego Valley Basin.

O5-6

GDE Unit 1 – Coyote Creek

- **Please provide information on the depth to groundwater, particularly in the NCCAG mapped areas that do not coincide with perennial surface flows.**

O5-7

GDE Unit 3 – Mesquite Bosque

- Scientific literature does not support the removal of Mesquite Bosque in Borrego Sink. It appears that Mequite Bosque was not considered a GDE because it was assumed

O5-8

that the ecosystem has become disconnected from groundwater and is in decline. This finding was based on: 1) Estimated evapotranspiration for this area modeled by the USGS in a MODFLOW modeling study that was assumed to be zero; 2) surviving mesquite derive their water from soil moisture and perched groundwater; and 3) the rooting depth for *Prosopis glandulosa* was assumed to be 15.33 feet (Table 13 of the USGS (2015) modelling study, which does not have any references associated with it) and considerably lower than current groundwater levels (~55 feet). However, none of these assumptions were substantiated through field observations. According to TNC's global rooting depth database[4], the max rooting depth for *Prosopis glandulosa* can be as high as 66 feet. And, depending on the subsurface soils and thickness of the capillary fringe, groundwater at depths >66 feet could still be supporting the remaining Mesquite. Similarly, it is known that *P. glandulosa* can have taproots, in the absence of available subsurface water, up to 190 feet according to the United States Forest Service[5]. These reported rooting depth observations for Honey Mesquite are beyond the 55 feet bgs groundwater levels observed in MW-5B, meaning that groundwater is likely still supporting this vegetation at greater depths than originally presented in this GSP. **Unless there is field evidence that demonstrates otherwise, it should be assumed that the remaining mesquite is groundwater-dependent and mapped as GDEs until further data and information can confirm otherwise. In addition, the sustainability criteria should be set to avoid adverse impacts to this species through further (post-SGMA) degradation. At a minimum this should be considered a data gap and the ecosystem needs to be further evaluated.**

O5-8 Cont.

3.1.1 Standard for Establishing the Sustainability Goal (p.3-1)
[Checklist items #19-21]:

- According to 23 CCR §354.22, the sustainability goal must "culminate in the absence of undesirable results within 20 years of the applicable statutory deadline." As the GSP is written now, the sustainable management criteria fail to address adverse impacts to beneficial uses in the basin, and permit groundwater conditions in the basin to worsen over the 20 years of GSP implementation. **Please redefine your sustainability goal so that it complies with the intent of SGMA.**

O5-9

3.2.1. Chronic Lowering of Groundwater Levels – Undesirable Results (p. 3-7)
[Checklist items #26-42]:
While impacts to GDEs have been broadly described in Appendix D4 of the Draft GSP, **please provide more specifics on what biological responses (e.g., extent of habitat, growth, recruitment rates) would best characterize a significant and unreasonable impact to GDEs.** The definition of 'significant and unreasonable' is a qualitative statement that is used to describe when undesirable results would occur in the basin, such that a minimum threshold can be quantified. Potential effects on all beneficial users of groundwater in the basin need to be taken into consideration. According to the California Constitution Article X, §2, water resources in California must be "put to beneficial use to the fullest extent of which they are capable". **Please identify appropriate biological indicators that can be used to monitor potential impacts to environmental beneficial users due to groundwater**

O5-10

[4] TNC's Global Rooting Depth Database is available at: https://groundwaterresourcehub.org/gde-tools/gde-rooting-depths-database-for-gdes/
[5] U.S. Forest Service: https://www.fs.fed.us/database/feis/plants/tree/progla/all.html

conditions. Refer to Appendix E of this letter for an overview of a free, new online tool for monitoring the health of GDEs over time.

O5-10 Cont.

3.2.6 Depletions of Interconnected Surface Water – Undesirable Results (p.3-14)
[Checklist items #26-42]:

- **Please provide scientific evidence that supports the following statement on p 3-15: "The honey mesquite [in the Borrego Sink] experienced prolonged adverse impacts including desiccation, inability to regenerate and habitat loss well prior to 2015".** While adverse impacts (e.g., extent of honey mesquite habitat) has been declining for years prior to SGMA, it is unclear of what the current ecological status of the remaining portions.

O5-11

- There is insufficient evidence to conclude that current groundwater levels are no longer supporting the honey mesquite. The Mesquite polygons in the NC dataset were mapped from 1996, however, 35 years of Landsat imagery[6] (Figure 1) show a slight upward trend in vegetation growth (indicated by Normalized Vegetation Difference Index (NDVI)) and leaf moisture (indicated by Normalized Vegetation Moisture Index (NDMI)), with fluctuations over wet and dry years during this time period. Scientific studies[7,8,9] have found that gradual increases in depth to groundwater within a GDE with historically shallow groundwater levels tends to result in an altered species composition due to the migration of more opportunistic invasive species that have deeper rooting systems and are better adapted to deeper groundwater conditions. **Please conduct field verification to determine whether the polygons in this area are still Mesquite or if the invasive Tamarix (e.g., *Tamarix ramosissima*) is prevalent.** If either are present, it is still very likely that groundwater is currently supporting these phreatophytes. However, the presence of Tamarix and the lack of Mesquite would likely suggest that pre-SGMA adverse impacts are underway, confirming previous observations. If this is the case, conservation efforts (removal of *Tamarix spp*.) could provide water supply benefits for the Borrego springs area and the Mesquite vegetation. Visit TNC's Groundwater Resource Hub for a case study on how the invasive *Arundo donax* is being removed in Ventura County to improve groundwater supply and enhance habitat[10].

O5-12

[6] TNC's GDE Pulse is described in **Attachment E** of this letter and the web viewer is available at: https://gde.codefornature.org/#/map
[7] Keddy, P.A., and A.A. Reznicek. 1986. Great Lakes vegetation dynamics: The role of fluctuating water levels and buried seeds. *Journal of Great Lakes Research* 12: 25 – 36. DOI:10.1016/S0380-1330(86)71697-3.
[8] Moore, D.R.J., and P.A. Keddy. 1988. Effects of a water-depth gradient on the germination of lakeshore plants. *Canadian Journal of Botany* 66: 548–552. DOI:10.1139/b88-078.
[9] Sommer, B., and R. Froend. 2014. Phreatophytic vegetation responses to groundwater depth in a drying mediterranean-type landscape. *Journal of Vegetation Science* 25: 1045–1055. DOI:10.1111/jvs.12178.
[10] Case Study available at: https://groundwaterresourcehub.org/public/uploads/pdfs/GWR_Hub_Ventura_Co_arundo_case_study.pdf

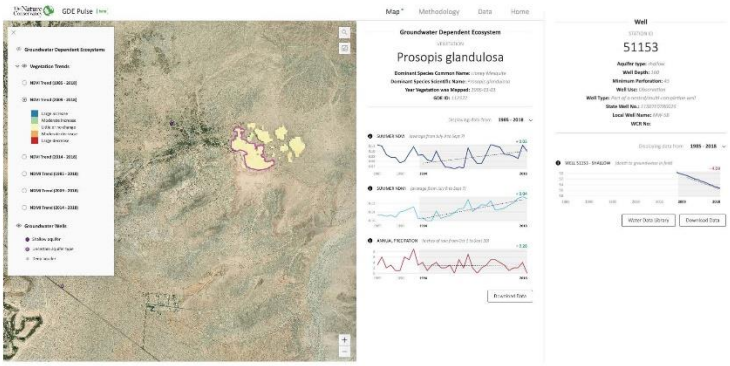

Figure 1. Landsat satellite data from GDE Pulse[5] of the Mesquite (*Prosopis glandulosa*) vegetation mapped within GDE Unit 3, and groundwater levels from nearby MW-5B.

- While the restoration of the honey mesquite GDE map may require groundwater levels to shallow by 30-40 feet to achieve its historic extent, **it is still possible to maintain groundwater levels such that no further adverse impacts occur post-SGMA so that remaining habitat is preserved.** SGMA also gives GSA's the authority to address pre-SGMA impacts by restoring some of the original historic extent of the honey mesquite, if the GSA's choses to do so.
- **Please describe whether there are any legally protected species that rely on the honey mesquite GDE habitat.**

O5-13

O5-14

3.3.1 Chronic Lowering of Groundwater Levels - Minimum Thresholds (p.3-17 thru 3-25)
[Checklist items #22-25]:

- While maintaining groundwater levels above saturated screen intervals for pre-existing municipal wells during an anticipated multi-year drought circumstance is a suitable approach to establish minimum thresholds that protect some beneficial users of groundwater (i.e., municipal and domestic (*de-minimus*) users), it fails to prevent adverse impacts to GDEs and environmental beneficial users of surface water in interconnected surface waters. **Environmental beneficial users of groundwater are required to be considered when establishing measurable thresholds, measurable objectives, and interim milestones. Please include environmental beneficial users in section 3.3.1.4 of the GSP when describing how the minimum threshold impacts beneficial uses. Refer to Step 2 of *GDEs under SGMA: Guidance for Preparing GSPs*[1] for how this can be accomplished.**
- On page 3-20, the GSP describes that the measurable objectives, interim milestones, and minimum thresholds assume that the historical climate from 1960 through 2010 repeats itself for the 2020 through 2070 period. This has resulted in a linear reduction in pumping (outlined in Table 3-6) from current levels to a target of 5,700 AFY between

O5-15

O5-16

2020 and 2070. The sustainable yield target of 5,700 AFY is inadequate for the following reasons:

- The target sustainable yield of 5,700 AFY does not take climate change into consideration, and establishing a target sustainable yield based on historical climate conditions fails to sustainably manage groundwater resources for current and future social, economic, and environmental benefits, thus deviating from the legal intent of SGMA. SGMA was passed at the height of California's historic drought, a period of time that was characterized by adverse impacts to domestic well owners (e.g., dry wells), GDEs (e.g., water stress impacts on growth, reproduction, and even mortality due to lack of groundwater), and surface water users (e.g., lower streamflows). Critically overdrafted basins, such as the Borrego Valley Basin, are more likely to have disproportionately experienced these adverse impacts due to historical groundwater overdraft in the basin.
- As currently written in the GSP, a sustainable yield target of 5,700 AFT results in pumping restrictions that permit groundwater conditions to worsen by ~100,000 AF beyond 2015 conditions (see Figure 2 in this letter). This has resulted in the groundwater level measurable objectives and interim milestones in Table 3-7 to be deeper than they are in 2018. This is highly problematic, given that Borrego Valley has been characterized as a critical status basin nor does it adequately prevent adverse impacts to beneficial users in the basin.

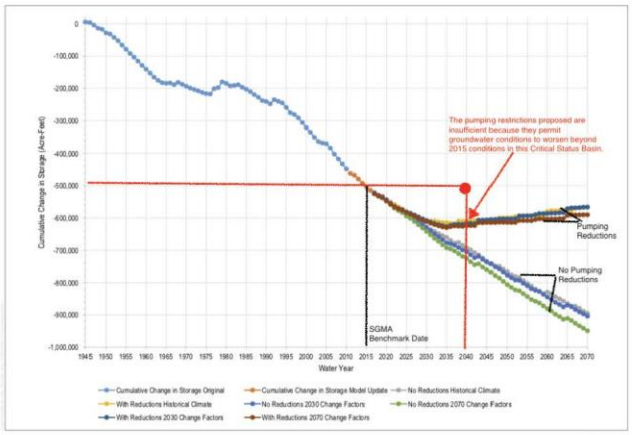

Figure 2. Figure 3.3-2 is annotated to demonstrate how the proposed pumping restrictions permit groundwater conditions to worsen post-2015 in the basin.

O5-16 Cont.

- The minimum thresholds outlined in Table 3-5 (p.3-22) are inadequate for the following reasons:
    - The SGMA benchmark date is Jan 1, 2015 not 2018. Any adverse impacts that have been accrued in the current period (2015-2019) need to be corrected.
    - The scientific rationale behind the maximum allowable decline in groundwater levels through 2040 are not explained well. Also, the maximum allowable decline needs to be compared to the SGMA benchmark date, not the beginning of GSP implementation. **Please provide an explanation of how the maximum allowable decline in groundwater levels through 2040 will prevent adverse impacts to beneficial users of groundwater in the basin.**
    - As noted on p.3-21: "The GSA will adjust the rate of pumping reduction, revisit minimum thresholds, and/or evaluate additional PMAs if the minimum thresholds in Table 3-4 or Table 3-5 are exceeded or if the interim milestones in Table 3-7 are not being achieved." While adaptive management is certainly a foundational principle of SGMA, this statement fails to comply with SGMA by operating the basin with enough operational flexibility so that groundwater conditions are away from minimum thresholds. **Please revise the minimum thresholds so that they prevent post-2015 adverse impacts to beneficial users of groundwater in the basin.**

O5-17

- Please describe whether there are any legally protected species that exist in GDE or ISW areas in the basin and rely on groundwater. **Please describe any differences between the selected minimum threshold and state, federal, or local standards relevant to the species or habitats residing in GDEs, as required [23 CCR §354.28 (b)(5)].**

O5-18

3.4.1 Chronic Lowering of Groundwater Levels – Measurable Objectives (p. 3-32)
[Checklist item #22]:

- The GSA should be managing the basin towards a measurable objective that is in a better state than Jan 1, 2015. As the measurable objectives are written now (in Table 3-7, page 3-33), the groundwater level goals for 2040 are actually deeper than 2018 observed levels. January 1, 2015 was at the height of California's historic drought, a period of time that was characterized by adverse impacts to domestic well owners (e.g., dry wells), GDEs (e.g., water stress impacts on growth, reproduction, and even mortality due to lack of groundwater), and surface water users (e.g., lower streamflows). **The onus is on the GSAs to determine whether groundwater conditions (due to groundwater pumping) exacerbated impacts to these beneficial users. And if so, to recognize these impacts and establish thresholds and measurable objectives that can avoid adverse impacts to beneficial users caused by groundwater in all water year types.**

O5-19

3.4.6 Depletions of Interconnected Surface Water – Measurable Objectives (p.3-36)
[Checklist item #22]:

The honey mesquite bosque located in the vicinity of the Borrego Sink appear to be supported by current groundwater level (~55 feet), given the max rooting depths known for honey mesquite (see description above in section 2.2.2.6). In order to prevent adverse impacts post-SGMA, minimum thresholds around the SGMA benchmark date need to be established, at the very least. According to MW-5B, depth to groundwater ranged between ~50-56 feet over the past 10 years (2008-2018) (see Figure 1 in this letter). The average depth to groundwater measured at this well over this period (~53 feet), and would be a reasonable minimum threshold to consider for this honey mesquite GDE. SGMA empowers GSAs to address pre-SGMA impacts, and as demonstrated by TNC's Ventura County Case Study[10], conservation projects that remove invasive tamarisk could benefit groundwater conditions for the honey mesquite and the Borrego sink vicinity. **Please consider these suggestions when establishing sustainable management criteria**.

O5-20

Chapter 3.5 Monitoring Network (pp. 2-68 through 2-72 and Appendix D)
[Checklist items 43-45]:

- The potential GDE Unit 3 - Borrego Sink (Mesquite Bosque) is one of the areas targeted for future monitoring. The well MW-5B is located about 1.2 miles northeast of the Borrego sink and is 480 feet deep. The well is a multi-completion well that includes MW-5B, screened from 45 to 155 feet, and MW-5A, screened from 200 to 340 feet. Similar groundwater levels were found and suggest potentially unconfined conditions in the Borrego Valley Subbasin. The following remark is made at page 2-71 in the GSP: "However, it is uncertain whether a good well seal was obtained during installation of the multi-completion monitoring well." Therefore, monitoring is suggested at a new well located near well MW5B that is screened from a depth of 45 ft bgs to 100 ft bgs focused on the shallower part of the aquifer. Monitoring in this new well would provide data for the groundwater levels screened in a region of interest to the GDE.

O5-21

- Coyote Creek is one of the potential GDEs, Unit 1. This GDE is described as a losing stream reach based on limited visual observations in the creek. Additional streamflow measurements are needed to improve the understanding of streamflow contribution and stream leakage. Installation of recording streamflow gauges at the former USGS measuring locations is suggested instead of manual/visual measurements. This method would be more likely to monitor conditions that represent when the creek is losing or gaining as well as the infrequent and flashy flows from the watershed.

O5-22

4.0 Projects and Management Actions
[Checklist items: 46 & 47]:

- For more case studies on how to incorporate environmental benefits into groundwater projects, please visit our website: https://groundwaterresourcehub.org/case-studies/recharge-case-studies/

O5-23

Attachment C

Freshwater Species Located in the Borrego Valley Basin

To assist in identifying the beneficial users of surface water necessary to assess the undesirable result "depletion of interconnected surface waters", Attachment C provides a list of freshwater species located in the Borrego Valley Basin. To produce the freshwater species list, we used ArcGIS to select features within the California Freshwater Species Database version 2.0.9 within the GSA's boundary. This database contains information on ~4,000 vertebrates, macroinvertebrates and vascular plants that depend on fresh water for at least one stage of their life cycle. The methods used to compile the California Freshwater Species Database can be found in Howard et al. 2015[11]. The spatial database contains locality observations and/or distribution information from ~400 data sources. The database is housed in the California Department of Fish and Wildlife's BIOS[12] as well as on The Nature Conservancy's science website[13].

Scientific Name	Common Name	Legal Protected Status		
		Federal	State	Other
BIRDS				
Actitis macularius	Spotted Sandpiper			
Aechmophorus occidentalis	Western Grebe			
Agelaius tricolor	Tricolored Blackbird	Bird of Conservation Concern	Special Concern	BSSC - First priority
Aix sponsa	Wood Duck			
Anas acuta	Northern Pintail			
Anas americana	American Wigeon			
Anas clypeata	Northern Shoveler			
Anas crecca	Green-winged Teal			
Anas cyanoptera	Cinnamon Teal			
Anas discors	Blue-winged Teal			
Anas platyrhynchos	Mallard			
Anas strepera	Gadwall			
Anser albifrons	Greater White-fronted Goose			
Ardea alba	Great Egret			
Ardea herodias	Great Blue Heron			
Aythya affinis	Lesser Scaup			
Aythya americana	Redhead		Special Concern	BSSC - Third priority
Aythya collaris	Ring-necked Duck			
Aythya valisineria	Canvasback		Special	

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[11] Howard, J.K. et al. 2015. Patterns of Freshwater Species Richness, Endemism, and Vulnerability in California. PLoSONE, 11(7). Available at: https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0130710
[12] California Department of Fish and Wildlife BIOS: https://www.wildlife.ca.gov/data/BIOS
[13] Science for Conservation: https://www.scienceforconservation.org/products/california-freshwater-species-database

Botaurus lentiginosus	American Bittern			
Bucephala albeola	Bufflehead			
Butorides virescens	Green Heron			
Calidris mauri	Western Sandpiper			
Calidris minutilla	Least Sandpiper			
Chen caerulescens	Snow Goose			
Chen rossii	Ross's Goose			
Chroicocephalus philadelphia	Bonaparte's Gull			
Cistothorus palustris palustris	Marsh Wren			
Egretta thula	Snowy Egret			
Empidonax traillii	Willow Flycatcher	Bird of Conservation Concern	Endangered	
Empidonax traillii brewsteri	Willow Flycatcher	Bird of Conservation Concern	Endangered	
Fulica americana	American Coot			
Gallinago delicata	Wilson's Snipe			
Himantopus mexicanus	Black-necked Stilt			
Icteria virens	Yellow-breasted Chat		Special Concern	BSSC - Third priority
Limnodromus scolopaceus	Long-billed Dowitcher			
Lophodytes cucullatus	Hooded Merganser			
Megaceryle alcyon	Belted Kingfisher			
Mergus serrator	Red-breasted Merganser			
Nycticorax nycticorax	Black-crowned Night-Heron			
Oreothlypis luciae	Lucy's Warbler		Special Concern	BSSC - Third priority
Oxyura jamaicensis	Ruddy Duck			
Pelecanus erythrorhynchos	American White Pelican		Special Concern	BSSC - First priority
Phalacrocorax auritus	Double-crested Cormorant			
Piranga rubra	Summer Tanager		Special Concern	BSSC - First priority
Plegadis chihi	White-faced Ibis		Watch list	
Podiceps nigricollis	Eared Grebe			
Podilymbus podiceps	Pied-billed Grebe			
Porzana carolina	Sora			
Rallus limicola	Virginia Rail			
Setophaga petechia	Yellow Warbler			BSSC - Second priority

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Tachycineta bicolor	Tree Swallow			
Tringa melanoleuca	Greater Yellowlegs			
Tringa semipalmata	Willet			
Tringa solitaria	Solitary Sandpiper			
Vireo bellii	Bell's Vireo			
Vireo bellii arizonae	Arizona Bell's Vireo	Bird of Conservation Concern	Endangered	
Vireo bellii pusillus	Least Bell's Vireo	Endangered	Endangered	
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		Special Concern	BSSC - Third priority
Xanthocephalus xanthocephalus	Yellow-headed Blackbird		Special Concern	BSSC - Third priority
FISH				
Cyprinodon macularius	Desert pupfish	Endangered	Endangered	Endangered - Moyle 2013
Cyprinodon macularius	Desert pupfish	Endangered	Endangered	Endangered - Moyle 2013
Cyprinodon macularius	Desert pupfish	Endangered	Endangered	Endangered - Moyle 2013
HERPS				
Actinemys marmorata marmorata	Western Pond Turtle		Special Concern	ARSSC
Anaxyrus boreas boreas	Boreal Toad			
Anaxyrus boreas halophilus	California Toad			ARSSC
Anaxyrus californicus	Arroyo Toad	Endangered	Special Concern	ARSSC
Anaxyrus punctatus	Red-spotted Toad			
Pseudacris cadaverina	California Treefrog			ARSSC
Pseudacris regilla	Northern Pacific Chorus Frog			
Thamnophis hammondii hammondii	Two-striped Gartersnake		Special Concern	ARSSC
Anaxyrus punctatus	Red-spotted Toad			
Pseudacris cadaverina	California Treefrog			ARSSC
Thamnophis hammondii hammondii	Two-striped Gartersnake		Special Concern	ARSSC
INSECTS & OTHER INVERTS				
Abedus spp.	Abedus spp.			
Anax junius	Common Green Darner			
Argia nahuana	Aztec Dancer			
Argia spp.	Argia spp.			

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Argia vivida	Vivid Dancer			
Baetis adonis	A Mayfly			
Baetis spp.	Baetis spp.			
Belostomatidae fam.	Belostomatidae fam.			
Callibaetis spp.	Callibaetis spp.			
Chaetarthria pallida				Not on any status lists
Chironomidae fam.	Chironomidae fam.			
Coenagrionidae fam.	Coenagrionidae fam.			
Cricotopus spp.	Cricotopus spp.			
Cryptochironomus spp.	Cryptochironomus spp.			
Enallagma civile	Familiar Bluet			
Erpetogomphus compositus	White-belted Ringtail			
Erpetogomphus spp.	Erpetogomphus spp.			
Erythemis collocata	Western Pondhawk			
Eucorethra underwoodi				Not on any status lists
Eukiefferiella spp.	Eukiefferiella spp.			
Fallceon quilleri	A Mayfly			
Fallceon spp.	Fallceon spp.			
Gomphidae fam.	Gomphidae fam.			
Helichus spp.	Helichus spp.			
Helicopsyche spp.	Helicopsyche spp.			
Hetaerina americana	American Rubyspot			
Heterelmis obesa				Not on any status lists
Heterotrissocladius spp.	Heterotrissocladius spp.			
Hydropsyche spp.	Hydropsyche spp.			
Hydropsychidae fam.	Hydropsychidae fam.			
Hydroptila spp.	Hydroptila spp.			
Hydroptilidae fam.	Hydroptilidae fam.			
Laccobius spp.	Laccobius spp.			
Larsia spp.	Larsia spp.			
Lauterborniella spp.	Lauterborniella spp.			
Lethocerus americanus				Not on any status lists
Libellula croceipennis	Neon Skimmer			
Libellula saturata	Flame Skimmer			
Libellulidae fam.	Libellulidae fam.			

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Macrodiplax balteata	Marl Pennant			
Meropelopia spp.	Meropelopia spp.			
Nilotanypus spp.	Nilotanypus spp.			
Ochrotrichia spp.	Ochrotrichia spp.			
Ophiogomphus spp.	Ophiogomphus spp.			
Orthemis ferruginea	Roseate Skimmer			
Pachydiplax longipennis	Blue Dasher			
Paltothemis lineatipes	Red Rock Skimmer			
Pantala flavescens	Wandering Glider			
Paracladopelma spp.	Paracladopelma spp.			
Parametriocnemus spp.	Parametriocnemus spp.			
Paratendipes spp.	Paratendipes spp.			
Peltodytes spp.	Peltodytes spp.			
Pentaneura spp.	Pentaneura spp.			
Perithemis intensa	Mexican Amberwing			
Phaenopsectra spp.	Phaenopsectra spp.			
Polypedilum spp.	Polypedilum spp.			
Postelichus spp.	Postelichus spp.			
Pseudochironomus spp.	Pseudochironomus spp.			
Radotanypus spp.	Radotanypus spp.			
Rhagovelia spp.	Rhagovelia spp.			
Rheotanytarsus spp.	Rheotanytarsus spp.			
Rhionaeschna multicolor	Blue-eyed Darner			
Sanfilippodytes spp.	Sanfilippodytes spp.			
Simulium spp.	Simulium spp.			
Sperchon spp.	Sperchon spp.			
Stictotarsus striatellus				Not on any status lists
Sympetrum corruptum	Variegated Meadowhawk			
Sympetrum spp.	Sympetrum spp.			
Tanytarsus spp.	Tanytarsus spp.			
Tinodes spp.	Tinodes spp.			
MAMMALS				
Castor canadensis	American Beaver			Not on any status lists
MOLLUSKS				
Physa spp.	Physa spp.			
PLANTS				

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Cont.

Baccharis salicina				Not on any status lists
Castilleja minor minor	Alkali Indian-paintbrush			
Castilleja minor spiralis	Large-flower Annual Indian-paintbrush			
Datisca glomerata	Durango Root			
Juncus dubius	Mariposa Rush			
Juncus rugulosus	Wrinkled Rush			
Juncus xiphioides	Iris-leaf Rush			
Lythrum californicum	California Loosestrife			
Mimulus guttatus	Common Large Monkeyflower			
Phacelia distans	NA			
Platanus racemosa	California Sycamore			
Pluchea sericea	Arrow-weed			
Salix exigua exigua	Narrowleaf Willow			
Salix gooddingii	Goodding's Willow			
Salix laevigata	Polished Willow			
Schoenoplectus americanus	Three-square Bulrush			
Typha domingensis	Southern Cattail			
Veronica anagallis-aquatica	NA			
Phacelia distans	NA			

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Attachment D

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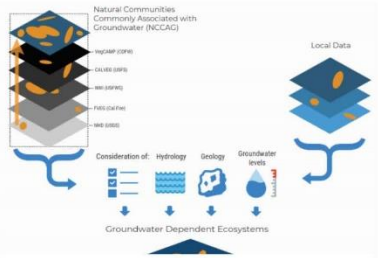
IDENTIFYING GDEs UNDER SGMA
Best Practices for using the NC Dataset

The Sustainable Groundwater Management Act (SGMA) requires that groundwater dependent ecosystems (GDEs) be identified in Groundwater Sustainability Plans (GSPs). As a starting point, the Department of Water Resources (DWR) is providing the Natural Communities Commonly Associated with Groundwater Dataset (NC Dataset) online[14] to help Groundwater Sustainability Agencies (GSAs), consultants, and stakeholders identify GDEs within individual groundwater basins. To apply information from the NC Dataset to local areas, GSAs should combine it with the best available science on local hydrology, geology, and groundwater levels to verify whether polygons in the NC dataset are likely supported by groundwater in an aquifer (Figure 1)[15]. This document highlights six best practices for using local groundwater data to confirm whether a potential GDE identified in the NC dataset is supported to groundwater.

The NC Dataset identifies vegetation and wetland features that are good indicators of a GDE. The dataset is comprised of 48 publicly available state and federal datasets that map vegetation, wetlands, springs, and seeps commonly associated with groundwater in California[16]. It was developed through a collaboration between DWR, the Department of Fish and Wildlife, and The Nature Conservancy (TNC). TNC has also provided detailed guidance on identifying GDEs from the NC dataset[17] on the Groundwater Resource Hub, a website dedicated to GDEs[18].



[14] NC Dataset Online Viewer is available at: https://gis.water.ca.gov/app/NCDatasetViewer/
[15] California Department of Water Resources (DWR). 2018. Summary of the "Natural Communities Commonly Associated with Groundwater" Dataset and Online Web Viewer. Available at: https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Groundwater-Management/Data-and-Tools/Files/Statewide-Reports/Natural-Communities-Dataset-Summary-Document.pdf
[16] For more details on the mapping methods, refer to: Klausmeyer, K., J. Howard, T. Keeler-Wolf, K. Davis-Fadtke, R. Hull, A. Lyons. 2018. Mapping Indicators of Groundwater Dependent Ecosystems in California: Methods Report. San Francisco, California. Available at: https://groundwaterresourcehub.org/public/uploads/pdfs/iGDE_data_paper_20180423.pdf
[17] "Groundwater Dependent Ecosystems under the Sustainable Groundwater Management Act: Guidance for Preparing Groundwater Sustainability Plans" is available at https://groundwaterresourcehub.org/gde-tools/gsp-guidance-document/
[18] The Groundwater Resource Hub is available at: www.GroundwaterResourceHub.org

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BEST PRACTICE #1. Establishing a Connection to Groundwater

Groundwater basins can be comprised of one continuous aquifer (Figure 2A) or multiple aquifers stacked on top of each other (Figure 2B). In unconfined aquifers (Figure 2A), using the depth to groundwater and the rooting depth of the vegetation is a reasonable method to determine groundwater dependence for GDEs. If groundwater is well below the rooting (and capillary) zone of the plants and any wetland features, the ecosystem is considered disconnected and groundwater management is not likely to affect the ecosystem (Figure 2D). However, it is important to consider local conditions (soil type, groundwater flow gradients, and aquifer parameters) and to review groundwater depth data from multiple seasons and water year types (wet and dry) because intermittent periods of high groundwater levels can replenish perched clay lenses that serve as the water source for GDEs (Figure 2C). Maintaining these natural groundwater fluctuations are important to sustaining GDE health.

Basins with a stacked series of aquifers (Figure 2B) may have varying levels of pumping across aquifers in the basin, depending on the production capacity or water quality associated with each aquifer. If pumping is concentrated in deeper aquifers, SGMA still requires GSAs to sustainably manage groundwater resources in shallow aquifers, such as perched aquifers, that support springs, surface water, domestic wells, and groundwater dependent ecosystems (Figure 2). This is because vertical groundwater gradients across aquifers may result in pumping from deeper aquifers to cause adverse impacts onto beneficial users reliant on shallow aquifers or interconnected surface water. The goal of SGMA is to sustainably manage groundwater resources for current and future social, economic, and environmental benefits. While groundwater pumping may not be currently occurring in a shallower aquifer, use of this water may become more appealing and economically viable in future years as pumping restrictions are placed on the deeper production aquifers in the basin to meet the sustainable yield and criteria. Thus, identifying GDEs in the basin should done irrespective to the amount of current pumping occurring in a particular aquifer, so that future impacts on GDEs due to new production can be avoided. A good rule of thumb to follow is: *if groundwater can be pumped from a well - it's an aquifer.*

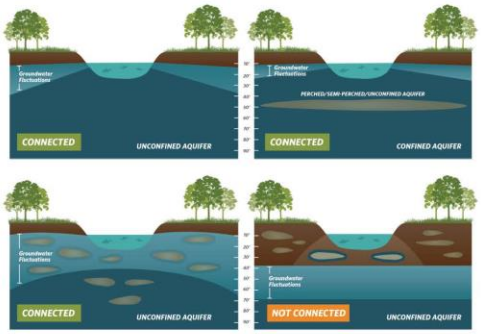

Figure 2. Confirming whether an ecosystem is connected to groundwater in a principal aquifer. Top: (Left) Depth to Groundwater in the aquifer under the ecosystem is an unconfined aquifer with depth to groundwater fluctuating seasonally and interannually within 30 feet from land surface. **(Right)** Depth to Groundwater in the shallow aquifer is connected to overlying ecosystem. Pumping predominately occurs in the confined aquifer, but pumping is possible in the shallow aquifer. **Bottom: (Left)** Depth to groundwater fluctuations are seasonally and interannually large, however, clay layers in the near surface prolong the ecosystem's connection to groundwater. **(Right)** Groundwater is disconnected from surface water, and any water in the vadose (unsaturated) zone is due to direct recharge from precipitation and indirect recharge under surface water feature. These areas typically support species that do not require access to groundwater to survive.

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BEST PRACTICE #2. Characterize Seasonal and Interannual Groundwater Conditions

SGMA requires GSAs to describe current and historical groundwater conditions when identifying GDEs [23 CCR §354.16(g)]. Relying solely on the SGMA benchmark date (January 1, 2015) or any other single point in time to characterize groundwater conditions (e.g., depth-to-groundwater) is inadequate because managing groundwater conditions with data from one time point fails to capture the seasonal and interannual variability typical of California's climate. DWR's Best Management Practices document on water budgets[19] recommends using 10 years of water supply and water budget information to describe how historical conditions have impacted the operation of the basin within sustainable yield, implying that a baseline[20] could be determined based on data between 2005 and 2015. Using this or a similar time period, depending on data availability, is recommended for determining the depth-to-groundwater.

GDEs depend on groundwater levels being close enough to the land surface to interconnect with surface water systems or plant rooting networks. The most practical approach[21] for a GSA to assess whether polygons in the NC dataset are connected to groundwater is to rely on groundwater elevation data. As detailed in TNC's GDE guidance document[4], one of the key factors to consider when mapping GDEs is to contour depth-to-groundwater in the aquifer that is supporting the ecosystem (See Best Practice #5).

Groundwater levels fluctuate over time and space due to California's Mediterranean climate (dry summers and wet winters), climate change (flood and drought years), and subsurface heterogeneity in the subsurface (Figure 3). Many of California's GDEs have adapted to dealing with intermittent periods of water stress, however, if these groundwater conditions are prolonged adverse impacts to GDEs can result. While depth-to-groundwater levels within 30 feet[4] are generally accepted as being a proxy for confirming that polygons in the NC dataset are supported by groundwater, it is highly advised that fluctuations in the groundwater regime be characterized to understand the seasonal and interannual groundwater variability in GDEs. Utilizing groundwater data from one point in time can misrepresent groundwater levels required by GDEs, and inadvertently result in adverse impacts to the GDEs. Time series data on groundwater elevations and depths are available on the SGMA Data Viewer[22]. However, if insufficient data are available to describe groundwater conditions within or near polygons from the NC dataset, include those polygons in the GSP until data gaps are reconciled in the monitoring network (See Best Practice #6).

Figure 3. Example seasonality and interannual variability in depth to groundwater over time. Selecting one point in time, such as Spring 2018, to characterize groundwater conditions in GDEs fails to capture what groundwater conditions are necessary to maintain the ecosystem status into the future so adverse impacts are avoided.

O5-25 Cont.

[19] DWR. 2016. Water Budget Best Management Practice. Available at: https://water.ca.gov/LegacyFiles/groundwater/sgm/pdfs/BMP_Water_Budget_Final_2016-12-23.pdf

[20] *Baseline is defined under the GSP regulations as "historic information used to project future conditions for hydrology, water demand, and availability of surface water and to evaluate potential sustainable management practices of a basin." [23 CCR §351(e)]*

[21] Groundwater reliance can also be confirmed via stable isotope analysis and geophysical surveys. For more information see The GDE Assessment Toolbox (Appendix IV, GDE Guidance Document for GSPs - link in footnote above).

[22] *SGMA Data Viewer: https://sgma.water.ca.gov/webgis/?appid=SGMADataViewer*

BEST PRACTICE #3. Ecosystems Often Rely on Both Groundwater and Surface Water

GDEs are plants and animals that rely on groundwater for all or some of its water needs, and thus can be supported by multiple water sources. The presence of non-groundwater sources (e.g., surface water, soil moisture in the vadose zone, applied water, treated wastewater effluent, urban stormwater, irrigated return flow) within and around NC polygons does not preclude the possibility that a connection to groundwater exists. SGMA defines GDEs as "ecological communities and species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface" [23 CCR §351(m)]. Hence, depth-to-groundwater data should be used to identify whether NC polygons are supported by groundwater and should be considered GDEs. In addition, SGMA requires that significant and undesirable adverse impacts to beneficial users of surface water be avoided. Beneficial users of surface water include environmental users such as plants or animals[23], which therefore must be considered when developing minimum thresholds for depletions of interconnected surface water.

GSAs are only responsible for impacts to GDEs resulting from groundwater conditions in the basin, so if adverse impacts to GDEs result from the diversion of applied water, treated wastewater, or irrigation return flow away from the GDE, then those impacts will be evaluated by other permitting requirements (e.g., CEQA) and may not be the responsibility of the GSA. However, if adverse impacts occur to the GDE due to changing groundwater conditions resulting from pumping or groundwater management activities, then the GSA would be responsible (Figure 4).

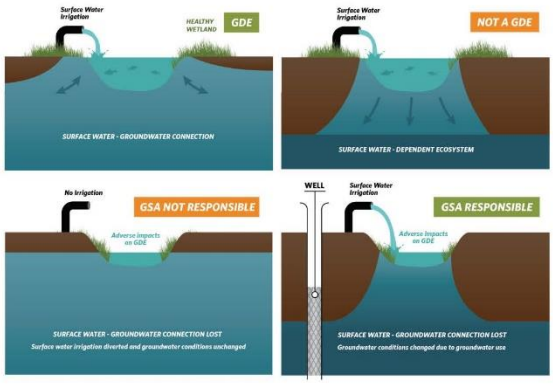

Figure 4. Ecosystems often depend on multiple sources of water. Top: (Left) Surface water and groundwater are interconnected, meaning that the GDE is supported by both groundwater and surface water. **(Right)** Ecosystems that are only reliant on non-groundwater sources are not groundwater-dependent. **Bottom: (Left)** An ecosystem that was once dependent on an interconnected surface water, but loses access to groundwater solely due to surface water diversions may not be the GSA's responsibility. **(Right)** Groundwater dependent ecosystems once dependent on an interconnected surface water system, but loses that access due to groundwater pumping is the GSA's responsibility.

O5-25 Cont.

[23] *For a list of environmental beneficial users of surface water by basin, visit: https://groundwaterresourcehub.org/gde-tools/environmental-surface-water-beneficiaries/*

BEST PRACTICE #4. Select Representative Groundwater Wells

Identifying GDEs in a basin requires that groundwater conditions are characterized to confirm whether polygons in the NC dataset are supported by the underlying aquifer. To do this, proximate groundwater wells should be identified to characterize groundwater conditions (Figure 5). When selecting representative wells, it is particularly important to consider the subsurface heterogeneity around NC polygons, especially near surface water features where groundwater and surface water interactions occur around heterogeneous stratigraphic units or aquitards formed by fluvial deposits. The following selection criteria can help ensure groundwater levels are representative of conditions within the GDE area:

- Choose wells that are within 5 kilometers (3.1 miles) of each NC Dataset polygons because they are more likely to reflect the local conditions relevant to the ecosystem. If there are no wells within 5km of the center of a NC dataset polygon, then there is insufficient information to remove the polygon based on groundwater depth. Instead, it should be retained as a potential GDE until there are sufficient data to determine whether or not the NC Dataset polygon is supported by groundwater.
- Choose wells that are screened within the surficial unconfined aquifer and capable of measuring the true water table.
- Avoid relying on wells that have insufficient information on the screened well depth interval for excluding GDEs because they could be providing data on the wrong aquifer. This type of well data should not be used to remove any NC polygons.

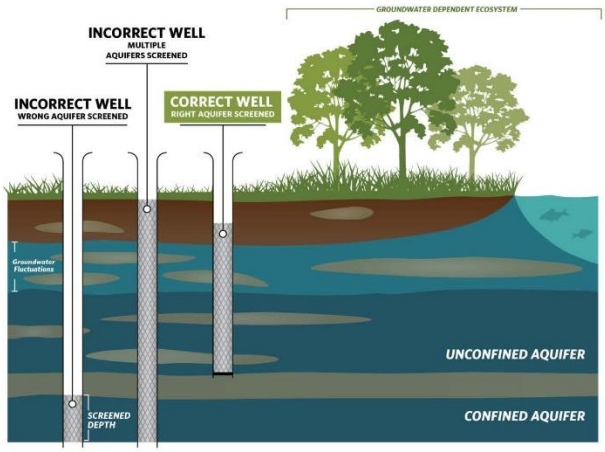

Figure 5. Selecting representative wells to characterize groundwater conditions near GDEs.

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BEST PRACTICE #5. Contouring Groundwater Elevations

The common practice to contour depth-to-groundwater over a large area by interpolating measurements at monitoring wells is unsuitable for assessing whether an ecosystem is supported by groundwater. This practice causes errors when the land surface contains features like streams and wetlands depressions because it assumes the land surface is constant across the landscape and depth-to-groundwater is constant below these low-lying areas (Figure 6 - left panel). A more accurate approach is to interpolate **groundwater elevations** at monitoring wells to get an estimate of groundwater elevation across the landscape. This layer can then be subtracted from the land surface elevation from a Digital Elevation Model (DEM)[24] to estimate depth to groundwater contours across the landscape (Figure 6 – right panel; Figure 7). This will provide a much more accurate contours of depth-to-groundwater along streams and other land surface depressions where GDEs are commonly found.

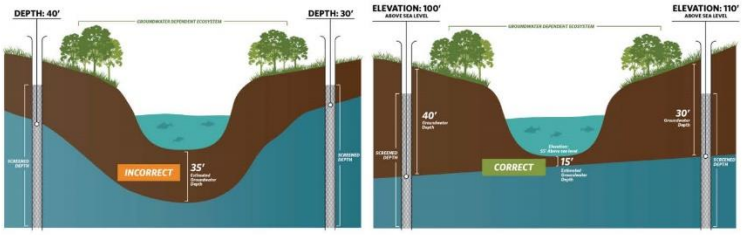

Figure 6. Contouring depth-to-groundwater around surface water features and GDEs. (Left) Groundwater level interpolation using depth-to-groundwater data from monitoring wells. **(Right)** Groundwater level interpolation using groundwater elevation data from monitoring wells and DEM data.

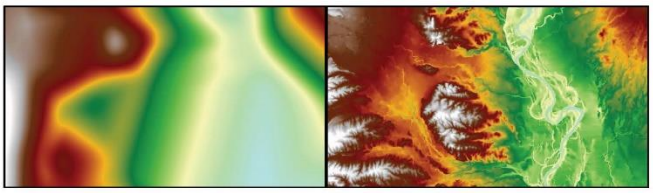

Figure 7. Depth to Groundwater Contours in Northern California. (Left) Contours were interpolated using depth to groundwater measurements determined at each well. **(Right)** Contours were determined by interpolating groundwater elevation measurements at each well and superimposing ground surface elevation from DEM spatial data to generate depth to groundwater contours. The image on the right shows a more accurate depth to groundwater estimate because it takes the local topography and elevation changes into account.

[24] USGS Digital Elevation Model data products are described at: https://www.usgs.gov/core-science-systems/ngp/3dep/about-3dep-products-services and can be downloaded at: https://viewer.nationalmap.gov/basic/

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BEST PRACTICE #6. Best Available Science

Adaptive management is embedded within SGMA and provides a process to work toward sustainability over time by beginning with the best available information to make initial decisions, monitoring the results of those decisions, and using the data collected through monitoring to revise decisions in the future. In many situations, the hydrologic connection of NC dataset polygons will not initially be clearly understood if site-specific groundwater monitoring data are not available. If sufficient data are not available in time for the 2020/2022 plan, **The Nature Conservancy strongly advises that questionable polygons from the NC dataset be included in the GSP until data gaps are reconciled in the monitoring network.** Erring on the side of caution will help minimize inadvertent impacts to GDEs as a result of groundwater use and management actions during SGMA implementation.

KEY DEFINITIONS

Groundwater basin is an aquifer or stacked series of aquifers with reasonably well-defined boundaries in a lateral direction, based on features that significantly impede groundwater flow, and a definable bottom. *23 CCR §341(g)(1)*

Groundwater dependent ecosystem (GDE) are ecological communities or species that depend on groundwater emerging from aquifers or on groundwater occurring near the ground surface. *23 CCR §351(m)*

Interconnected surface water (ISW) surface water that is hydraulically connected at any point by a continuous saturated zone to the underlying aquifer and the overlying surface water is not completely depleted. *23 CCR §351(o)*

Principal aquifers are aquifers or aquifer systems that store, transmit, and yield significant or economic quantities of groundwater to wells, springs, or surface water systems. *23 CCR §351(aa)*

ABOUT US

The Nature Conservancy is a science-based nonprofit organization whose mission is *to conserve the lands and waters on which all life depends*. To support successful SGMA implementation that meets the future needs of people, the economy, and the environment, TNC has developed tools and resources (www.groundwaterresourcehub.org) intended to reduce costs, shorten timelines, and increase benefits for both people and nature.

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Attachment E

GDE Pulse

A new, free online tool that allows Groundwater Sustainability Agencies to assess changes in groundwater dependent ecosystem (GDE) health using satellite, rainfall, and groundwater data.

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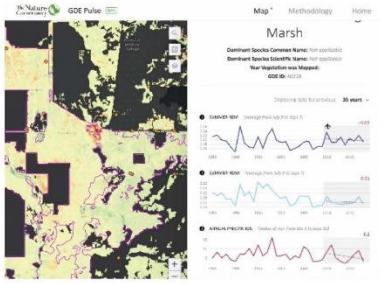
Visit
https://gde.codefornature.org/



Remote sensing data from satellites has been used to monitor the health of vegetation all over the planet. GDE pulse has compiled 35 years of satellite imagery from NASA's Landsat mission for every polygon in the Natural Communities Commonly Associated with Groundwater Dataset[25]. The following datasets are included:

O5-26

Normalized Difference Vegetation Index (NDVI) is a satellite-derived index that represents the greenness of vegetation. Healthy green vegetation tends to have a higher NDVI, while dead leaves have a lower NDVI. We calculated the average NDVI during the driest part of the year (July - Sept) to estimate vegetation health when the plants are most likely dependent on groundwater.

Normalized Difference Moisture Index (NDMI) is a satellite-derived index that represents water content in vegetation. NDMI is derived from the Near-Infrared (NIR) and Short-Wave Infrared (SWIR) channels. Vegetation with adequate access to water tends to have higher NDMI, while vegetation that is water stressed tends to have lower NDMI. We calculated the average NDVI during the driest part of the year (July–September) to estimate vegetation health when the plants are most likely dependent on groundwater.

Annual Precipitation is the total precipitation for the water year (October 1st – September 30th) from the PRISM dataset[26]. The amount of local precipitation can affect vegetation with more precipitation generally leading to higher NDVI and NDMI.

Depth to Groundwater measurements provide an indication of the groundwater levels and changes over time for the surrounding area. We used groundwater well measurements from nearby (<1km) wells to estimate the depth to groundwater below the GDE based on the average elevation of the GDE (using a digital elevation model) minus the measured groundwater surface elevation.

[25] *The Natural Communities Commonly Associated with Groundwater Dataset is hosted on the California Department of Water Resources' website: https://gis.water.ca.gov/app/NCDatasetViewer/#*

[26] The PRISM dataset is hosted on Oregon State University's website: http://www.prism.oregonstate.edu/

Letter O5

Commenter: Sandi Matsumoto, Associate Director, California Water Program, The Nature Conservancy
Date: May 21, 2019

O5-1 This comment provides introductory information about The Nature Conservancy's role in advocating for land and water conservation, clarifying its interest in the implementation of SGMA and summarizes the tools and resources it has developed to assist GSAs in identifying and evaluating interconnected surface waters and groundwater dependent ecosystems (GDEs). Specific responses to issues raised are provided below (responses to Comment O5-3 through Comment O5-27).

O5-2 The GSA appreciates TNC's provision of its detailed checklist for considering nature. The GSP has adequately considered interconnected surface waters and GDEs in accordance with SGMA. Specific responses to issues raised are provided below (responses Comment O5-3 through Comment O5-27).

O5-3 Please see Master Response regarding GDEs. The technical appendix identifying and evaluating GDEs (GSP Appendix D4) has been updated with additional information to provide further evidence that there are no groundwater dependent ecosystems and other species that depend on interconnected surface water within the Borrego Subbasin. In addition, as requested, the GSP has identified lands protected open space preserves, habitat reserves, wildlife refuges, etc. by both state (ABDSP) and non-profit (Anza-Borrego Foundation), described in GSP Section 2.1.1 (see also Figure 2.1-4 and Table 2.1-2).

O5-4 The GSP has been revised to incorporate suggested revisions. Information on the depth to groundwater for the nearest wells to each GDE Unit shown in Figure 2.2-17 has been added.

O5-5 Interconnected surface waters (ISWs) are identified in GSP Chapter 2, Section 2.2.2.6, and shown in Figure 2.2-17. These features were identified through the U.S. Geological Survey's watershed boundary dataset and local mapping of perennial waters provided by Anza Borrego Desert State Park. The GSA's assessment does not rely solely on stream segments mapped as perennial, but is supported by data provided by ABDSP; review of historical stream flow data; manual stream flow measurements and field observation of Coyote Creek; and more generally, the Subbasin's conceptual hydrogeological model. The HCM, supported by geologic cross sections and groundwater levels recorded in monitoring wells, indicates that as soon as the basin boundary is crossed, perennial waters, where present, rapidly

transition to disconnected streams. These areas are characterized by desert alluvial fan morphology, which consist of thick packages of coarse permeable sediment conducive to recharge. The commenter is referred to GSP Appendix D4, Section 2 and Section 5.1 for an in depth discussion.

Although groundwater monitoring and stream gauge sites are sparse around the margins of the Subbasin, the available data indicates the depth to water, even in locations close to the mountain front, is hundreds of feet below the ground surface, as discussed in GSP Section 2.2.2.7. The GSP has been revised to correct a typo which misidentified State Park Well No. 3 as the Horse Camp Well. This well has a depth to groundwater of 347.84 feet, as measured in Spring 2018. The Horse Camp Well (which has a groundwater depth of 287.69 feet) and State Park Well No. 3 are the best available data to indicate the depth to water beneath Coyote Creek and Borrego Palm Creek, respectively. Figure 2.2-17 has been amended to include these monitoring well locations, and elevation contours have been added to Figures 2.2-13A through 2.2-13C to show the difference between groundwater levels and the land surface.

The GSA recognizes that the hydraulic connection between surface water and groundwater does not need to be spatially coincident or permanent in nature for a surface water body to be defined as an ISW. As discussed in the GSP, the hydraulic connection to groundwater occurs from springs and the fractured rock aquifer that exists outside the Subbasin's boundaries. Surface water that originates from groundwater sources outside the Subbasin are rapidly lost to percolation, transpiration or evaporation. While they may be ISWs, their status as ISWs is not affected by pumping within the Subbasin or implementation of the GSP. The GSA has not identified a data gap associated with knowledge of ISWs because there is enough evidence to show that the Subbasin as a whole is a system whose surface waters are disconnected from the underlying groundwater system (i.e., losing streams) and is not hydraulically connected by a continuous saturated zone to the underlying aquifer.

O5-6 There are no NCCAG polygons that the GSA has evaluated as representing current GDEs. The Master Response on groundwater dependent ecosystems clarifies why the GSA has determined that there are no undesirable effects associated with GDEs. The GSP addresses GDEs in Section 2.2.2.7 and in Appendix D4. The GSP has been amended as follows in response to this question:

- Information on the depth to groundwater for the nearest wells to each GDE Unit shown in Figure 2.2-17 has been added.

- Elevation contours have been added to Figures 2.2-13A through 2.2-13C to show the difference between groundwater levels and the land surface.
- All edits described in the GDE Master Response.

O5-7 The GSP has provided all available data on groundwater elevation in monitoring wells through 2018. See prior responses on how the GSP has been amended to provide additional clarity on depth to groundwater.

O5-8 The commenter is referred to the master response on GDEs.

O5-9 The GSP does not identify NCCAG-mapped GDEs as an undesirable result under SGMA, and therefore does not include a sustainability goal specific to GDEs. The minimum thresholds, measurable objectives, and projects and management actions described in GSP Chapters 3 and 4 are designed to culminate in the absence of undesirable results by 2040.

O5-10 The commenter is referred to the master response on GDEs.

O5-11 See master response. Additional evidence is provided by using the TNC iGDE dataset, which shows changes in plant moisture over time are closely correlated with precipitation patterns, and not correlated with groundwater level trends. The GSA has amended Appendix D4 and Section 2.2.2.7 of the GSP to provide this additional evidence.

O5-12 The commenter is referred to the master response on GDEs. The GSA appreciates TNC's reference to Ventura County case studies.

O5-13 The commenter is referred to the master response on GDEs. The GSP concludes that impacts to groundwater dependent ecosystems are a pre-2015 impact and is not currently an undesirable result applicable to the Subbasin.

O5-14 The commenter is referred to the master response on GDEs. Because there is no significant nexus between the Honey Mesquite habitat and the regional groundwater table, an analysis of whether any legally protected species rely on the honey mesquite habitat is not required.

O5-15 The commenter is referred to the master responses on GDEs and the initial estimate of sustainable yield. The commenter is also referred to the GSAs response to Letter O2.

O5-16 The commenter is referred to the master responses on the initial estimate of sustainable yield. The sustainable yield is based on the USGS pre-development scenario in the

BVHM, and is confirmed through a water budget as presented in response to Letter O2. The GSP recognizes that the long-term average for natural recharge may not be reproduced in the future, especially over shorter time intervals, as evaluated through a Monte Carlo Simulation (MCS) uncertainty analysis, described in GSP Section 3.3.1.1. This analysis found that the uncertainty associated with climate variability is much greater than that associated with climate change.

O5-17 The commenter is referred to GSP Section 3.2, which defines what the GSA considers to be undesirable results for each of SGMA's sustainability indicators. The measurable objectives, interim milestones, and minimum thresholds established in the GSP are fixed standards that are not influenced by how groundwater conditions have changed between 2015 and 2019. The commenter assumes that any decline in the groundwater level or amount of groundwater in storage amounts to an adverse impact to beneficial users of groundwater. This is not the case, because the GSA has defined what would constitute an undesirable result in Section 3.2, and has determined that impacts to interconnected surface waters and GDEs occurred prior to 2015 and thus has not established sustainable management criteria for GDEs. Beneficial users consist of municipal, agricultural, recreational, and other uses (i.e., small water systems and non-potable irrigators), and do not include environmental uses. Operational flexibility is provided in the difference between interim milestones and minimum thresholds in key indicator wells, as described in GSP Section 3.4 and shown in Figure 3.4-1.

O5-18 The commenter is referred to response to Comment O5-14.

O5-19 The commenter is referred to response to Comment O5-17.

O5-20 The commenter is referred to the master response on GDEs.

O5-21 The commenter's suggestion is noted. The GSA will continue to use the existing groundwater level monitoring network to assess Subbasin conditions, and further develop the groundwater level network over the GSP's planning and implementation horizon, in accordance with adaptive management needs and as necessary to meet the GSP's sustainability goal.

O5-22 The commenter's suggestion is noted. The GSA will continue to use the BCM in future model updates, and incorporate new streamflow records that may become available within the watershed, in accordance with adaptive management needs and as necessary to meet the GSP's sustainability goal.

O5-23 The GSA appreciates the case studies linked by TNC. In response to this and other comments on the GSP, the GSA has modified some of its language to be more open ended with regard to multibenefit groundwater recharge projects. However, the GSA is not proposing specific groundwater recharge PMAs at this time because there are few existing barriers to recharge (i.e., hardened stream channels) within the Subbasin. The construction and maintenance costs and the regulatory constraints (i.e., FEMA floodplain considerations) that would be involved in building artificial/engineered recharge projects within the Subbasin are greatly disproportionate to the benefits of such a project. Though uncertain, the additional recharge provided by such projects would occur highly infrequently (i.e., high rainfall years when runoff is sufficient to reach the Borrego Sink), likely impossible to predict or forecast, and would add only incrementally to total recharge during major wet years. However, the GSA would encourage the construction of small scale recharge projects in conjunction with golf course renovation, or new development and/or redevelopment project, consistent with existing County stormwater regulations.

O5-24 The commenter is referred to the master response on GDEs. Because there is no significant nexus between interconnected surface waters and the regional groundwater table, the sustainable management criteria established to achieve the sustainability goal of the GSP will not impact the list of freshwaters species provided by TNC in its Attachment C.

O5-25 The GSA appreciates the guidance developed by TNC to identify and evaluate potential GDEs within groundwater basins. TNC is referred to GSP appendix D4 which implements many of the principles and practices discussed in the guidance. The commenter is referred to the master response on GDEs.

O5-26 The GSA appreciates the guidance developed by TNC to identify and evaluate potential GDEs within groundwater basins. TNC is referred to GSP Appendix D4 which implements many of the principles and practices discussed in the guidance. The commenter is referred to the master response on GDEs.

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Comment Letter O6

Fostering the protection and appreciation SAN DIEGO AUDUBON SOCIETY *of birds, other wildlife and their habitats...*

May 17, 2019

Jim Bennett
County of San Diego Planning & Development
5510 Overland, Avenue, Suite 310
San Diego, CA 92123
Re: Draft Groundwater Sustainability Plan for the Borrego Valley Groundwater Basin
Dear Mr. Jim Bennett,

San Diego Audubon Society (SDAS) appreciates the opportunity to comment on the Draft Groundwater Sustainability Plan (GSP) for the Borrego Valley Basin (Plan) being prepared under the Sustainable Groundwater Management Act (SGMA), as an environmental stakeholder in the basin. SDAS is a non-profit organization with a mission to foster the protection and appreciation of birds, other wildlife, and their habitats, through education and study, and advocate for a cleaner, healthier environment. The San Diego Audubon Society advocates on behalf of birds, other wildlife and their habitats. O6-1

SDAS reviewed the Draft GSP for the Borrego Valley Basin to assess the treatment of groundwater dependent ecosystems and interconnected surface water systems as required by SGMA. SDAS has an interest in sustainable groundwater management because many wildlife habitats and ecosystems rely on groundwater or interconnected surface water. This letter will outline concerns we have with three topics discussed in the GSP: 1) Groundwater Dependent Ecosystems, 2) Beneficial Uses and Users of Groundwater, and 3) Depletions of Interconnected Surface Water Systems.

Groundwater Dependent Ecosystems

The SGMA requires that all beneficial users and uses of groundwater, including Groundwater Dependent Ecosystems (GDE), be considered in the GSP (CWC Section 10723.2). There are three GDE's described in the Plan: Coyote Creek, Palm Canyon, and Mesquite Bosque. Other GDE's mentioned are Hellhole Palms. Tubb Canyon, and Glorietta Canyon, though there is no analysis of their ecological condition, past or present and their hydrological relationship, to the Subbasin. This appears to us to be a significant deficiency. Please revise the GSP to include this information for all of the relevant GDEs and include information on the likely impacts of the lack of ground water sustainability on key species in each of these GDEs. O6-2

Beneficial Users and Uses of Groundwater

The Plan designates beneficial users for surface waters including freshwater habitat, wildlife habitat and preservation of rare, threatened or endangered species. Under SGMA, depletions of surface waters interconnected with water in the Subbasin that have significant and adverse impacts on beneficial users of surface waters constitute an undesirable result (CWC Section 10721(x)(6)). There are brief and inadequate descriptions of all three GDE's in the Plan. Coyote Canyon and Palm Canyon list none of the species and/or current dependence on surface water feeding these regions. The descriptions for Mesquite Bosque concentrate on the Honey Mesquite Bosque and other native plants, but doesn't identity specific species. Section 2.1.4 Beneficial Uses and Users of Groundwater (p. 2-26) fails to O6-3

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identify environmental users of groundwater, including groundwater dependent ecosystems and species that depend on interconnected surface waters. The Least Bell's Vireo is an endangered species with critical habitat on Coyote Creek, and there are numerous other species who should be identified as beneficial users of groundwater. Please perform an accounting of species and add Environmental Users to Table 2.1-7 (p. 2-26).

O6-3 Cont.

A USGS (2015) study noted that phreatophytes roots in the Borrego Sink was 15.3 feet though they have been known to reach 150 feet. The historic groundwater table was within 10 feet of the surface at Mesquite Bosque, which was the site of 450 acres of honey mesquite and other native phreatophytes. The Draft GSP describes the honey mesquite bosque as completely disconnected from groundwater as a result of pre-2015 impacts to the groundwater from pumping. But there is no thorough description of the existing ecological conditions of the Mesquite Bosque and the claim that remaining vegetation does not rely on groundwater is based on a rooting depth estimate from one modeling study. Additional research with field studies should be conducted to determine if the Mesquite Bosque is connected to and dependent on groundwater, including between 2015 and 2019.

O6-4

Depletions of Interconnected Surface Water Systems

Section 3.2.6 (p. 3-14) does not identify depletions of interconnected surface waters as an undesirable result because it describes impacts to interconnected surface waters as having occurred prior to 2015. The Draft GSP again describes the Mesquite Bosque as being disconnected from groundwater because of pre-2015 groundwater depletion, but there is insufficient scientific evidence to support this conclusion. The current ecological conditions are not thoroughly described and no field studies are utilized to characterize the relationship between groundwater and the habitat. Without further evidence the Mesquite Bosque should be considered a GDE and interconnected surface water and the sustainability criteria should be defined to avoid significant and unreasonable results to this site. In addition, please provide data on any Federal or State endangered species that rely on the Mesquite Bosque habitat and measures that can be taken for protection.

O6-5

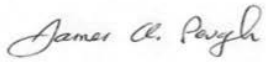
Because the Draft GSP allows additional declines in groundwater levels while pumping restrictions are phased in, it is critical that GDEs and interconnected surface water systems are accurately identified so that post-2015 impacts can be avoided. Minimum thresholds should be set to prevent further impacts to interconnected surface water systems.

O6-6

Thank you for your consideration of San Diego Audubon Society's comments on the Draft Groundwater Sustainability Plan for the Borrego Valley Basin. SDAS looks forward to seeing further improvements in the GSP and supports the long-term efforts towards sustainable groundwater management. Please contact us at conservation@sandiegoaudubon.org, or 858-723-7800 if there are further questions.

O6-7

Sincerely,



James A. Peugh
Conservation Chair
San Diego Audubon Society

Page 2

Letter O6

Commenter: James A. Peugh, Conservation Chair, San Diego Audubon Society
Date: May 17, 2019

O6-1 This comment provides introductory information about San Diego Audubon Society's role as an environmental stakeholder in advocating for the appreciation, conservation, and the education/study of birds and other wildlife. The San Diego Audubon Society's main concerns about the GSP involve groundwater dependent ecosystems (GDEs), the beneficial uses and users of groundwater, and interconnected surface waters. Specific responses to issues raised are provided below (responses to Comment O6-2 through Comment O6-7).

O6-2 The commenter is referred to GSP Appendix D4, which provides a complete identification and evaluation of the potential GDEs identified by The Nature Conservancy's NCCAG dataset. The commenter is also referred to the master response on Groundwater Dependent Ecosystems. The GSA has determined that potential GDEs mapped within the Subbasin are supported by surface water, perennial flow originating outside the boundaries of the Subbasin, and have no connection to the regional groundwater table within the Plan Area.

O6-3 The commenter is referred to GSP Section 2.2.2.6 and Appendix D4, which provides an adequate evaluation of interconnected surface waters. The GSP identifies the mapped streams within the Subbasin as *losing* streams, even where such streams are mapped as having perennial flow. If there is a groundwater connection to streams entering the Subbasin, such as Coyote Creek and Borrego Palm Creek, it is from the fractured rock aquifer (bedrock), which exists outside the Plan Area Boundaries, and which pumping within the Subbasin would have no appreciable influence. This concept is further supported by the fact that groundwater levels around the western and northern margins of the Subbasin are hundreds of feet lower than the ground surface. Since there is no hydrologic connection between the aquifer accessed by pumpers and surface water resources in the Plan Area, the GSP is not required to provide a detailed analysis of terrestrial and/or aquatic biological resources. The commenter is reminded that the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any of the PMAs in the GSP.

O6-4 The commenter is referred to the master response on Groundwater Dependent Ecosystems.

O6-5 The commenter is referred to the response to Letter O5 (The Nature Conservancy letter) and the master response on Groundwater Dependent Ecosystems.

O6-6 The commenter is referred to the response to Letter O5 (The Nature Conservancy letter) and the master response on Groundwater Dependent Ecosystems.

O6-7 Comment noted.

Comment Letter O7

From: Bri Fordem <bfordem@theabf.org>
Sent: Tuesday, May 21, 2019 3:09 PM
To: LUEG, GroundWater, PDS
Subject: GSP Comment: Anza-Borrego Foundation
Attachments: ABF.GSPresponse.pdf

Please see attached comment letter.
Thank you for the opportunity to comment, we look forward to learning more in the future.

Bri

Bri Fordem
Executive Director
TheABF.org
760-767-0446 EXT 1001

ANZA BORREGO FOUNDATION

1

County of San Diego
Planning and Development Services
C/o Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Subject: Draft Groundwater Sustainability Plan for the Borrego Valley Groundwater Basin (GSP)

Dear Mr. Bennett:

Thank you for the opportunity to comment on the draft GSP. Our appreciation goes out to the County, the Borrego Water District, the Core Team and the SGMA Advisory Committee for their efforts over the past many months to produce such an impressive document.

Anza-Borrego Foundation (ABF) was founded in 1967 to purchase inholdings from willing sellers within the vast Anza-Borrego Desert State Park® (Park) Since our founding we have added over 55,000 acres to the Park and over the years have funded a wide variety of education, research and resource management projects in the Park. The Park is approximately 1,000 square miles, surrounds the approximate 98 square mile Borrego Springs Subbasin, and supplies the majority of the natural groundwater recharge to the Subbasin (GSP Figure 2.2-1). O7-1

Our comments on the draft GSP are as follows:

1. The Park contributes over $40 million annually to the economy of Eastern San Diego County. The community of Borrego Springs plays a critical role as the hospitality hub for the State Park. To protect this economic vitality, it is essential that the community and the more than 500,000 visitors which it attracts annually have access to an affordable supply of high-quality water for basic needs use in town and for recreation in the Park. O7-2

   a. Allocate a portion for municipal use to ensure an adequate and affordable water supply to support the community's growing role as the primary provider of goods and services to both residents and visitors.

   b. Don't gamble with water quality. Avoid the threat of diminishing water quality and the necessity for expensive water treatment facilities by shortening the target year to reach sustainability by 2030.

2. It is essential that the plan include ample water for critical at-risk biological resources in the basin. The draft GSP dismisses the relationship of continued pumping on both Groundwater Dependent Ecosystems (the Mesquite Bosque) and historic surface stream flow reductions on major tributaries entering the basin (Coyote Creek and others). There is no solid scientific consensus regarding the viability, survivability and recoverability of these important elements of the desert ecosystem. The people of California have promised to protect this precious desert ecosystem in perpetuity. Therefore, significant efforts to reduce the impact on the valued resources of the Park should be a priority of a plan towards recovery and sustainability of the area. O7-3

3. ABF recommends the Groundwater Sustainability Agency ("GSA") adjust the current shares of the estimated sustainable yield by considering proportion of land ownership, historic beneficial use, and feasibility of further reductions of use.

   a. The draft GSP does not consider the proportion of land each pumper services in the Subbasin. It focuses only on prior use over a five year period. (GSP 3.3.2.1.) According to the draft GSP, the Park covers 27% of the land subject to the GSP. (GSP Table 2.1-2.) The draft GSP also identifies that ABF owns an additional 5% that will be transferred to the Park. (GSP Table 2.1-2.) The Park will have the responsibility of stewardship over 32% of the land that is subject to this GSP, but its water use consists of less than .07% of the total baseline pumping allocation. Yet under the draft GSP, the Park is still responsible for reducing use by 74%. O7-4

b. Whereas the Park is responsible for a large portion of the land and minimal water use, the agriculture sector's responsibility and use are the opposite. According to the draft GSP, the agriculture sector comprises 4.2% of the Subbasin's 62,776 acre surface area and uses 70% of the pumped water. (GSP Table 2.1-1; GSP 2.1.1; and GSP 3.1.4.) Because recent usage data is the only method the GSA used to determine shares of the estimated sustainable yield, the agriculture sector is also being allocated around 71.7% of the total baseline pumping allocation. (GSP Table 2.1-7; and GSP Table 3-6.)

c. By failing to give any consideration to the amount of land sustained by each pumper's use, the GSP assigns a significant burden to the Park that may be impossible to bare, resulting in shutting down the Park. The blanketed 74% reduction is an ineffective approach to reaching sustainability, particularly where the current use is known to be concentrated in agricultural areas and the agriculture sector will be maintaining its 70% of the water use.

O7-4 Cont.

4. There are data gaps in the water quality monitoring particularly in the North Management Area. Wells now in the process of being secured for water quality monitoring will not yield usable initial data for years. The GSP should specify mandatory water quality monitoring of any major wells in the Subbasin. As water quality degrades and additional treatment is required, the cost for ratepayers, including ABDSP, will increase. The GSP should identify Ratepayers as stakeholders in the development of a Water Trading Program. Pumped water is a public resource concern in Borrego Springs.

O7-5

5. Fallowing of agricultural land must include the removal of invasive weed species. There are two highly invasive weed species that threaten native habitats, wildflowers, and native species in the Park: Egyptian knapweed (*Volutaria tubuliflora*) and Sahara mustard (*Brassica tournefortii*). Currently, there are fallowed agricultural fields that host these species. State Parks devotes staff time and resources to remove and control these species in the Coyote Canyon area of the Park.

O7-6

6. While the Water Trading Program is referred to as an economic incentive that will lead to more water conservation (GSP 4.1), the Water Trading Program is not necessarily the key to water reduction.

O7-7

7. ABF supports the immediate implementation upon GSP approval of the mandatory metering program as detailed in Appendix E of the GSP.

O7-8

We appreciate your considerations of these important needs as you revise the current draft GSP.

Brianna Fordem
Executive Director
Anza-Borrego Foundation

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Letter O7

Commenter: Brianna Fordem, Executive Director, Anza-Borrego Foundation
Date: May 21, 2019

O7-1 This comment provides introductory information about the Anza Borrego Foundation (ABF), and its role as an environmental stakeholder that seeks to add acreage to ABDSP; and further education, research and resource management projects in the Park. Specific responses to issues raised are provided below (responses Comments O7-2 through Comment O7-8).

O7-2 The Groundwater Sustainability Agency (GSA) appreciates the critical role played by ABDSP and ABF in the region's economic vitality, tourism, and hospitality. With regard to the commenter's concern over an adequate and affordable water supply, the commenter is referred to the master response for the baseline pumping allocation and pumping reduction program. The commenter's request to shorten the target year to 2030 is noted. While the Groundwater Sustainability Plan (GSP) does not set specific a specific schedule for reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

O7-3 The commenter is referred to the master response for groundwater dependent ecosystems.

O7-4 The commenter is referred to the master response for the baseline pumping allocation and pumping reduction program. With regard to its concerns over whether the BPA and pumping reduction program leaves sufficient water to operated ABDSP, the commenter is referred to the GSA's response to Letter S2 (ABDSP letter).

O7-5 The GSP states,

> Degraded water quality is significant and unreasonable if the magnitude of degradation at pre-existing groundwater wells precludes the use of groundwater for existing beneficial use(s), including through migration of contaminant plumes that impair water supplies, where alternative means of treating or otherwise obtaining sufficient alternative groundwater resources are not technically or financially feasible. At a

> minimum, for municipal and domestic wells, water quality must meet potable drinking water standards specified in Title 22 of the CCR. For irrigation wells, water quality should generally be suitable for agriculture use. The Basin Plan has not established numerical objectives for groundwater quality in the Plan Area but recognizes that in most cases irrigation return flows return to the aquifer with an increase in mineral concentrations such as TDS and nitrate (Colorado River RWQCB 2017). The Basin Plan objective is to minimize quantities of contaminants reaching the aquifer by establishing stormwater and irrigation/fertilizer use best management practices (Draft GSP Section 3.2.5; page 3-13).

The GSA will continue to use the existing water quality monitoring network to assess Subbasin conditions, and further develop the groundwater quality network over the GSP's planning and implementation horizon, in accordance with adaptive management needs and as necessary to meet the GSP's sustainability goal.

Furthermore, BWD monitors water quality regularly, and cannot legally deliver water quality that does not meet applicable standards, including potable drinking water standards specified in Title 22 of the CCR. The commenter makes the assumption that water quality will degrade and eventually require additional and/or expensive treatment. This is not necessarily the case. BWD drinking water wells are located away from areas in the GSP identified as having water quality issues such as the Borrego Sink, and would retain the flexibility to manage the location of its groundwater pumping so as to avoid having to plan and build additional and/or expensive treatment facilities or facility upgrades. The commenter is referred to sections of GSP Chapter 3 that describe undesirable results (Section 3.2.4), minimum thresholds (Section 3.3.4), and measurable objectives (Section 3.4.4) related to water quality.

O7-6 The GSA notes the commenter's request that future fallowing include removal of invasive weed species. The GSP includes Voluntary Fallowing of Agriculture Land (PMA No. 4). As indicated in the GSP, the GSA will prepare policy development and CEQA documentation after GSP adoption in advance of considering formal adoption and implementation of a voluntary fallowing program.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

O7-7 Comment noted.

O7-8 Comment noted.

Comment Letter O8

CLEAN WATER ACTION

May 21, 2019

Jim Bennett, Water Resources Manager
Borrego Valley Groundwater Sustainability Agency
5510 Overland Avenue, Suite 310
San Diego, California 92123
Sent via electronic mail to PDS.LUEGGroundwater@sdcounty.ca.gov

Re: Comments on Draft Groundwater Sustainability Plan for Borrego Groundwater Basin

Dear Mr. Bennett,

On behalf of Clean Water Action, I am pleased to provide the following comments on the draft Borrego Groundwater Sustainability Plan. Our organization has been working on the implementation of the Sustainable Groundwater Management Act (SGMA) since its inception, and has an interest in its successful implementation throughout the state. We have been engaged in groundwater protection efforts since our program opened in California in 1990, and have specific expertise in drinking water and stakeholder engagement. As part of our interest in the successful implementation of SGMA, our organization has commented on SGMA activities at the state level and on several plans submitted in 2016 as alternatives to Groundwater Sustainability Plans. Our organization co-authored a report on stakeholder engagement in SGMA[1] and were able to participate remotely in 2 meetings of the Ad Hoc Stakeholder Outreach Committee for this Plan.

Our review of this draft is admittedly cursory; we did not review models or the data used to run them, nor did we comprehensively review undesirable results and management actions. However, we're indebted to the Local Government Commission for its more thorough review of the plans and have attached their memo to supplement our questions.

We also understand that this is a draft document and welcome the opportunity to request additional information and clarification. Our questions are limited to governance and management actions, stakeholder engagement and drinking water.

O8-1

[1] "Collaborating for Success: *Stakeholder Engagement for Sustainable Groundwater Management Act implementation*" Community Water Center, Clean Water Fund and Union of Concerned Scientists, 2015

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Notice and Communication (Appendices C, C1)

We appreciated the strong commitment to stakeholder outreach and engagement expressed by the members of the Ad Hoc committee on the calls in which we participated. It would be helpful if more information about those efforts were provided in this plan. For instance, how successful were efforts to reach all classes of beneficial users? Where is more effort – or a different approach – needed? In this area, we are specifically interested in your success in reaching domestic well users. We have the same question about public engagement – how successful were your efforts to encourage the "active involvement" of the general public[2]?. Specifically, how successful were your outreach efforts to Spanish-speaking residents in the basin?

It would also be helpful if the plan could identify how input received was incorporated. Can you provide more specifics about how the plan was amended in response to public input?

O8-2

We are also interested in how outreach and communications continue through the plan's implementation, as required in statute. Unfortunately, we found the communications plan in Appendix F-2 woefully lacking in detail and hope that that can be amended in the final plan. A few suggestions;

- While the MOU in Appendix B-4 clearly states that the Advisory Committee will provide input on plan implementation, the plan itself states that the terms of those committee members extends only through plan development and completion[3]. Can you please clarify the permanent nature of the AC in the final plan?
- What are the goals, strategies and tactics for stakeholder outreach and communications?
- At a minimum, a key goal of the plan should be to educate residents and beneficial users about the need to raise funds for plan implementation.

Table 5-2 identifies an annual budget (in 2020 dollars) of $6,000 for outreach. What activities will be funded with this budget? Is it sufficient to accomplish your objectives?

O8-3

[2] Water Code 10727.8 "The groundwater sustainability agency shall encourage the active involvement of diverse social, cultural, and economic elements of the population within the groundwater basin prior to and during the development and implementation of the groundwater sustainability plan."
[3] Draft Plan, Page 1-4

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Drinking Water

As we reviewed the information in the report, we were unable to identify clearly which wells were potentially compromised due to water quality issues or the lowering of the groundwater table. Specifically, which domestic wells will potentially be impacted by increasing groundwater contamination and lowering groundwater levels? How does the plan identify those impacts and when and how would mitigation efforts be triggered? Also, the plan seems to confuse mitigation with additional plan actions. Our interpretation is that mitigation requires the impacted party to be directly assisted. O8-4

We also recommend that the plan reference the Irrigated Lands Regulatory Program[4]. While it has not yet been implemented in Borrego Valley, the State Board in 2018 adopted final amendments to the East San Joaquin River Program, with some parts of that revised order identified as precedential. Specifically, the State Board required that all domestic wells located on land covered by the Program be tested for nitrates and that all agricultural operations should develop and implement irrigation and nutrient management plans to limit their discharge of nitrates to groundwater. O8-5

Projects and Management Actions

We appreciate the breadth of actions being considered, but have some questions. First, how are these actions being prioritized? If the plan is to reach the Sustainability Goal by 2040 in a linear fashion, do all of these measures need to be implemented simultaneously? Can they be prioritized according to cost and perhaps public receptiveness? O8-6

Water trading is an action being considered in basins around the state, but to date, only Ventura County has implemented a market and it is still in pilot form. Yet this plan states definitively that this is something that it definitely will do. Is the timeline for implementing this plan too ambitious O8-7

We appreciate that the Water Conservation action provides explicit savings. In the final plan, it would be helpful to quantify expected conservation for each identified measures, along with costs for each. All conservation is not alike and it may be more appropriate to implement some measures over time. O8-8

We agree with the metering requirement for the pumping reduction program and look forward to proposals to ensure that any program to track metered water use is effectively enforced. O8-9

[4] https://www.waterboards.ca.gov/water_issues/programs/agriculture/

We agree that some agricultural fallowing will be necessary to meet the 2040 Sustainability Goal and measurable objectives. We hope that this effort will be informed by an analysis of the impact of fallowing on farm workers and how that impact might be mitigated.

O8-9 Cont.

Can you clarify the intent of the Water Quality Optimization Program? It seems as though this is looking at expensive options for treatment or intrabasin transfers in response to water quality degradation. Instead, could you consider accelerating other efforts, such as pumping reduction? For instance, if your monitoring plan indicates that the middle and lower aquifers in the Northern Management do contain significant levels of arsenic, you may want to accelerate efforts to reach the sustainability goal in that area and protect the upper aquifer. For nitrate, working with the board to implement the Irrigated Lands Regulatory Program could help reduce excess nitrate being discharged to the vadose zone? In short a cost comparison looking at source protection efforts rather than the mitigation efforts in this program seems like an appropriate action.

O8-10

Thank you for allowing us the opportunity to comment. Please feel free to contact me if you have any questions

Sincerely,

Jennifer Clary
Water Program Manager

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DRAFT Summary Memorandum

Independent Review of the Borrego Valley GSP

Gaps and Opportunities

Presented by

Local Government Commission

to

Borrego Valley Endowment Fund
&
Borrego Valley Stewardship Council
&
Borrego Water District

Friday, May 17, 2019

I. IMPETUS FOR REVIEW

The Borrego Valley Endowment Fund (BVEF) retained the services of Local Government Commission (LGC), on behalf of the Borrego Valley Stewardship Council (BVSC), to conduct an independent review of the draft Groundwater Sustainability Plan (GSP) for the Borrego Valley Groundwater Basin, as released by the Borrego Valley Groundwater Sustainability Agency (BV GSA) on March 21, 2019.

According to Task I of the BVEF/LGC Contract, "LGC will review GSP documents produced to date, past meeting agendas and notes; and interview advisory committee members and other relevant stakeholders. LGC's review of the existing GSP development process will identify both gaps in the current status and opportunities to enhance the GSP so as to help BWD ensure regulatory compliance while also enhancing the positive impact of the GSP for the entire Borrego Springs community. LGC will produce a summary findings memo outlining identified gaps and opportunities, with special attention to the needs of severely disadvantaged community members and the long-term vision for Borrego Springs."

LGC entered into contract with BVEF on May 7, 2019. As such, LGC had 8 business days to review the draft GSP for gaps and opportunities, with the goal of informing the Borrego Valley Stewardship Council and other interested parties for their own public comment to the GSA. To maximize use of available time, LGC determined to focus our review of the draft GSP on the two most important sections: Chapter 2, Plan Area & Basin Setting; and Chapter 3, Sustainable Management Criteria.

This document, submitted to BVEF on Friday May 17, 2019, represents the Draft Deliverable, "Summary Memo of Gap Analysis and Recommendations." The Final Deliverable will be submitted at a later date, no later than 60 days following submittal of the Borrego Valley GSP to the California Department of Water Resources or by December 31, 2019, whichever occurs first. LGC has used 40 of the estimated 80 hours personnel time to complete this task. LGC will use any remaining funds allocated to this task for completion of the Final Summary Memo.

II. CONTEXT OF REVIEW

LGC has coordinated closely with members of the Borrego Valley Stewardship Council, Borrego Springs Community Sponsor Group, Borrego Valley GSA Advisory Committee and other interested parties in its review of the Draft GSP. The goal of our review is to support long-term goals of aligning the Final Borrego Subbasin GSP with the existing BVSC Geotourism Charter and integrated watershed master plan to be developed at a later date, with specific attention to ensuring robust and meaningful representation of

O8-11

historically underrepresented Borrego community members whom potentially face disadvantages (i.e., "disadvantaged communities" and "severely disadvantaged communities" under SGMA).

The BVSC Geotourism Charter aims to promote, sustain and enhance the geographical character of Borrego Springs—its environment, culture, aesthetics, heritage, and the well-being of its residents and visitors. The following principles of the BVSC Charter aligned with the goals of the Sustainable Groundwater Management Act:

- Principle VI. Community Involvement
- Principle VIII. Protection and enhancement of destination appeal
- Principle IX. Land Use
- Principle X. Conservation of Resources
- Principle XI. Planning

The key concepts of the future integrated watershed master plan, as outlined in the April BVSC Workshop, include: [6 break-out groups]

- Planning within a Water Budget / Integrated Planning Framework
- Sustainable Distanation Management / Hospitality
- Sustainable Community Development Needs Assessment
- Cultural Landscape Survey
- Economic Innovation & Transition Zones
- GSP / CEQA Compliance & Community Plan Integration

O8-11 Cont.

In the context of these key principles, LGC reviewed the Draft Borrego Subbasin GSP on the following topics:

- Stakeholder Engagement
- Disadvantaged Communities
- Drinking Water Safety
- Climate Change
- Groundwater Dependent Ecosystems
- Land Use / Groundwater Recharge

A summary of our review on each of these topics is provided in the following section. Attached to this document are excel file evaluation tools with detailed analysis of the GSP for each topic.

III. SUMMARY FINDINGS OF GAPS AND OPPORTUNITIES

The Borrego Valley GSA is the first real form of collaborative local governance for the Borrego Springs community, which provides a significant opportunity for Borrego Springs to achieve its vision for a sustainable future. SGMA provides ample flexibility

for the GSP to include broad goals that will support land use and economic development shifts necessary to achieve this vision (without overstepping jurisdictional authority of San Diego County. Local Government Commission strongly urges the BVGSA and its stakeholders to use this opportunity to the greatest extent possible – to establish necessary land use, water management, and community governance policies that will accelerate achievement of a sustainable Borrego Springs.

IV. RECOMMENDATIONS TO THE BVSC & OTHER INTERESTED PARTIES

- LGC strongly encourages the Borrego Valley Stewardship Council, its members, and all other interested parties to submit public comment letters to the Borrego Subbasin GSA. This can easily be done using this document and the attached excel spreadsheets. LGC recommends the following protocol for creating comment letters:
  - Select between 1 and 3 key issues of most interest to each BVSC member / constituent group.
  - Structure your letter as follows:
    i. Your constituency & interest in the GSP
    ii. Commendations to the GSA for their hard work & dedication
    iii. Recognition of the overarching goals of SGMA, as they relate to your topic of interest/concern
    iv. Then, for each interest/concern
      1. [Code/Regulation citation] requires that [quoted text]...
      2. [section / page number of GSP] addresses / fulfills this requirement by...
      3. GSP fails to meet the requirement because...
      4. I/We urge the GSA to remedy this shortcoming / address this concern by... [recommendation; inverse of the concern]
    v. Thank you for your consideration; please do not hesitate to contact me/us to further discuss our concerns/recommendations.
  - Populate the content of your letter by:
    - Copying summary language for each of your topics of concern from this memo.
    - Pull the specific code or regulation reference (citation) and text (quoted) from the attached excel spreadsheets.
  - Letters should be submitted via email (preferred) or postal mail in accordance with the draft GSP public comment guidelines.
    - *Note*: more letters citing the same concerns and recommendations, sent from multiple individuals and/or organizations will have a greater impact than fewer letters with multiple parties "signing on"

O8-11 Cont.

to a single letter. However, following both models will be the most impactful.

- LGC strongly encourages BVSC, its members, and all other interested parties to request that the GSA include all work products and reports developed to date by ENSI, LeSar, Dudek, or other consultants should be included in the body of the GSP and considered for adoption, and not included solely as an attachment, appendix, addendum or support document to the GSP.
- LGC strongly encourages Borrego Valley Stewardship Council, its members, and all other interested parties to attend all upcoming public meetings regarding the GSP, and voice their concerns regarding these gaps in the current draft, as well as their recommendations, especially with regard to:
  - Proportional reductions across all sectors;
    - LGC strongly recommends no water use reductions for the municipal sector. Proportional reductions are completely inappropriate and unnecessary based on current and historic pumping levels. Municipal users account for a fraction of that pumped by agriculture, and half what is pumped by golf. Neither of these industries are sustainable in the valley at high percentages. The Community needs to transition to lower water-use industries that will support the long-term economic sustainability of the region.
  - Accelerated Pumping Reductions
    - LGC recommends front-loading water use reductions in order to preserve more water in the subbasin and safeguard against potential drought and unforeseen impacts. Using a fixed percentage of the Baseline Pumping Allocations to calculate yearly reductions, rather than a fixed volume of water, will preserve as much groundwater as reducing the cut-back period from 20 years to 15 years under the current methodology.
  - Groundwater Dependent Ecosystems
    - LGC strongly encourages the GSA to reconsider its evaluation of groundwater dependent ecosystems. Existing data and anecdotal evidence illustrates that groundwater dependent ecosystems within the subbasin, especially within the Anza Borrego Desert State Park, continue to experience undesirable results. The current draft GSP does not acknowledge these impacts, as the analysis referred to uses the false assumption that groundwater dependent ecosystems were irreparably harmed prior to the January 2015 baseline.
  - Stakeholder engagement, communication, and disadvantaged community considerations

O8-11
Cont.

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        - LGC finds the current Draft GSP's treatment of stakeholder engagement and DAC considerations to be woefully inadequate. We strongly urge the GSA to significantly enchance their stakeholder engagement efforts, especially to disadvantaged communities, and document this engagement within the GSP.
    - Land use changes and groundwater recharge potential.
        - LGC encourages the GSA to more adequately evaluate land use changes and groundwater recharge potential as a project and management action for the sustainability goal. Land use zoning and decisions have a tremendous impact on groundwater quality and recharge potential. The GSA should work closely with the Community Sponsor Group and the County to update all land use planning documents to maximize recharge potential while also maximizing opportunity for economic development in Borrego Springs.
- LGC strongly encourages the Borrego Valley Stewardship Council, its members, and all other interested parties to organize in-person meetings with the GSA Advisory Committee to discuss these concerns and recommendations in detail.
- Draft Comment Letter

O8-11 Cont.

V. DETAILED REVIEW OF THE GSP BY CHAPTER

[redacted] Chapter 1: Introduction

[redacted] 1.2 Sustainability Goal

The Sustainability Goal should be based on climate change impacts and future conditions, and should acknowledge that maximizing groundwater recharge will be a necessary component of achieving sustainability. The current draft GSP makes no reference to climate change impacts on achieving the sustainability goal; nor does it reference soil conditions, recharge rates, or land use change impacts on achieving that sustainability goal. In fact, the sustainability goal as stated in the draft GSP is not a goal at all – but simply a restatement of the intent of SGMA. It is extremely vague and not quantified in this section. This is completely inadequate and must be resolved.

O8-12

[redacted] 1.3.1 Organization and Management Structure

The GSA should include personnel with a focus on climate change effects on groundwater conditions and recharge rates. There is no clear identification that any of the staff on the GSA "Core Team" or Advisory Committee (AC) have background or expertise in either soil science or considering the impacts of land use on groundwater conditions. However, the organizational structure does include broad representation

from relevant sectors. Personnel from the state park may be equipped to address climate change, but this is unclear. Similarly, the BVSC representative should uphold climate change concerns, but it is unclear whether they have the necessary expertise. The GSA should seek to ensure the Core Team and AC is populated with adequate expertise on both climate science, soil science, and hydrology. The GSP should be updated to include a thorough description of the requisite background of Core Team and AC members.

1.3.3 Implementation Costs

Estimated costs to implement the GSP, and the GSA's approach to meeting those costs should include costs related to climate change impacts and adaptation, as well as costs to implement groundwater recharge. The current draft GSP includes no reference to soil conditions, recharge, or land use impacts or changing conditions as a result of climate change, and how these changing conditions could affect GSP implementation costs. The GSP implementation cost estimate does include a 10% contingency, but this is drastically insufficient, given the lack of detail in the current projects and management actions and implementation budget. The GSP implementation cost estimates need to be re-evaluated in conjunction with more detail being provided to the projects and management actions.

Further, a thorough analysis of projected costs, and how the GSA will raise those funds, needs to be conducted to determine the potential impacts to vulnerable communities, and how to mitigate those impacts.

O8-12 Cont.

Chapter 2: Plan Area & Basin Setting

Plan Area

a) 2.1.1 Summary of Jurisdictional Areas and Other Features

Disadvantaged Communities

This section should include specific reference to disadvantaged communities. The current draft includes no specific reference to where most vulnerable community members (e.g., specific neighborhoods or population groups) within the subbasin are located.

This section should include locations and extent of communities dependent upon groundwater and noting where community wells are located near higher production wells, such as irrigation wells, that could potentially impact domestic well users' groundwater supply or quality. The current draft includes a map with density of wells per square mile, but does not include a map of the 52 "de minimis extractors," such as the 49 domestic wells in the subbasin and small water systems. Despite the requirement of SGMA not extending to de minimis users, the Borrego Subbasin GSP *should* include

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these users, because the overall water budget for the entire basin is relatively small, thus "de minimis" users actually make up a recognizable percentage of total extractors.

This section should represent various portions of the basin dependent upon groundwater for beneficial uses, including communities dependent upon groundwater for domestic uses. While the draft plan does map existing land use designations and zoning, it does not include specific data by land use on groundwater dependent users; all of the Borrego community and all users are groundwater dependent. This should be explicitly stated and mapped.

b) 2.1.2 Water Resources Monitoring and Management Programs

Monitoring & Regulatory Alignment

This section should note where monitoring programs are located and where there may be gaps in monitoring. Components of the monitoring plan should include: 1) if stakeholders have requested additional monitoring; 2) either when additional monitoring will be implemented or why the request will not be approved at this time; and 3) water-relevant climate, land use and recharge variables (such as land use, soil conditions, precipitation, temperature, and evapotranspiration).

The current draft GSP highlights BWD's existing tiered rate structure, but does not indicate how this relates to water affordability for lower income groups. The draft provides a clear description of plan area geographic bounds, contributing watersheds, and land use designations with size and percent land cover. However, monitoring only lists the groundwater elevation monitoring wells included in CASGEM. No reference is made to soil conditions, precipitation, temperature, or evapotranspiration. Demand Offset Mitigation Water Credits Policy is the only management program in the section that adequately describes how this will impact or aligns with the GSP. All other programs included should follow this model, and this level of detail. These components need to be incorporated into the monitoring plan.

The current draft GSP references that the County Groundwater Ordinance will need to be evaluated and possibly revised to ensure consistency with GSP sustainability goals, but provides no guidance on what that would look like. There is also no information on metrics measured, past impacts, or anticipated future impacts.

The current draft GSP does a sufficient job explaining the impact of wells to the GSP, but still includes no metrics and no real information on how this information will be incorporated into the GSP.

This section raises a number of questions:

O8-12 Cont.

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- How does BWD's Conservation Management Program (including tiered rates) determine water affordability for low-income communities?
- How does the Draft GSP integrate with the 2009 Anza-Borrego Desert IRWM Plan?
- How will the GSP integrate into the Region 7 Water Quality Control Plan for the Colorado River Basin?
- Why is there a discrepancy between BWD and the County's Water Credits Policy? As such, which water credits will be validated under the GSP's Baseline Pumping allocations?
- How many wells have been applied for vs. approved since passage of SB 252 and release of this plan?
- How will domestic wells and small water systems be protected from negative impacts of the baseline pumping allocation?

Each of these questions must be answered favorably for this section to adequately fulfil the requirements of the regulation.

The current draft of this section only describes the applicable laws and regulations present in the basin; it needs to be augmented to describe how monitoring of each of those programs will be incorporated into the GSP, how those existing programs will limit operational flexibility, and how the GSA will adapt to those limits.

O8-12 Cont.

c) 2.1.3 Land Use Elements of Topic Categories of Applicable General Plans

This section of the plan should identify:

- disadvantaged and severely disadvantaged unincorporated communities;
- where water agency consolidations or service extensions are being considered;
- potential sources of contamination from current land use practices;
- expected land use changes due to climate change impacts or development and socio-economic conditions, that may affect water supply and water demands, as well as groundwater recharge rates;
- projected water demand as a result of climate change or population growth, and its impact on achieving the sustainability goal; and
- how climate, land use and soil conditions impact groundwater recharge, and the affect this may have on water supply and demands how the GSP addresses those effects.

This current draft of this section does a very good job of identifying all the policies that are relevant and in alignment with the GSP, but need to greater specificity on how the GSP will uphold or implement these various policies.

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According to the San Diego County Groundwater Ordinance: "One of the purposes of the ordinance is to ensure that development is not approved in groundwater dependent areas of the County unless a project applicant can demonstrate that there are adequate supplies available to serve both existing and proposed uses." The existing Community Plan and General Plan land use policies are listed in the draft GSP, but the degree of integration is included only as a yes/no factor. This raises the questions,

1) How will the GSP affect the pre-existing San Diego County Groundwater Ordinance? and

2) How will this impact pumping allocations?

These questions should be answered in this section of the GSP, as well as providing detail on how the integration requirement is met, and identifying in which section of both the GSP and the General Plan (GP)/ Community Plan (CP) this is discussed.

This section also fails to answer the following questions, necessary for meeting the regulatory requirements:

- Do current well permitting practices protect vulnerable water supply sources, such as shallow wells (for all beneficial uses)?
- Are there documented instances of stakeholder concerns regarding current land use or well ordinances impacting other beneficial uses?
- Which current ordinances need to be amended in order for the basin to meet its sustainability goals?
- Are the policies considered to implement the GSP actual policies that are currently in existence, or policies that would need to be established?

Each of these questions must be sufficiently answered for this section to adequately fulfil the requirements of the regulation.

O8-12
Cont.

Recharge

The San Diego County General Plan (GP) and Borrego Valley Community Plan (CP) include positive policies to protect the basin from continued overdraft and to minimize the impact of stormwater runoff (e.g., Goal LU-8; COS-5.2), yet include no mention what so ever of recharge. The current draft GSP should be augmented to include this information, and future GP / CP updates should do the same.

The current draft GSP includes positive language regarding future GP and CP needing to consider the sustainability goals of the GSP. The draft language also does an excellent job acknowledging the misalignment between agricultural preservation goals in the General Plan and groundwater sustainability in the Borrego subbasin. However, additional detail needs to be provided on how that consideration and GP / CP updates will occur, as well as how the agricultural preservation and groundwater sustainability goals will be reconciled.

It is unclear whether GP Conservation and Open Space Element, Goal COS-4: Water Management, and/or COS-4.3 - "Maximize stormwater filtration and/or infiltration" will promote groundwater recharge, or if it only refers to stormwater mitigation where groundwater is not shallow. This policy should be clarified, and potentially reevaluated to maximize groundwater recharge potential.

The discussion in this section of estimated buildout and impacts on the GSP is inconsistent. The draft GSP states that Borrego could not meet the water needs if all allowable lots were built out, yet also states that implementation of existing land use will not affect sustainable management. The draft does, however, acknowledge that updated buildout estimates should be considered in conjunction with the GSP.

Climate

The GP includes a "climate change and land use" goal (LU-5) (e.g., "sustainability"), but there is absolutely no discussion of potential climate change impacts on development patterns in the plan area. This section of the GSP needs to address this gap in existing policy by identifying potential impacts of increasing drought and evapotranspiration rates potentially making agriculture unsuitable for the subbasin, and therefor potentially causing major change in land use patterns. Further, current policy nor the draft GSP includes no discussion what so ever of climate change impacts to water supply and demand, or how the GSP will address those affects.

O8-12 Cont.

d) 2.1.4 Beneficial Uses and Users

This section of the plan should include a description of the beneficial uses and users of groundwater in the basin, including potential climate impacts to beneficial uses and users, the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties. This section should also identify whether groundwater recharge is a designated beneficial use in the appropriate Basin Plan (per Regional Water Quality Control Board), and discuss potential locations for groundwater recharge.

The current draft GSP states that the "beneficial uses" evaluated in this GSP are not strictly synonymous with those analyzed in the Basin Plan. It is of no benefit to the GSA or the community for the GSP "beneficial uses" to be different from the Basin Plan "Beneficial uses;" these should be consistent.

Groundwater recharge nor habitat preservation / restoration are currently not included as beneficial uses in the GSP, even though they are included in the Colorado River Basin Plan. Is this because there is no active recharge currently exists in the subbasin?

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The GSA should: a) consider including groundwater recharge and habitat preservation/restoration (especially in the washes/creeks & the Anza Borrego Desert State Park) as a beneficial use in the GSP, and b) seek modification at the Regional Water Board to the existing Beneficial Use Designations to ensure consistency between the Basin Plan and the GSP.

The current draft GSP lists de minimus users as a beneficial user in this section, but then includes them with municipal users in the water budget. This is misleading and affects proper analysis. This section should be augmented to include a narrative description of issues affecting the supply and beneficial uses of groundwater. Additionally, the GSP should distinguish between domestic well owners and small water systems independent of the municipal water supply in the water budget.

e) 2.1.5 Notice and Communication

The notice and communication section is required to include the following:

- An explanation of the Agency's (GSAs) decision-making process.
- Identification of opportunities for public engagement and a discussion of how public input and response will be used.
- A description of how the Agency (GSA) encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.
- The method the Agency (GSA) shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.

O8-12 Cont.

Essentially, this section does not include a ture communication strategy. Rather, this section merely describes how the GSA communicated with the public (essentially just fulfilling minimum brown act requirements).; no real communication strategy, just explaining how they met brown act violation; no explanation of decision-making, just how they engaged with the AC.

This section should also describe how climate change and related uncertainties, available adaptation strategies, groundwater recharge potential and available optimization strategies (including potential land use changes) are integrated into the GSA's communication strategy. The current draft GSP includes absolutely no mention of climate impacts, nor is there any mention of groundwater recharge opportunities.

The current draft GSP states that there is currently no program to actively replenish the aquifer, and that aquifer storage and recovery are not being considered as an option at this time because using imported water to recharge the basin was determined to be

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economically infeasible. However, the GSP should consider other forms of managed aquifer recharge, such as stormwater capture and agricultural runoff management.

The communication section should adequately outline the types of outreach performed throughout the GSP process and how outreach will continue moving forward. The current draft GSP includes little mention of how diverse groups were engaged; nor does it include future plans to share progress with these groups. Disadvantaged Communities ("DAC') and Severely Disadvantaged Communities ("SDAC') are not mentioned even once in the Stakeholder Engagement Plan, despite the entire Borrego Subbasin being designated a SDAC.

GSP meetings should always be held at times and places that enable all stakeholders to participate in at least some of the meetings. All Borrego Subbasin GSA Advisory Committee Meetings were held during work hours, thus precluding many community members from attending.

Meetings, outreach, and education materials should always be translated into appropriate languages spoken in the community. Meetings should provide services such as meals and/or childcare to enable working families to attend. While the current draft GSP does refer to translated materials, these materials are not included in the stakeholder engagement plan, nor are translation services in general mentioned in the stakeholder engagement plan.

O8-12
Cont.

Public comment should be taken during all meetings, and written comments should be accepted throughout the process. The current Draft GSP references targeted "SDAC engagement" via a Proposition 1 Stakeholder Engagement grant. Yet, outcomes from that engagement is not included in the draft GSP. This lack of information raises the following questions:

- What was the feedback from outreach to "Domestic water users" and "Disadvantaged and Severely Disadvantaged Communities?"
- How are these interests represented in the sustainability goals?
- How will they be included moving forward?

A list of all meetings, including times and locations, should be included in the communication section of the GSP. A sufficient number of meetings should be held to ensure stakeholders have adequate opportunities to learn about the GSP creation process and provide public comment. One public meeting, "Ad Hoc Committee on Severely Disadvantaged Community (SDAC) Involvement," occurred on 4/27/2018. Yet attendance is listed as "unknown." Meeting minutes and meeting agenda for this convening are not listed on the website. The two most public meetings ("Community Meetings" on 3/16/18 and 9/19/18) also lack meeting minutes and agendas on the GSA

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website, despite the GSP referencing that these materials are on the website. for either of the 2 most public meetings.

The Notice and Communication section, as well as the Stakeholder Engagement Plan for the draft GSP is woefully lacking. This raises the following concerns: has there been adequate stakeholder surveying and mapping? How were stakeholders informed of the process? How are the interests of small businesses, the tourism industry, and residents represented in the GSP? What were the key messages shared?

To remedy these shortcomings, the GSA should:

- Provide responses to the questions above in the Notice and Communications section of the GSP;
- Identify the outreach plan moving forward through GSP implementation, especially in development and implementation of Projects and Management Actions;
- Describe how public comments and feedback are incorporated into the GSP;
- Provide more opportunities for public input (e.g., more Community Meetings with agendas and minutes posted online) with special effort to ensure these meetings are accommodating of all community members;
- Determine how the stakeholder engagement plan will be evaluated and adapted moving forward, and share that methodology with all stakeholders.

O8-12 Cont.

The Borrego Subbasin GSA must augment its stakeholder engagement plan and communication section of the GSP to incorporate the following changes:

- Post meeting minutes and agendas from all community meetings;
- Identify specifically which/where vulnerable community groups are;
- Explain how vulnerable communities have been (and should be) engaged;
- Describe the major concerns of community members as identified by community members;
- Establish a process for incorporating public input into GSP revisions;
- Determine how the Stakeholder Engagement Plan will be evaluated and regularly updated.

f) 2.1.6 Additional GSP Elements

According to CWC Section 10727.4, the GSP must describe the "processes to review land use plans and efforts to coordinate with land use planning agencies to assess activities that potentially create risks to groundwater quality or quantity." While the current draft GSP does indeed list the relevant land use planning documents, there is no description of the process followed, or that will continue to be used, for reviewing and coordinating

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with other land use planning activities. This section of the GSP must be augmented to fully meet the regulatory requirement.

This section of the GSP should describe how soil conditions and land use may further impact groundwater dependent ecosystems and how to mitigate such impacts. It should also consider an increase on water storage losses due to higher climate change temperatures. The current draft GSP includes no mention what so ever of potential impacts to groundwater dependent ecosystems, nor of water storage loss from higher temperatures; it merely mentions loss of storage in the context of potential intra-basin transfers. The GSP should be augmented to address these inadequacies.

■ Basin Setting

a) 2.2.1 Hydrological Conceptual Model

Drinking Water

The Hydrological Conceptual Model (HCM) should specify which aquifers are the main source of water for drinking water purposes, as well as for DACs, households relying on private wells, small community water systems, and school districts. The current draft GSP identifies the upper aquifer as the main source of water in the subbasin historically. Yet, this section does not explicitly state whether it is also the shallow aquifer that serves as the main source of water for DACs, households relying on private wells, small community water systems, and school districts. This must be rectified by including more information on the upper aquifer as it pertains to community drinking water.

O8-12 Cont.

For aquifers of interest for drinking water wells, the HCM should specify the overall water bearing characteristics of the aquifer (e.g., overall water quality, overall water production capacity, vertical and lateral extent, hydraulic conductivity, and storativity).

The HCM should specify how much recharge can be accomplished in different hydrogeologic environments/aquifers, and particularly provide a brief description of potential benefits and concerns of the potential recharge areas.

The HCM should be attentive to information provided for shallow aquifers and water quality concerns.

b) 2.2.2 Current and Historic Groundwater Conditions

Groundwater Elevation

The HCM should clearly state specific groundwater levels in relation to various land uses. In particular, the HCM should note where first-encountered groundwater is relatively deep; where groundwater users reliant upon shallower wells; and where users

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may not have the resources to drill new, deeper wells. Special notice should be given to drinking water uses. The current draft GSP provides no information regarding dewatering of wells, rehabilitation costs, rehabilitation data, or any other information about the impacts to DACs. The GSP should, but does not currently include a map identifying the locations of all drinking water systems, DACs, and areas of critical lowering of GW levels. The GSP should use monitoring wells screened for a specific aquifer, not combining aquifers, so as to indicate whether, and if so where, dewatering of wells is occurring.

Groundwater Quality
This section of the plan should include a map of known groundwater conditions, including sensitive uses and users of groundwater that may be impacted or threatened to be impacted.

According to the GSP, "The lateral distribution of the wells in the monitoring network that measure groundwater quality is limited, and does not extend to the outer portions of each management area." The GSP also notes that "high salinity, poor-quality connate water is thought to occur in deeper formational materials in select areas of the aquifer as well as shallow groundwater in the vicinity of the Borrego Sink in the southern portion of the Plan Area." The GSA needs more monitoring data for "di minimus" domestic well users and small water systems, especially regarding the potential impacts to disadvantaged community members and cost projections for remediation. The GSP should also indicate which wells are being considered to be taken out of production or drilled deeper to mitigate water quality concerns. Increasing contamination trends are noted in the GSP, but there is little discussion of how these issues will be addressed under the sustainability goal and management actions.

O8-12
Cont.

Drinking Water
This section should also include information regarding contamination of wells, treatment costs, water quality data, or any other information regarding the impacts to disadvantaged communities. This should also include a map noting the locations of all drinking water systems, DACs, and areas of critical water quality contamination. The current draft of the GSP does not include this information. However, meeting minutes posted on the GSA website note that community members are concerned about elevated nitrate levels in some drinking water wells. This is referenced in the GSP, but not adequately.

c) 2.2.3 Water Budget Information

The water budget should include historical use of groundwater for all types of uses and users, in particular the uses of small drinking water systems, regardless of whether they will be subject to pumping restrictions. Future use for drinking water needs must utilize

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data from sources such as county general plans and LAFCo documents (e.g., population projections and water demand forecasts).

The historic groundwater use percentages in the Borrego Subbasin (i.e., 70% agriculture, 20% golf course, 10% municipal) is not sustainable. This section should include a description of how historical conditions have impacted the ability of BWD and the County of San Diego to manage the basin within sustainable yield. Further, including domestic/di minimus users with the overall municipal users water budget and municipal pumping reductions is both inappropriate and inaccurate. These uses must be separated and accounted for independently in the water budget.

Data used to develop the water budget is out dated and inaccurately represents the groundwater conditions in the subbasin. The GSP must use the most recent data, and exclude data sets producing a biased result. For example, the hydrological modeling projections currently used in the draft GSP include time periods extending far back in time, prior to when pumping began, and do not take into account shifts in the hydrologic regime which have occurred as a result of climate change. The water budget currently does not (and must) consider projected recharge reductions due to land fallowing and water conservation.

These inadequacies must be addressed in order for the water budget to accurately represent present groundwater conditions and support the sustainability goal.

O8-12 Cont.

d) 2.2.4 Management Areas

The purpose of this section is to ensure that management areas are designed in a way to protect, rather than harm, particular uses and users of groundwater. Management areas should be designed to set stricter requirements near vulnerable drinking water sources. The current draft GSP provides no indication of where potentially vulnerable drinking water source are within the management areas. The GSP should include a map identifying the location of all drinking water systems, DACs, and areas of particular threat from lowering of groundwater levels.

[redacted] Chapter 3: Sustainable Management Criteria

a) 3.1 Sustainability Goal

According to 23 CCR § 354.24, the GSP must include a sustainability goal using information from the basin setting to establish measures that will ensure sustainable yield, and describe a realistic path to achieving the goal over a 20-year period. The sustainability goal should also consider all beneficial uses and users susceptible to harm from changing groundwater conditions over the 20-year time frame.

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The GSP's primary sustainability goal, and five sub-goals, are brief and overly broad. As previously stated, utilizing the BVHM modeling from 1945-2010 that cites groundwater conditions from a time period before major agricultural development began, does not accurately reflect the current hydrogeological make-up of the basis, nor does it consider future impacts from climate change. The GSP should use the most recent data and hydrogeologic modeling that includes potential impacts from climate change, and exclude data sets producing a biased result.

Of the five sub-goals, only two of them explicitly consider domestic well owners (chronic lowering of groundwater levels and water quality concerns), however, the goals aren't tied back to the basin setting, nor do they identify specific vulnerable areas or how these goals impacts the sustainable yield.

It is unclear whether the sustainability goal intends is to address pre-SGMA impacts, or maintain current conditions.

The sustainability goal explains how land use and groundwater recharge was considered towards achieving the sustainability goal within 20 years of Plan implementation

local determination of the sustainable management criteria (sustainability goal, undesirable results, minimum thresholds, and measurable objectives).

O8-12 Cont.

a) 3.2 Undesirable Results

The GSP only considers 3 of the 6 possible sustainability indicators: Only considering 3 of the 6 possible sustainability indicators:
1. Chronic Lowering of Groundwater Levels
2. Reduction of Groundwater Storage
3. Degraded Water Quality Makes sense to not consider seawater intrusion, but land subsidence & connected surface waters should be included!

Chronic Lowering of Groundwater Levels

The GSP accurately identifies di minimus users as one of the groups most vulnerable to lowering groundwater levels, and cites the technical, financial and geographic constraints these users face when compared to better resourced pumpers like BWD or larger agricultural users. While this is notable, it is unclear how outreach was conducted to help better understand the negative impacts different stakeholders are experiencing due to declining groundwater levels. Some alternative means of obtaining water for de-minimis and domestic pumpers who can no longer pump are mentioned in the plan, however these alternatives lack further discussion in the minimum thresholds, measurable objectives, or projects and management actions.

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It's noted that the some di minimus wells may currently lack access to adequate water, and may be close to the BWD water distribution system, however the project management actions fail to discuss how consolidation is being considered for these di minimus users. The GSP includes figures (i.e. Figure 3.2-4) with average domestic well depths, however this map should include specific well data to better identify the most vulnerable areas.

The GSP also reports, "The exact number of agricultural and domestic wells that have been abandoned and re-drilled deeper and/or relocated due to production rate loss from declining groundwater levels is not known. However, anecdotal information and field observations have confirmed that inactive wells exist throughout the Plan Area" (Section 3.2.1, Page 3-10). Similar to well consolidation, the GSP fails to address the data gap of abandoned wells, and the steps being taken to follow up on anecdotal concerns.

The GSP fails to consider pre-SGMA impacts to groundwater levels, instead opting to set the highest bar as maintaining current conditions, or levels at a lower than current state.

Minimum Threshold for Chronic Lowering of Groundwater Levels:
The minimum threshold for chronic lowering of groundwater levels is based principally on the documented screen intervals of key municipal water wells and domestic/de-minimis wells located in the basin, however, not all of the de-minimus wells have accurate data to identify where at-risk wells may be located. The GSP should indicate how the GSA's intend to improve well monitoring data for di minimus users as part of the interim milestones

Measurable Objective for Chronic Lowering of Groundwater Levels:
The GSP proposes linear pumping cuts for agricultural, municipal, and recreational users, however these is no description of how different uses and users of groundwater were considered and whether the measurable objectives and interim milestones will help achieve the sustainability goal as it pertains to the most vulnerable uses of groundwater, namely di minimus users and small water systems. It is unclear how the margin of safety protects di minimus users. In addition, the outlined 5-year evaluation of the interim milestones and measurable objectives does not indicate how stakeholders will be engaged throughout these interim evaluations

Lowering of Groundwater Storage
Lowering groundwater levels are intrinsically linked with decreased groundwater storage, however the , and begins to address how the sustainability goals will impact the San Diego County General Plan and Borrego Spring Community Plan.

O8-12 Cont.

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Degraded Water Quality

Must include how stakeholders will be engaged throughout these interim evaluations, specifically how to set MT's for growers in the region to meet ag needs.
Increased need for monitoring water quality in domestic wells. Indicate how the GSP will integrate with the RQCB 'Basin Plan' groundwater quality objectives.

Minimum Threshold/Measurable Objectives

The GSP fails to indicate how these will be determined or met.

b) 3.5 Monitoring Network

Data gap in 3.5.4.2 - Well screened in multiple aquifers

- Screen can be slots or other measure that allows water through and keeps solids out
- Water comes from the aquifer into the well
- When you're using a monitoring well that is screened in different aquifers, you're getting a combined result - not really seeing what the impacts on a given aquifer are
- Need to use monitoring wells screened for a specific aquifer, not combining aquifers

Chapter 4: Projects and Management Actions

However it is unclear how the top priority PMA's (land fallowing and pumping reductions) will impact domestic/small water system users

Expected benefits and metrics for evaluation for each PMA do a poor job of mentioning how PMA's will impact groundwater-dependent vulnerable groups

PMA's were not put before stakeholders (see feedback in Section 4.0), therefore stakeholders are not aware of project goals, timelines, benefits, and risks

Prior to adoption, the GSA should hold public meetings to gather input on the PMA's via publicly available meetings (appropriate meeting times, translation and childcare services, etc.).

Notes: According to public meetings posted on the GSA website, there was no 'Community Meeting' held to discuss the projects and management actions - the most recent Advisory Committee meeting (Jan 2019) includes slides on the PMA's and how to provide input, however, minutes from the meeting aren't posted (incorrect minutes are posted from Aug 2018); AND as seen from the previous schedule of Adis Committee meetings, these meetings tend to take place beginning at 10:00 am during workdays

O8-12 Cont.

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- Chapter 5: Plan Implementation

TBD

- Excel Review Templates (attached)
  - Stakeholder Engagement & DACs
  - Climate
  - Recharge

O8-12
Cont.

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Letter O8

Commenter: Jennifer Clary, Water Program Manager, Clean Water Action
Date: May 21, 2019

O8-1 The Groundwater Sustainability Agency (GSA) appreciates your comments on the Draft Groundwater Sustainability Plan (GSP) and participation in two referenced meetings.

O8-2 The GSA acknowledges your request to provide additional information in the GSP regarding how successful efforts to reach all classes of beneficial users, where is more effort – or a different approach – needed and specifically interested in your success in reaching domestic well users. We note your questions regarding the success of general public engagement and efforts to Spanish-speaking residents. Additionally, you ask to identify how input received was incorporated and to provide more specifics about how the plan was amended in response to public input. In response, the Borrego Water District (BWD) placed into the administrative record, the SDAC [Severely Disadvantaged Community] Impact/Vulnerability Analysis (Task 2 Report) prepared by Environmental Navigation Services Inc., dated April 15, 2019. The report was prepared to understand the implications that the implementation of Sustainable Groundwater Management Act (SGMA) will have on the SDAC population of Borrego Springs.

O8-3 The GSA acknowledges your comment that the communications plan is woefully lacking in detail and hope that that it can be amended in the final plan. Specifically, you request clarification on the role of the Advisory Committee in the final plan, and what are the goals, strategies and tactics for stakeholder outreach and communications. In addition, the GSA notes that the commenter believes the key goal of the plan should be to educate residents and beneficial users about the need to raise funds for plan implementation. Finally, the commenter asks whether the $6,000 for outreach identified in Table 5-2 is sufficient to accomplish GSA objectives. In response, as stated in the Memorandum of Understanding, the Advisory Committee was formed for Plan Development. The primary purpose of the GSA under SGMA is to develop a GSP to achieve long-term groundwater sustainability. SGMA requires and directs GSAs to involve stakeholders and interested parties in the process to regulate groundwater. The purpose of outreach activities as described in the GSP was to provide individual stakeholders and stakeholder organizations, and other interested parties an opportunity to be involved in the development and evaluation of the GSP. Lastly, the GSP includes

an initial estimate of $6,000 for outreach activities, which will be evaluated during implementation of the GSP.

O8-4 The GSA acknowledges your comment regarding identifying which wells were potentially compromised due to water quality issues or the lowering of the groundwater table. Specifically, which domestic wells will potentially be impacted by increasing groundwater contamination and lowering groundwater levels? How does the plan identify those impacts and when and how would mitigation efforts be triggered? Also, the GSA notes your comment that the plan seems to confuse mitigation with additional plan actions and that your interpretation is that mitigation requires the impacted party to be directly assisted. The Draft GSP specifically discusses in Section 3.2.1 Chronic Lowering of Groundwater Levels – Undesirable Results that "Overall, there are 77 domestic wells in DWR's well completion report database.

As shown Figure 3.2-4, four of the township and range sections have water levels estimated to be below the bottom of the well in the section. Furthermore, the difference between the average well depth and the average groundwater level is less than 50 feet in seven township and range sections, representing 20 domestic wells, which indicates a high likelihood that some may lack access to adequate water in existing wells. With groundwater levels expected to continue to decline early in the GSP implementation period, domestic users are currently experiencing undesirable results, which will be alleviated by 2040.

The majority of the wells in this situation are close to the BWD water distribution system" (Draft GSP page 3-10).

Groundwater level declines would be significant and unreasonable if they are sufficient in magnitude to lower the rate of production of pre-existing groundwater extraction wells below that needed to meet the minimum required to support the overlying beneficial use(s), and that alternative means of obtaining sufficient groundwater resources are not technically or financially feasible. To the extent lowering groundwater levels impact de-minimis pumpers, significant and unreasonable impacts to those pumpers could be avoided.

> For example, alternative means of obtaining water for de-minimis and domestic pumpers who can no longer pump may include connection to the municipal water system (i.e., BWD), groundwater well maintenance or rehabilitation (e.g., well pump lowering), or for some beneficial users, well redevelopment or deepening. However, use of these alternative means of supply, by themselves, do not

> necessarily offset undesirable results for lowering groundwater levels in the context of the Subbasin as a whole (as opposed to individual uses or users), because the ultimate source of supply remains groundwater pumped from the Subbasin, even if from another location (Draft GSP page 3-8).

Table 2.2-6 Management Area Background Water Quality indicates that in water quality in the Subbasin is good and generally meets regulatory standards for intended beneficial use. Available Subbasin-wide data does not suggest that domestic wells will be impaired by increasing groundwater contamination. That said, the GSA recognizes that there has historically been limited sampling of domestic wells in the Subbasin by public agencies. The County of San Diego Department of Environmental Health (DEH) Land and Water Quality Division, requires that all building permit applicants demonstrate that their private water well supply is potable prior to occupancy or change of use.

The DEH reviews the water testing results submitted by the owner or their certified laboratory to verify potable quality for domestic use. However, it remains the responsibility of the private well owner to maintain the ongoing health standards and safety of their water supply. At a minimum, testing for bacteria and nitrates is required by an owner or applicant to verify a potable water supply prior to County issuance of a building or septic system permit. If the water sample results do not meet health standards for drinking water, or if an applicant fails to submit water testing results from a private water well, building occupancy will not be granted by the County (County of San Diego 2019). By proactively monitoring groundwater levels and groundwater quality in the Subbasin, the GSA will be able to ascertain if undesirable results to domestic well owners will potentially result in impairment to beneficial use.

It is noted that private domestic wells require regular maintenance and typically have an average lifespan of 30 to 50 years with pump lifespans of 4 to 10 years. One well failing in the Subbasin does not necessarily indicate an impairment or an undesirable result. Well failure can be the result of several factors including but not limited to age, well casing material and depth, screen and filter pack clogging due to bio-fouling or mineral encrustation and poor well construction. If it is determined that declining groundwater levels or deteriorating water quality is the result of management actions taken by the GSA, then the GSA will evaluate potential impacts and options at that time.

O8-5 The GSA acknowledges your comment that the plan reference the Irrigated Lands Regulatory Program. The Irrigated Lands Regulatory Program is already described in Draft GSP Section 2.1.2 Water Resources Monitoring and Management Programs. We note your comment that East San Joaquin River Program required that all domestic wells be tested for nitrates and that all agricultural operations should develop and implement irrigation and nutrient management plans to limit their discharge of nitrates to groundwater.

O8-6 The GSA appreciates your comment regarding how the Projects and Management Actions will be prioritized if the GSP is to reach the sustainability goal by 2040. First and foremost, Projects and Management Actions that result in a reduction in water demand at the lowest cost may affect prioritization, taking into account the magnitude of required reduction to reach the sustainability goal. Not all of the Projects and Management Actions need to be implemented simultaneously and depending on results of additional study and monitoring, some Projects and Management Actions such as the Water Quality Optimization Program and/or the Intra-Subbasin Water Transfers may not be required to be implemented but have been included in the Draft GSP should future monitoring prove impairment of beneficial water use due to groundwater quality degradation or supply.

O8-7 The Water Trading Program is a proposed Project and Management Action and expected to be implemented; however it is unclear how the commenter concluded that the GSP states that "definitively that this is something that it definitely will do" as this text does not appear anywhere in the Draft GSP. The GSA notes your concern that the timeline for implementing [water trading] is too ambitious.

O8-8 The GSA notes the comment that water conservation action provides explicit savings and that in the Final GSP, it would be helpful to quantify expected conservation for each identified measures, along with costs for each. Detailed development of measures and of costs is part of the Water Conservation Program development and not part of GSP development. Preliminary measures and associated costs are provided in Draft GSP Section 4.3 Projects and Management action No. 2 – Water Conservation.

O8-9 The GSA acknowledges that the commenter agrees with the metering requirement for the pumping reduction program and looks forward to proposals to ensure that any program to track metered water use is effectively enforced. In addition, the GSA notes the commenter agrees that some agricultural fallowing will be necessary to meet the 2040 sustainability goal and measurable objectives. Also, the GSA

acknowledges that the commenter hopes this effort will be informed by an analysis of the impact of fallowing on farm workers and how that impact might be mitigated.

O8-10 The GSA notes your request to clarify the intent of the Water Quality Optimization Program. In brief the Water Quality Optimization Program is a proposed mitigation measure should beneficial water use be harmed by impaired water quality in the future. The GSP emphasizes that available data do not suggest that existing water quality is impairing any beneficial uses. Should future monitoring prove impairment of beneficial water uses due to groundwater quality degradation the GSA would conduct analysis to determine the cause of the impairment and determine feasible mitigation options. This process is described in Section 4.6.1, Water Quality Optimization Program Description, of the Draft GSP.

O8-11 The GSA notes that the Borrego Valley Endowment Fund retained the Local Government Commission on behalf of the Borrego Valley Stewardship Council to conduct independent review of the Draft GSP. The GSA notes the comment to establish necessary land use, water management and community governance policies that will accelerate achievement of a sustainable Borrego Springs. The GSA notes the comment that all work products be included in the body of the GSP and not included solely as attachments or appendices. The GSA notes the comment regarding proportional reductions. The GSA notes the comment regarding accelerated pumping reductions. The GSA notes the assertion that existing data and anecdotal evidence illustrates that groundwater dependent ecosystems (GDEs) within the Subbasin, especially within the Anza-Borrego Desert State Park, continue to experience undesirable results. The GSA points out that your letter provides no data or anecdotal evidence to support this general conclusion regarding GDEs. The GSA acknowledges your comment regarding stakeholder engagement and DAC considerations being inadequate, and your request to strengthen outreach and document engagement in the GSP. The GSA notes your comment regarding land use changes and groundwater recharge potential. Specifically you request evaluation of land use zoning and evaluation of impacts on both water quality and recharge.

O8-12 The commenter is referred to the GSA's response to Letter O12.

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Comment Letter O9

BORREGO VILLAGE ASSOCIATION
BORREGO SPRINGS, CALIFORNIA

May 21, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Re: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett,

I am writing on behalf of the Borrego Village Association (BVA), a 501(c)(6) non-profit corporation, whose mission is to facilitate sustainable economic development of the Anza-Borrego Desert State Park and the unincorporated village of Borrego Springs. Our mission is predicated on the premise that through sustainable economic development we will be able to grow our community sufficiently to be able to sustain healthy schools, a more robust healthcare delivery system, and healthy businesses that support our population.

I am grateful to you and the other members of the Core Team who have worked tirelessly on our behalf to create the draft Groundwater Sustainability Plan. We understand that while SGMA directly addresses hydrological issues, that it is the intent of SGMA to leave communities such as ours as healthy and economically vibrant. In this regard, SGMA and the mission of the Borrego Village Association are well aligned.

The purpose of this letter is to articulate our strong opposition to the concept of Proportional Reductions across all sectors of current water users, i.e. a 70-75% reduction from baseline allotments for Municipal Users as well as Agriculture and Recreation. In our view, Proportional Reductions are completely inappropriate and unnecessary based on current and historic pumping levels. Municipal Users account for a fraction of the water pumped by Agriculture and a half of what is pumped by Recreation. Neither of these industries is sustainable, thus requiring the community to transition to lower water-use industries, e.g. tourism, that will support the long-term economic sustainability of the region.

O9-1

BORREGO VILLAGE ASSOCIATION P.O. BOX 1133 BORREGO SPRINGS, CA 92004

We urge the GSA to remedy this shortcoming of the GSP by requiring no reduction in water allotment to Municipal Users beyond their Baseline Allotment of approximately 1700 acre feet per year. Our calculations indicate it would be possible to modestly grow the population of our community if no additional reductions are mandated for Municipal Users in the GSP. We believe modest growth of our population will be possible as a result of the economic development model now being implemented by the Borrego Village Association, and that such growth will lead to the healthy, vibrant community envisioned by SMGA.

Thank you for your consideration. Please do not hesitate to contact me if I may provide you with additional information regarding the interface of the activities of the Borrego Village Association and the issue of Proportional Reductions.

O9-1 Cont.

Sincerely yours,

J. David Garmon, M.D.
Acting President, BVA

JDG: ms

BORREGO VILLAGE ASSOCIATION P.O. BOX 1133 BORREGO SPRINGS, CA 92004

Letter O9

Commenter: J. David Garmon, M.D., Acting President, Borrego Village Association
Date: May 21, 2019

O9-1: The Groundwater Sustainability Agency (GSA) acknowledges the commenter's opposition to proportional reductions and that Borrego Water District (BWD) would not be subject to reductions below 1,700 acre-feet per year.

While the Groundwater Sustainability Plan (GSP) does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter O10

From: Nancy L. Collins <NCollins@rwglaw.com>
Sent: Tuesday, May 21, 2019 3:04 PM
To: LUEG, GroundWater, PDS
Subject: Letter to County of San Diego
Attachments: Letter to County of San Diego.pdf

Attached please find a letter from James Markman regarding the above-referenced matter. The original is being sent via first-class mail.

Nancy

Nancy L. Collins
Legal Secretary

RWG LAW

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Secretary to James L. Markman, Paula Gutierrez Baeza, Roy Clarke and Isra Shah

1

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VIA ELECTRONIC MAIL & U. S. MAIL

County of San Diego
Planning & Development Services
c/o: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, California 92123

Re: Re: Comment of Borrego Springs Unified School District on Draft Sustainability Plan for the Borrego Springs Groundwater Basin

Dear Sirs:

The undersigned represents Borrego Springs Unified School District ("the District") concerning the SGMA process for the Borrego Springs Groundwater Basin. There is one specific comment which we hereby provide to you regarding the District's Baseline Pumping Allocation quantified by you in a letter to the District dated July 13, 2018. That comment is that in determining rampdown reductions in the District's Baseline Pumping Allocation related to water production serving the District's elementary school, you are required to recognize that the pumping right exercised by the District is a priority overlying right under California law, but also is protected against prescription by California Civil Code section 1007. Therefore, unlike other overlying rights, such as agricultural production rights and recreational (golf course) production rights, the District's overlying rights remain superior to the rights of any appropriator and, specifically superior to the rights of Borrego Water District. That factor of priority of pumping must be considered in developing a rampdown or pumping reduction program as part of the final Implementation Plan.

O10-1

Please respond or call at your convenience if you would like additional information about the District's input and suggestion stated in this letter.

Very truly yours,

James L. Markman

cc: Mark Stevens, Superintendent
Borrego Springs Unified School District

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RICHARDS WATSON GERSHON

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Letter O10

Commenter: James L. Markman, Borrego Springs Unified School District
Date: May 21, 2019

O10-1: The commenter's claim is that the water rights of the School District are superior to other appropriators, which include the Borrego Water District. The letter further requests that this right be considered when developing a rampdown or reduction program. The comment does not address the adequacy of the Draft GSP and calls for a legal conclusion to which the Groundwater Sustainability Agency (GSA) is not required to respond. Therefore, no further response is required or necessary.

While the Groundwater Sustainability Plan (GSP) does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

The comment does not address the adequacy of the Draft GSP and calls for a legal conclusion to which the GSA is not required to respond. Therefore, no further response is required or necessary.

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Comment Letter O11

From: Martha Deichler <mdeichler@bsusd.net>
Sent: Tuesday, May 21, 2019 3:27 PM
To: LUEG, GroundWater, PDS
Subject: Borrego Springs GSP

County of San Diego
Planning and Development Services
% Jim Bennett
5510 Overland Ave. Suite 310
San Diego, CA 92123

May 17, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Jim Bennett;

I have much respect for the time and process the County, Borrego Water Coalition, Borrego Water District, Advisory Council and other interested parties have put into the creation of the Groundwater Sustainability Plan. It has been a long, complicated and at times arduous journey requiring much patience and willingness to listen on everyone's part - especially yours. Thank you for your time and your expertise on behalf of Borrego Springs.

I am writing in reaction to the Draft GSP's lack of any reference to the results of the Environmental Navigation Services, Inc. study of our SDAC (Severely Disadvantaged Community). I am referring specifically to the high cost of water for our local low-income residents as well as the potential loss of employment when golf courses and agriculture are reduced and/or eliminated. These two aspects of our water situation could have drastic impacts on the economic viability of our community. With loss of jobs, families will move out of Borrego in search of employment and the local infrastructure will suffer. Specifically, schools will lose students, lose state funding, lay off teachers and become a skeleton of a school district with high school becoming an online program for a few.

O11-1

The loss of our labor force will impact the local economy as housekeepers, gardeners, dishwashers, laborers and other low skilled workers leave our valley in search of employment elsewhere. The infrastructure of our village depends on these workers and their families; their leaving will have a definite negative impact. In addition, a town without children is truly not a livable place.

Please consider the plight of our low income citizens as well as the plight of our town as you ponder next steps in our GSP.

Sincerely,

Martha Deichler
School Community Liaison
Borrego Springs Unified School District

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Letter O11

Commenter: Martha Deichler, School Community Liaison, Borrego Springs Unified School District
Date: May 17, 2019

O11-1 The Groundwater Sustainability Agency (GSA) appreciates comments from the Borrego Springs Unified School District. The commenter asserts that implementation of the Groundwater Sustainability Plan (GSP) will result in loss of employment and labor force, and result in substantial reduction of population leading to an absence of children. The commenter is referred to the response to Comment O12-5 regarding consideration of Severely Disadvantaged Communities (SDACs).

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Comment Letter O12

Bennett, Jim

From: David Garmon <jdgarmon@me.com>
Sent: Tuesday, May 21, 2019 4:40 PM
To: LUEG, GroundWater, PDS
Cc: Diane Johnson
Subject: Groundwater Sustainability Plan Borrego Valley Groundwater Basin
Attachments: BVSC Comment Letter.pdf

Dear Jim,

Please find attached below the comment letter from Diane Johnson, who is the Stewardship Council representative to the AC. Diane is traveling from Canada today and has asked me to submit this letter on her behalf.

Thank you,

David

1

Borrego Valley Stewardship Council

Borrego Springs, CA

May 21, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Re: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett,

Please accept this review of the draft Groundwater Sustainability Plan (GSP) from the Borrego Valley Stewardship Council. The Stewardship Council is an umbrella organization in Borrego Springs composed of businesses, non-profits, and governmental agencies. Please visit our website for a listing of our institutional signatories at http://www.borregovalleystewardshipcouncil.org/home.html.

The Borrego Valley Stewardship Council is committed to the sustainable development and growth of the Borrego region in its entirety. As such, we have great interest in most aspects of the GSP as described below.

We are grateful for the diligent work you and your team have put into this process over the last two years, and we look forward to continuing to work with you and your team for the health and vitality of the Borrego Valley.

O12-1

I. DETAILED REVIEW OF THE GSP BY CHAPTER

Chapter 1: Introduction

1.2 Sustainability Goal

The Sustainability Goal should be based on climate change impacts and future conditions, and should acknowledge that maximizing groundwater recharge will be a necessary component of achieving sustainability. The current draft GSP makes no reference to climate change impacts on achieving the sustainability goal; nor does it reference soil conditions, recharge rates, or land use change impacts on achieving that sustainability goal. In fact, the sustainability goal as stated in the draft GSP is not a goal at all – but simply a restatement of the intent of SGMA. It is extremely vague and not quantified in this section. This is completely inadequate and must be resolved.

O12-2

1.3.1 Organization and Management Structure

The GSA should include personnel with a focus on climate change effects on groundwater conditions and recharge rates. There is no clear identification that any of the staff on the GSA "Core Team" or Advisory Committee (AC) have background or expertise in either soil science or considering the impacts of land use on groundwater conditions. However, the organizational structure does include broad representation from relevant sectors. Personnel from the state park may be equipped to address climate change, but this is unclear. Similarly, the BVSC representative should uphold climate change concerns, but it is unclear whether they have the necessary expertise. The GSA should seek to ensure the Core Team and AC is populated with adequate expertise on both climate science, soil science, and hydrology. The GSP should be updated to include a thorough description of the requisite background of Core Team and AC members.

O12-3

1.3.3 Implementation Costs

Estimated costs to implement the GSP, and the GSA's approach to meeting those costs should include costs related to climate change impacts and adaptation, as well as costs to implement groundwater recharge. The current draft GSP includes no reference to soil conditions, recharge, or land use impacts or changing conditions as a result of climate change, and how these changing conditions could affect GSP implementation costs. The GSP implementation cost estimate does include a 10% contingency, but this is drastically insufficient, given the lack of detail in the current projects and management actions and implementation budget. The GSP implementation cost estimates need to be re-evaluated in conjunction with more detail being provided to the projects and management actions.

O12-4

Further, a thorough analysis of projected costs, and how the GSA will raise those funds, needs to be conducted to determine the potential impacts to vulnerable communities, and how to mitigate those impacts.

O12-4 Cont.

Chapter 2: Plan Area & Basin Setting

Plan Area

a) 2.1.1 Summary of Jurisdictional Areas and Other Features

Disadvantaged Communities

This section should include specific reference to disadvantaged communities. The current draft includes no specific reference to where most vulnerable community members (e.g., specific neighborhoods or population groups) within the subbasin are located.

This section should include locations and extent of communities dependent upon groundwater and noting where community wells are located near higher production wells, such as irrigation wells, that could potentially impact domestic well users' groundwater supply or quality. The current draft includes a map with density of wells per square mile, but does not include a map of the 52 "de minimis extractors," such as the 49 domestic wells in the subbasin and small water systems. Despite the requirement of SGMA not extending to de minimis users, the Borrego Subbasin GSP *should* include these users, because the overall water budget for the entire basin is relatively small, thus "de minimis" users actually make up a recognizable percentage of total extractors.

This section should represent various portions of the basin dependent upon groundwater for beneficial uses, including communities dependent upon groundwater for domestic uses. While the draft plan does map existing land use designations and zoning, it does not include specific data by land use on groundwater dependent users; all of the Borrego community and all users are groundwater dependent. This should be explicitly stated and mapped.

O12-5

b) 2.1.2 Water Resources Monitoring and Management Programs

Monitoring & Regulatory Alignment

This section should note where monitoring programs are located and where there may be gaps in monitoring. Components of the monitoring plan should include: 1) if stakeholders have requested additional monitoring; 2) either when additional monitoring will be implemented or why the request will not be approved at this time; and 3) water-relevant climate, land use and recharge

O12-6

variables (such as land use, soil conditions, precipitation, temperature, and evapotranspiration).

The current draft GSP highlights BWD's existing tiered rate structure, but does not indicate how this relates to water affordability for lower income groups. The draft provides a clear description of plan area geographic bounds, contributing watersheds, and land use designations with size and percent land cover. However, monitoring only lists the groundwater elevation monitoring wells included in CASGEM. No reference is made to soil conditions, precipitation, temperature, or evapotranspiration. Demand Offset Mitigation Water Credits Policy is the only management program in the section that adequately describes how this will impact or aligns with the GSP. All other programs included should follow this model, and this level of detail. These components need to be incorporated into the monitoring plan.

The current draft GSP references that the County Groundwater Ordinance will need to be evaluated and possibly revised to ensure consistency with GSP sustainability goals, but provides no guidance on what that would look like. There is also no information on metrics measured, past impacts, or anticipated future impacts.

The current draft GSP does a sufficient job explaining the impact of wells to the GSP, but still includes no metrics and no real information on how this information will be incorporated into the GSP.

This section raises a number of questions:

- How does BWD's Conservation Management Program (including tiered rates) determine water affordability for low-income communities?
- How does the Draft GSP integrate with the 2009 Anza-Borrego Desert IRWM Plan?
- How will the GSP integrate into the Region 7 Water Quality Control Plan for the Colorado River Basin?
- Why is there a discrepancy between BWD and the County's Water Credits Policy? As such, which water credits will be validated under the GSP's Baseline Pumping allocations?
- How many wells have been applied for vs. approved since passage of SB 252 and release of this plan?
- How will domestic wells and small water systems be protected from negative impacts of the baseline pumping allocation?

Each of these questions must be answered favorably for this section to adequately fulfill the requirements of the regulation.

O12-6
Cont.

The current draft of this section only describes the applicable laws and regulations present in the basin; it needs to be augmented to describe how monitoring of each of those programs will be incorporated into the GSP, how those existing programs will limit operational flexibility, and how the GSA will adapt to those limits.

O12-6 Cont.

c) 2.1.3 Land Use Elements of Topic Categories of Applicable General Plans

This section of the plan should identify:

- disadvantaged and severely disadvantaged unincorporated communities;
- where water agency consolidations or service extensions are being considered;
- potential sources of contamination from current land use practices;
- expected land use changes due to climate change impacts or development and socio-economic conditions, that may affect water supply and water demands, as well as groundwater recharge rates;
- projected water demand as a result of climate change or population growth, and its impact on achieving the sustainability goal; and
- how climate, land use and soil conditions impact groundwater recharge, and the affect this may have on water supply and demands how the GSP addresses those effects.

O12-7

This current draft of this section does a very good job of identifying all the policies that are relevant and in alignment with the GSP, but need to greater specificity on how the GSP will uphold or implement these various policies.

According to the San Diego County Groundwater Ordinance: "One of the purposes of the ordinance is to ensure that development is not approved in groundwater dependent areas of the County unless a project applicant can demonstrate that there are adequate supplies available to serve both existing and proposed uses." The existing Community Plan and General Plan land use policies are listed in the draft GSP, but the degree of integration is included only as a yes/no factor. This raises the questions,

1) How will the GSP affect the pre-existing San Diego County Groundwater Ordinance? and

2) How will this impact pumping allocations?

These questions should be answered in this section of the GSP, as well as providing detail on how the integration requirement is met, and identifying in

which section of both the GSP and the General Plan (GP)/ Community Plan (CP) this is discussed.

This section also fails to answer the following questions, necessary for meeting the regulatory requirements:

- Do current well permitting practices protect vulnerable water supply sources, such as shallow wells (for all beneficial uses)?
- Are there documented instances of stakeholder concerns regarding current land use or well ordinances impacting other beneficial uses?
- Which current ordinances need to be amended in order for the basin to meet its sustainability goals?
- Are the policies considered to implement the GSP actual policies that are currently in existence, or policies that would need to be established?

Each of these questions must be sufficiently answered for this section to adequately fulfill the requirements of the regulation.

O12-7 Cont.

Recharge

The San Diego County General Plan (GP) and Borrego Valley Community Plan (CP) include positive policies to protect the basin from continued overdraft and to minimize the impact of stormwater runoff (e.g., Goal LU-8; COS-5.2), yet include no mention what so ever of recharge. The current draft GSP should be augmented to include this information, and future GP / CP updates should do the same.

The current draft GSP includes positive language regarding future GP and CP needing to consider the sustainability goals of the GSP. The draft language also does an excellent job acknowledging the misalignment between agricultural preservation goals in the General Plan and groundwater sustainability in the Borrego subbasin. However, additional detail needs to be provided on how that consideration and GP / CP updates will occur, as well as how the agricultural preservation and groundwater sustainability goals will be reconciled.

O12-8

It is unclear whether GP Conservation and Open Space Element, Goal COS-4: Water Management, and/or COS-4.3 - "Maximize stormwater filtration and/or infiltration" will promote groundwater recharge, or if it only refers to stormwater mitigation where groundwater is not shallow. This policy should be clarified, and potentially reevaluated to maximize groundwater recharge potential.

The discussion in this section of estimated buildout and impacts on the GSP is inconsistent. The draft GSP states that Borrego could not meet the water needs if all allowable lots were built out, yet also states that implementation of existing

O12-9

land use will not affect sustainable management. The draft does, however, acknowledge that updated buildout estimates should be considered in conjunction with the GSP.

O12-9

Climate

The GP includes a "climate change and land use" goal (LU-5) (e.g., "sustainability"), but there is absolutely no discussion of potential climate change impacts on development patterns in the plan area. This section of the GSP needs to address this gap in existing policy by identifying potential impacts of increasing drought and evapotranspiration rates potentially making agriculture unsuitable for the subbasin, and therefore potentially causing major change in land use patterns. Further, current policy nor the draft GSP includes no discussion what so ever of climate change impacts to water supply and demand, or how the GSP will address those affects.

O12-10

d) 2.1.4 Beneficial Uses and Users

This section of the plan should include a description of the beneficial uses and users of groundwater in the basin, including potential climate impacts to beneficial uses and users, the land uses and property interests potentially affected by the use of groundwater in the basin, the types of parties representing those interests, and the nature of consultation with those parties. This section should also identify whether groundwater recharge is a designated beneficial use in the appropriate Basin Plan (per Regional Water Quality Control Board), and discuss potential locations for groundwater recharge.

The current draft GSP states that the "beneficial uses" evaluated in this GSP are not strictly synonymous with those analyzed in the Basin Plan. It is of no benefit to the GSA or the community for the GSP "beneficial uses" to be different from the Basin Plan "Beneficial uses;" these should be consistent.

Groundwater recharge nor habitat preservation / restoration are currently not included as beneficial uses in the GSP, even though they are included in the Colorado River Basin Plan. Is this because there is no active recharge currently exists in the subbasin?
The GSA should: a) consider including groundwater recharge and habitat preservation/restoration (especially in the washes/creeks & the Anza Borrego Desert State Park) as a beneficial use in the GSP, and b) seek modification at the Regional Water Board to the existing Beneficial Use Designations to ensure consistency between the Basin Plan and the GSP.

O12-11

The current draft GSP lists de minimis users as a beneficial user in this section, but then includes them with municipal users in the water budget. This is misleading and affects proper analysis. This section should be augmented to include a narrative description of issues affecting the supply and beneficial uses of groundwater. Additionally, the GSP should distinguish between domestic well owners and small water systems independent of the municipal water supply in the water budget.

O12-11 Cont.

e) 2.1.5 Notice and Communication

The notice and communication section is required to include the following:

- An explanation of the Agency's (GSAs) decision-making process.
- Identification of opportunities for public engagement and a discussion of how public input and response will be used.
- A description of how the Agency (GSA) encourages the active involvement of diverse social, cultural, and economic elements of the population within the basin.
- The method the Agency (GSA) shall follow to inform the public about progress implementing the Plan, including the status of projects and actions.

O12-12

Essentially, this section does not include a true communication strategy. Rather, this section merely describes how the GSA communicated with the public (essentially just fulfilling minimum brown act requirements).; no real communication strategy, just explaining how they met brown act violation; no explanation of decision-making, just how they engaged with the AC.

This section should also describe how climate change and related uncertainties, available adaptation strategies, groundwater recharge potential and available optimization strategies (including potential land use changes) are integrated into the GSA's communication strategy. The current draft GSP includes absolutely no mention of climate impacts, nor is there any mention of groundwater recharge opportunities.

O12-13

The current draft GSP states that there is currently no program to actively replenish the aquifer, and that aquifer storage and recovery are not being considered as an option at this time because using imported water to recharge the basin was determined to be economically infeasible. However, the GSP should consider other forms of managed aquifer recharge, such as stormwater capture and agricultural runoff management.

O12-14

The communication section should adequately outline the types of outreach performed throughout the GSP process and how outreach will continue moving forward. The current draft GSP includes little mention of <u>how</u> diverse groups were engaged; nor does it include future plans to share progress with these groups. Disadvantaged Communities ("DAC') and Severely Disadvantaged Communities ("SDAC') are not mentioned even <u>once</u> in the Stakeholder Engagement Plan, despite the entire Borrego Subbasin being designated a SDAC.

GSP meetings should always be held at times and places that enable all stakeholders to participate in at least some of the meetings. All Borrego Subbasin GSA Advisory Committee Meetings were held during work hours, thus precluding many community members from attending.

Meetings, outreach, and education materials should always be translated into appropriate languages spoken in the community. Meetings should provide services such as meals and/or childcare to enable working families to attend. While the current draft GSP does refer to translated materials, these materials are not included in the stakeholder engagement plan, nor are translation services in general mentioned in the stakeholder engagement plan.

Public comment should be taken during all meetings, and written comments should be accepted throughout the process. The current Draft GSP references targeted "SDAC engagement" via a Proposition 1 Stakeholder Engagement grant. Yet, outcomes from that engagement is not included in the draft GSP. This lack of information raises the following questions:

- What was the feedback from outreach to "Domestic water users" and "Disadvantaged and Severely Disadvantaged Communities?"
- How are these interests represented in the sustainability goals?
- How will they be included moving forward?

A list of all meetings, including times and locations, should be included in the communication section of the GSP. A sufficient number of meetings should be held to ensure stakeholders have adequate opportunities to learn about the GSP creation process and provide public comment. One public meeting, "Ad Hoc Committee on Severely Disadvantaged Community (SDAC) Involvement," occurred on 4/27/2018. Yet attendance is listed as "unknown." Meeting minutes and meeting agenda for this convening are <u>not</u> listed on the website. The two most public meetings ("Community Meetings" on 3/16/18 and 9/19/18) also lack meeting minutes and agendas on the GSA website, despite the GSP referencing that these materials <u>are</u> on the website. for either of the 2 most public meetings.

O12-15

O12-16

The Notice and Communication section, as well as the Stakeholder Engagement Plan for the draft GSP is woefully lacking. This raises the following concerns: has there been adequate stakeholder surveying and mapping? How were stakeholders informed of the process? How are the interests of small businesses, the tourism industry, and residents represented in the GSP? What were the key messages shared?

To remedy these shortcomings, the GSA should:

- Provide responses to the questions above in the Notice and Communications section of the GSP;
- Identify the outreach plan moving forward through GSP implementation, especially in development and implementation of Projects and Management Actions;
- Describe how public comments and feedback are incorporated into the GSP;
- Provide more opportunities for public input (e.g., more Community Meetings with agendas and minutes posted online) with special effort to ensure these meetings are accommodating of all community members;
- Determine how the stakeholder engagement plan will be evaluated and adapted moving forward, and share that methodology with all stakeholders.

The Borrego Subbasin GSA must augment its stakeholder engagement plan and communication section of the GSP to incorporate the following changes:

- Post meeting minutes and agendas from all community meetings;
- Identify specifically which/where vulnerable community groups are;
- Explain how vulnerable communities have been (and should be) engaged;
- Describe the major concerns of community members as identified by community members;
- Establish a process for incorporating public input into GSP revisions;
- Determine how the Stakeholder Engagement Plan will be evaluated and regularly updated.

O12-17

f) 2.1.6 Additional GSP Elements

According to CWC Section 10727.4, the GSP must describe the "processes to review land use plans and efforts to coordinate with land use planning agencies to assess activities that potentially create risks to groundwater quality or quantity." While the current draft GSP does indeed list the relevant land use planning documents, there is no description of the process followed, or that will continue to be used, for reviewing and coordinating with other land use planning activities.

O12-18

This section of the GSP must be augmented to fully meet the regulatory requirement. O12-18

This section of the GSP should describe how soil conditions and land use may further impact groundwater dependent ecosystems and how to mitigate such impacts. It should also consider an increase on water storage losses due to higher climate change temperatures. The current draft GSP includes no mention what so ever of potential impacts to groundwater dependent ecosystems, nor of water storage loss from higher temperatures; it merely mentions loss of storage in the context of potential intra-basin transfers. The GSP should be augmented to address these inadequacies. O12-19

Basin Setting

g) 2.2.1 Hydrological Conceptual Model

Drinking Water

The Hydrological Conceptual Model (HCM) should specify which aquifers are the main source of water for drinking water purposes, as well as for DACs, households relying on private wells, small community water systems, and school districts. The current draft GSP identifies the upper aquifer as the main source of water in the subbasin historically. Yet, this section does not explicitly state whether it is also the shallow aquifer that serves as the main source of water for DACs, households relying on private wells, small community water systems, and school districts. This must be rectified by including more information on the upper aquifer as it pertains to community drinking water. O12-20

For aquifers of interest for drinking water wells, the HCM should specify the overall water bearing characteristics of the aquifer (e.g., overall water quality, overall water production capacity, vertical and lateral extent, hydraulic conductivity, and storativity).

The HCM should specify how much recharge can be accomplished in different hydrogeologic environments/aquifers, and particularly provide a brief description of potential benefits and concerns of the potential recharge areas.

The HCM should be attentive to information provided for shallow aquifers and water quality concerns.

h) 2.2.2 Current and Historic Groundwater Conditions

Groundwater Elevation O12-21

The HCM should clearly state specific groundwater levels in relation to various land uses. In particular, the HCM should note where first-encountered groundwater is relatively deep; where groundwater users reliant upon shallower wells; and where users may not have the resources to drill new, deeper wells. Special notice should be given to drinking water uses. The current draft GSP provides no information regarding dewatering of wells, rehabilitation costs, rehabilitation data, or any other information about the impacts to DACs. The GSP should, but does not currently include a map identifying the locations of all drinking water systems, DACs, and areas of critical lowering of GW levels. The GSP should use monitoring wells screened for a specific aquifer, not combining aquifers, so as to indicate whether, and if so where, dewatering of wells is occurring.

O12-21 Cont.

Groundwater Quality

This section of the plan should include a map of known groundwater conditions, including sensitive uses and users of groundwater that may be impacted or threatened to be impacted.

According to the GSP, "The lateral distribution of the wells in the monitoring network that measure groundwater quality is limited, and does not extend to the outer portions of each management area." The GSP also notes that "high salinity, poor-quality connate water is thought to occur in deeper formational materials in select areas of the aquifer as well as shallow groundwater in the vicinity of the Borrego Sink in the southern portion of the Plan Area." The GSA needs more monitoring data for "de minimis" domestic well users and small water systems, especially regarding the potential impacts to disadvantaged community members and cost projections for remediation. The GSP should also indicate which wells are being considered to be taken out of production or drilled deeper to mitigate water quality concerns. Increasing contamination trends are noted in the GSP, but there is little discussion of how these issues will be addressed under the sustainability goal and management actions.

O12-22

Drinking Water

This section should also include information regarding contamination of wells, treatment costs, water quality data, or any other information regarding the impacts to disadvantaged communities. This should also include a map noting the locations of all drinking water systems, DACs, and areas of critical water quality contamination. The current draft of the GSP does not include this information. However, meeting minutes posted on the GSA website note that community members are concerned about elevated nitrate levels in some drinking water wells. This is referenced in the GSP, but not adequately.

O12-23

i) 2.2.3 Water Budget Information

The water budget should include historical use of groundwater for all types of uses and users, in particular the uses of small drinking water systems, regardless of whether they will be subject to pumping restrictions. Future use for drinking water needs must utilize data from sources such as county general plans and LAFCo documents (e.g., population projections and water demand forecasts).

The historic groundwater use percentages in the Borrego Subbasin (i.e., 70% agriculture, 20% golf course, 10% municipal) is not sustainable. This section should include a description of how historical conditions have impacted the ability of BWD and the County of San Diego to manage the basin within sustainable yield. Further, including domestic/de minimis users with the overall municipal users water budget and municipal pumping reductions is both inappropriate and inaccurate. These uses must be separated and accounted for independently in the water budget.

Data used to develop the water budget is out dated and inaccurately represents the groundwater conditions in the subbasin. The GSP must use the most recent data, and exclude data sets producing a biased result. For example, the hydrological modeling projections currently used in the draft GSP include time periods extending far back in time, prior to when pumping began, and do not take into account shifts in the hydrologic regime which have occurred as a result of climate change. The water budget currently does not (and must) consider projected recharge reductions due to land fallowing and water conservation.

These inadequacies must be addressed in order for the water budget to accurately represent present groundwater conditions and support the sustainability goal.

O12-24

j) 2.2.4 Management Areas

The purpose of this section is to ensure that management areas are designed in a way to protect, rather than harm, particular uses and users of groundwater. Management areas should be designed to set stricter requirements near vulnerable drinking water sources. The current draft GSP provides no indication of where potentially vulnerable drinking water source are within the management areas. The GSP should include a map identifying the location of all drinking water systems, DACs, and areas of particular threat from lowering of groundwater levels.

O12-25

Chapter 3: Sustainable Management Criteria

k) 3.1 Sustainability Goal

According to 23 CCR § 354.24, the GSP must include a sustainability goal using information from the basin setting to establish measures that will ensure sustainable yield, and describe a realistic path to achieving the goal over a 20-year period. The sustainability goal should also consider all beneficial uses and users susceptible to harm from changing groundwater conditions over the 20-year time frame.

The GSP's primary sustainability goal, and five sub-goals, are brief and overly broad. As previously stated, utilizing the BVHM modeling from 1945-2010 that cites groundwater conditions from a time period before major agricultural development began, does not accurately reflect the current hydrogeological make-up of the basis, nor does it consider future impacts from climate change. The GSP should use the most recent data and hydrogeologic modeling that includes potential impacts from climate change, and exclude data sets producing a biased result.

Of the five sub-goals, only two of them explicitly consider domestic well owners (chronic lowering of groundwater levels and water quality concerns), however, the goals aren't tied back to the basin setting, nor do they identify specific vulnerable areas or how these goals impacts the sustainable yield.

It is unclear whether the sustainability goal intends is to address pre-SGMA impacts, or maintain current conditions.

The sustainability goal explains how land use and groundwater recharge was considered towards achieving the sustainability goal within 20 years of Plan implementation

O12-26

local determination of the sustainable management criteria (sustainability goal, undesirable results, minimum thresholds, and measurable objectives).

a) 3.2 Undesirable Results

The GSP only considers 3 of the 6 possible sustainability indicators: Only considering 3 of the 6 possible sustainability indicators:
1. Chronic Lowering of Groundwater Levels
2. Reduction of Groundwater Storage

O12-27

3. Degraded Water Quality Makes sense to not consider seawater intrusion, but land subsidence & connected surface waters should be included!

O12-27 Cont.

Chronic Lowering of Groundwater Levels

The GSP accurately identifies de minimis users as one of the groups most vulnerable to lowering groundwater levels, and cites the technical, financial and geographic constraints these users face when compared to better resourced pumpers like BWD or larger agricultural users. While this is notable, it is unclear how outreach was conducted to help better understand the negative impacts different stakeholders are experiencing due to declining groundwater levels. Some alternative means of obtaining water for de-minimis and domestic pumpers who can no longer pump are mentioned in the plan, however these alternatives lack further discussion in the minimum thresholds, measurable objectives, or projects and management actions.

It's noted that the some de minimis wells may currently lack access to adequate water, and may be close to the BWD water distribution system, however the project management actions fail to discuss how consolidation is being considered for these de minimis users. The GSP includes figures (i.e. Figure 3.2-4) with average domestic well depths, however this map should include specific well data to better identify the most vulnerable areas.

O12-28

The GSP also reports, "The exact number of agricultural and domestic wells that have been abandoned and re-drilled deeper and/or relocated due to production rate loss from declining groundwater levels is not known. However, anecdotal information and field observations have confirmed that inactive wells exist throughout the Plan Area" (Section 3.2.1, Page 3-10). Similar to well consolidation, the GSP fails to address the data gap of abandoned wells, and the steps being taken to follow up on anecdotal concerns.

The GSP fails to consider pre-SGMA impacts to groundwater levels, instead opting to set the highest bar as maintaining current conditions, or levels at a lower than current state.

Minimum Threshold for Chronic Lowering of Groundwater Levels:

The minimum threshold for chronic lowering of groundwater levels is based principally on the documented screen intervals of key municipal water wells and domestic/de-minimis wells located in the basin, however, not all of the de-minimus wells have accurate data to identify where at-risk wells may be located. The GSP should indicate how the GSA's intend to improve well monitoring data for de minimis users as part of the interim milestones

O12-29

Measurable Objective for Chronic Lowering of Groundwater Levels:
The GSP proposes linear pumping cuts for agricultural, municipal, and recreational users, however these is no description of how different uses and users of groundwater were considered and whether the measurable objectives and interim milestones will help achieve the sustainability goal as it pertains to the most vulnerable uses of groundwater, namely de minimis users and small water systems. It is unclear how the margin of safety protects de minimis users. In addition, the outlined 5-year evaluation of the interim milestones and measurable objectives does not indicate how stakeholders will be engaged throughout these interim evaluations

O12-30

Lowering of Groundwater Storage
Lowering groundwater levels are intrinsically linked with decreased groundwater storage, however the , and begins to address how the sustainability goals will impact the San Diego County General Plan and Borrego Spring Community Plan.

O12-31

Degraded Water Quality
Must include how stakeholders will be engaged throughout these interim evaluations, specifically how to set MT's for growers in the region to meet ag needs.
Increased need for monitoring water quality in domestic wells. Indicate how the GSP will integrate with the RQCB 'Basin Plan' groundwater quality objectives.

O12-32

Minimum Threshold/Measurable Objectives

The GSP fails to indicate how these will be determined or met.

b) 3.5 Monitoring Network

Data gap in 3.5.4.2 - Well screened in multiple aquifers
- Screen can be slots or other measure that allows water through and keeps solids out
- Water comes from the aquifer into the well
- When you're using a monitoring well that is screened in different aquifers, you're getting a combined result - not really seeing what the impacts on a given aquifer are
- Need to use monitoring wells screened for a specific aquifer, not combining aquifers

O12-33

Chapter 4: Projects and Management Actions

However it is unclear how the top priority PMA's (land fallowing and pumping reductions) will impact domestic/small water system users

Expected benefits and metrics for evaluation for each PMA do a poor job of mentioning how PMA's will impact groundwater-dependent vulnerable groups

O12-34

PMA's were not put before stakeholders (see feedback in Section 4.0), therefore stakeholders are not aware of project goals, timelines, benefits, and risks

Prior to adoption, the GSA should hold public meetings to gather input on the PMA's via publicly available meetings (appropriate meeting times, translation and childcare services, etc.).

Notes: According to public meetings posted on the GSA website, there was no 'Community Meeting' held to discuss the projects and management actions - the most recent Advisory Committee meeting (Jan 2019) includes slides on the PMA's and how to provide input, however, minutes from the meeting aren't posted (incorrect minutes are posted from Aug 2018); AND as seen from the previous schedule of Advisory Committee meetings, these meetings tend to take place beginning at 10:00 am during workdays.

O12-35

Thank you very much for your consideration of our concerns regarding this draft of the GSP. Please do not hesitate to contact me with any questions regarding the Stewardship Council's interests/concerns.

Sincerely yours,

Diane Johnson
BVSC Representative to the GSP Advisory Council

Letter O12

Commenter: Diane Johnson, Advisory Committee Member, Borrego Valley Stewardship Council
Date: May 21, 2019

O12-1 The Groundwater Sustainability Agency (GSA) welcomes comments submitted on behalf of the Borrego Valley Stewardship Council and recognizes your participation on the Advisory Committee and your commitment to sustainable development and growth of the Borrego region.

O12-2 The GSA acknowledges your comment that the Sustainability Goal should be based on climate change impacts and future conditions, and should acknowledge that maximizing groundwater recharge will be a necessary component of achieving sustainability. With regard to groundwater recharge, the commenter is referred to the GSAs response to Letter I19. With regard to climate change, the commenter is referred to Groundwater Sustainability Plan (GSP) Section 3.3.1.1 and Section 3.4.1 for a discussion of how Department of Water Resources (DWR) climate change factors were considered and applied in the establishment of minimum thresholds and measurable objectives.

The comment also indicates that sustainability goal is not a goal at all but simply a restatement of the intent of Sustainable Groundwater Management Act (SGMA) and inadequate. The GSA notes this concern, and the commenter is referred to GSP Section 3.1, which adequately describes the GSAs sustainability goal in accordance with SGMA and DWR regulations. Furthermore, GSP pgs. 3-21 and 3-22 explains how climate change was considered in the development of sustainable management criteria.

O12-3 The GSA notes the comment that the GSA should include personnel with a focus on climate change effects on groundwater conditions and recharge rates. The commenter indicates that there is no clear identification that any of the staff on the GSA "Core Team" or Advisory Committee (AC) have background or expertise in either soil science or considering the impacts of land use on groundwater conditions. The commenter requests that the GSA ensure that the Core Team and AC be populated with personnel with adequate expertise on climate science, soil science, and hydrology, and that the GSP be updated to include a thorough description of the requisite background of Core Team and AC members. The commenter is referred to GSP Section 1.3 and Appendix E, which describes the organization and management structure of the GSA.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

O12-4 The GSA acknowledges the comment that estimated costs to implement the GSP, and the GSA's approach to meeting those costs should include costs related to climate change impacts and adaptation, as well as costs to implement groundwater recharge. The commenter also indicates that the Draft GSP includes no reference to soil conditions, recharge, or land use impacts or changing conditions as a result of climate change, and how these changing conditions could affect GSP implementation costs. The commenter believes the GSP implementation cost estimates should be re-evaluated in conjunction with more detail being provided to the projects and management actions. The commenter requests an analysis of how the GSA will raise funds, and to determine potential impacts to vulnerable communities, and how to mitigate those impacts.

With regard to groundwater recharge, the commenter is referred to the GSAs response to Letter I19. With regard to climate change, the commenter is referred to GSP Section 3.3.1.1 and Section 3.4.1 for a discussion of how DWR climate change factors were considered and applied in the establishment of minimum thresholds and measurable objectives. The commenter is referred to GSP Chapter 5 for a description of GSP implementation, including costs. It should be noted that the specificity of cost estimates are commensurate with the level of detail of the Project and Management Actions (PMAs), and are subject to change. Finally, the commenter is reminded that the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any of the PMAs in the GSP.

O12-5 The commenter requests that the GSP be revised to indicate reference where the most vulnerable community members (e.g., specific neighborhoods or population groups) within the Subbasin are located. The commenter is referred to GSP Section 2.1.1 (Summary of Jurisdictional Areas and Other Features) for a description of the characteristics of the community including Severely Disadvantaged Community (SDAC) status. In addition, the commenter requests that the GSP include locations and extent of communities dependent upon groundwater, including where community wells are located near higher production wells, such as irrigation wells, that could potentially impact domestic well users' groundwater supply or quality. The commenter asserts that despite the requirement of SGMA not extending to de minimis users, the Borrego Subbasin GSP should include these users, because the overall water budget for the entire basin is relatively small, thus "de minimis" users actually make up a recognizable percentage of total extractors. In addition, the

commenter indicates that should represent various portions of the basin dependent upon groundwater for beneficial uses, including communities dependent upon groundwater for domestic uses and include specific data by land use on groundwater dependent users. Lastly, the commenter indicates that all of the Borrego community and all users are groundwater and this should be explicitly stated and mapped.

The Draft GSP adequately describes SDAC concerns, including the location of municipal and domestic wells which serves the SDAC. The Draft GSP adequately describes the location of de-minimis well users, and establishes thresholds protective of those uses. GSP Chapter 3 includes Figure 3.2-4 which shows the approximate location of de-minimis users along with BWD's distribution systems. In addition, Chapter 3 addresses how the GSP establishes thresholds that are protective of de-minimis users (Section 3.2.1 and Section 3.3.1). SGMA does not require identification of SDACs at the level of detail requested by the commenter. The GSA has appropriately identified the SDAC at the general scale of the U.S. Census Designated Place (CDP) and tracts.

The GSA sought grant funding to prepare the GSP and identify vulnerabilities and potential impacts from the GSP process on SDAC-related issues (e.g., water supply, cost, and infrastructure concerns). The BWD placed into the administrative record the SDAC Impact/Vulnerability Analysis (Task 2 Report) prepared by Environmental Navigation Services Inc., dated April 15, 2019. Besides defraying costs for the community, the report was prepared to understand the implications that the implementation of SGMA will have on the SDAC population of Borrego Springs. The report describes specific vulnerabilities, including challenges associated with potential loss of seasonal jobs in the agricultural and recreational sectors, funding and access to public schools, and water rate impacts to the lowest income portion of the community. The 20-year SGMA compliance period does provide time for the community to adapt, and potentially using the BWD's tiered rate structure and the GSA's commitment to seeking state funding to support the SDAC as the primary potential mitigation strategies to address SDAC concerns. GSP Section 2.1.5 has been amended to briefly summarize the results of BWD's Impact/Vulnerability Analysis.

O12-6 The commenter indicates that GSP Section 2.1.2 should note where monitoring programs are located and where there may be gaps in monitoring. In addition, the commenter requests that components of the monitoring plan should include: (1) if stakeholders have requested additional monitoring; (2) either when additional monitoring will be implemented or why the request will not be approved at this

time; and (3) water-relevant climate, land use, and recharge variables (e.g., land use, soil conditions, precipitation, temperature, evapotranspiration).

The GSA notes the comment that the Draft GSP highlights BWD's existing tiered rate structure, but does not indicate how this relates to water affordability for lower income groups. The commenter indicates that no reference is made for monitoring data specific to soil conditions, precipitation, temperature, or evapotranspiration. In addition, the commenter requests that all programs include the level of detail provided for the Demand Offset Mitigation Water Credits Policy and that these components [soil conditions, precipitation, temperature, or evapotranspiration] need to be incorporated into the monitoring plan.

The commenter states that the Draft GSP provides no guidance on how the County Groundwater Ordinance will need to be evaluated and possibly revised to ensure consistency with GSP sustainability goals. The GSA is unclear on the following comment: ". . . no information on metrics measured, past impacts, or anticipated future impacts." The commenter indicates the following six items need to be addressed and favorably answer to adequately fulfill the requirements of SGMA: (1) relationship of tiered rate to water affordability for low-income communities; (2) 2009 Anza-Borrego Desert IRWM Plan; (3) Region 7 Water Quality Control Plan; (4) BWD and the County's Water Credit Policy; (5) wells since passage of Senate Bill (SB) 252 and release of this plan; and (6) how will domestic wells and small water systems be protected from negative impacts of the baseline pumping allocation. Your comment suggests that describing applicable laws in the Draft GSP is not sufficient and that the GSP must to be augmented to describe how monitoring of each of those programs will be incorporated into the GSP, how those existing programs will limit operational flexibility, and how the GSA will adapt to those limits.

In response to this comment, the GSA has revised Section 2.1.2 to provide additional information on the relevance of the water resource management programs to implementation of the GSP as well as operational flexibility considerations. Adequate information on soil conditions, precipitation, temperature, and evapotranspiration is found in Chapter 2, and Chapter 3 incorporates climate change considerations into the development of sustainable management criteria. Otherwise, this comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

O12-7 The GSA acknowledges your comments on Section 2.1.3 Land Use Considerations and your request to identify the following items: (1) disadvantaged and severely disadvantaged unincorporated communities; (2) where water agency consolidations

or service extensions are being considered; (3) potential sources of contamination from current land use practices; (4) expected land use changes due to climate change impacts or development and socio-economic conditions, that may affect water supply and water demands, as well as groundwater recharge rate; (5) projected water demand as a result of climate change or population growth, and its impact on achieving the sustainability goal; and (6) how climate, land use and soil conditions impact groundwater recharge, and the affect this may have on water supply and demands how the GSP addresses those effects.

Your comment indicates that the Draft GSP needs specificity on how the GSP will uphold or implement various policies. In addition, you question how will the GSP affect the pre-existing San Diego County Groundwater Ordinance and how will this impact pumping allocations.

Additionally, you indicate that Section 2.1.3, Land Use Considerations, fails to answer the following items necessary for meeting SGMA requirements: (1) do current well permitting practices protect vulnerable water supply sources, such as shallow wells (for all beneficial uses); (2) are there documented instances of stakeholder concerns regarding current land use or well ordinances impacting other beneficial uses; (3) which current ordinances need to be amended in order for the basin to meet its sustainability goals; and (4) are the policies considered to implement the GSP actual policies that are currently in existence, or policies that would need to be established?

Adequate information on well permitting practices is found in GSP Section 2.1.2; adequate information on stakeholder concerns is found in GSP Section 2.1.5; and adequate information on current ordinances and policies and how they relate to GSP implementation is found in GSP Sections 2.1.2 and 2.1.3. As discussed in Chapter 2 (Section 2.1.3), population growth is expected to be minimal, as existing regulatory, environmental, and public service constraints severely limit the ability for Borrego Springs to grow. Water demand and supply is provided in GSP Section 2.2.3. In addition, the commenter is referred to previous responses O12-1 through O12-6 for responses to issues around climate change, land use and soil conditions.

O12-8 The GSA notes your comment that the San Diego County General Plan and Borrego Valley Community Plan include positive policies to protect the basin from continued overdraft and to minimize the impact of stormwater runoff (e.g., Goal LU-8; COS-5.2), yet include no mention what so ever of recharge. The GSA acknowledges your comment that Draft GSP should be augmented to include this information. In addition, you indicate that detail needs to be provided on how the

misalignment between agricultural preservation goals in the General Plan with the goals of the GSP will be aligned in the update to the General Plan.

The GSA notes your comment that it is uncertain whether General Plan Conservation and Open Space Element, Goal COS-4: Water Management, and/or COS-4.3 - "Maximize stormwater filtration and/or infiltration" will promote groundwater recharge, or if it only refers to stormwater mitigation, and that this policy should be clarified and potentially reevaluated to maximize groundwater recharge potential.

As described in the GSP (Section 2.1.3), "At the next County General Plan update, land use policies will be brought in line with the sustainability goals of this GSP. This will be done by considering the sustainability goals and the projects and management actions of the GSP in the updated community plan and through revisions to the County's groundwater ordinance."

O12-9 The GSA notes your comment that you infer that the GSP states that Borrego Springs could not meet the water needs if all allowable lots were built out, yet also states that implementation of existing land use will not affect sustainable management. This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary. As discussed in Chapter 2 (Section 2.1.3), population growth is expected to be minimal, as existing regulatory, environmental, and public service constraints severely limit the ability for Borrego Springs to grow. As stated in the GSP (pg. 2-21): "Future general plan and community plan updates should consider the sustainability goals of this GSP. Updated buildout estimates should be considered in conjunction with the sustainability goals, projects, and management actions outlined in this GSP."

O12-10 The GSA notes your comment that there is absolutely no discussion of potential climate change impacts on development patterns in the plan area. In addition, you indicate that current policy nor the Draft GSP includes no discussion what so ever of climate change impacts to water supply and demand, or how the GSP will address those affects. The commenter is referred to previous responses to Comment O12-1 through Comment O12-7 regarding issues around climate change, land use, and soil conditions.

O12-11 GSP Section 2.1.4 includes adequate information on beneficial uses and users at an appropriate level of detail to comply with SGMA. Groundwater recharge is discussed in GSP Section 2.2.1.4 and specific areas conducive to recharge are shown in Figure 2.2-11; in addition, recharge sources are quantified in GSP Section

2.2.3. As discussed in GSP Section 2.1.6, there is no program to actively replenish the aquifer, and there are no conjunctive use and/or underground storage programs within the Plan Area. Natural recharge is not considered a beneficial use.

Finally, the GSA notes the commenter's opinion that de minimis users should be listed as a separate beneficial use in Section 2.1.4. This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

O12-12 The commenter asserts that the GSP does not describe a true communication strategy. GSP Section 2.1.5 includes adequate information on notice and communication at an appropriate level of detail to comply with SGMA, and the commenter is referred to Appendix C which includes additional detail on the GSA's communication strategy. In addition, GSP Section 2.1.5 has been amended to briefly summarize the results of BWD's SDAC Impact/Vulnerability Analysis.

O12-13 The GSA notes the comment that Section 2.1.5 should describe how climate change and related uncertainties, including adaptation strategies, groundwater recharge potential, and other optimization strategies, are integrated into the GSA's communication strategy. The commenter is referred to previous responses to Comment O12-1 through Comment O12-11 for responses to issues around climate change, groundwater recharge, land use and soil conditions.

O12-14 The GSA acknowledges this comment on aquifer replenishment. The commenter is referred to previous responses to Comment O12-1 through Comment O12-11 for responses to issues around climate change, groundwater recharge, land use, and soil conditions.

O12-15 The GSA acknowledges the commenter's concern about the GSA's communication strategy. GSP Section 2.1.5 includes adequate information on notice and communication at an appropriate level of detail to comply with SGMA, and the commenter is referred to Appendix C which includes additional detail on the GSA's communication strategy. As stated therein,

> the GSA gathered valuable information [from the public, including the SDAC] about community concerns, which primarily related to rising water rates, economic impacts (e.g., job loss), land use changes, water use allocations, water quality, and long-term environmental impacts. This information was then incorporated into the development of this GSP, and considered in the evaluation of groundwater dependent ecosystem (GDE), development of projects

and management actions, seeking additional funding opportunities to minimize impacts on ratepayers, and land use implications.

In addition, GSP Section 2.1.5 has been amended to briefly summarize the results of BWD's SDAC Impact/Vulnerability Analysis, including mitigation strategies to address potential economic impacts of GSP implementation.

O12-16 Commenter points out attendance is not known for several meetings in Appendix C2 (List of Public Meetings), and indicates meeting minutes for several meetings are not posted on the website. The County website has archives of all GSA GSP advisory committee meetings and does not include meeting minutes that were hosted solely by the BWD.

O12-17 The GSA acknowledges the commenter's concern about the GSA's communication strategy. GSP Section 2.1.5 includes adequate information on notice and communication at an appropriate level of detail to comply with SGMA, and the commenter is referred to Appendix C which includes additional detail on the GSA's communication strategy. In addition, GSP Section 2.1.5 has been amended to briefly summarize the results of BWD's SDAC Impact/Vulnerability Analysis, including mitigation strategies to address potential economic impacts of GSP implementation.

O12-18 The GSA acknowledges the commenter's concern about the GSA's coordination of land use planning and SGMA compliance. It should be noted that the County—who is the only land use planning agency in the Subbasin—is also part of the GSA. Accordingly, no special inter-agency coordination is needed to ensure land use plans are updated to be consistent with the GSP. This isn't necessarily the case for other GSAs in the state. GSP Section 2.1.3 includes adequate information to comply with CWC Section 10727.4.

O12-19 The GSA acknowledges the commenter's claim that the GSP lacks information on soil conditions, land use impacts, groundwater dependent ecosystems, and climate change. The GSP includes adequate information on all these topics. The commenter is referred to previous responses to Comment O12-1 through Comment O12-11, and to the master response of groundwater dependent ecosystems.

O12-20 The GSA acknowledges the commenter's claim that the GSP lacks information on drinking water sources and water quality for SDACs, domestic well owners, small water systems and school districts. The source and quality of water is the same as described in the GSP for the whole Subbasin. The commenter is referred to Chapter 2 for complete information about aquifer properties, water quality, and water

budget. Furthermore GSP Chapter 3 provides additional information relevant to private well owners, small water systems, and de minimis users, including figures of how much water remains in the upper aquifer (e.g., Figure 3.2-1).

O12-21 The GSA acknowledges the commenter's opinion that the GSP should go into detail on each users' wells, the depth to groundwater for each, and speculate as to users' needs, costs, and/or resources to rehabilitate or drill new wells. GSP Chapter 3 includes adequate information that describes undesirable results for all beneficial users of groundwater within the Subbasin, including de minimis users of groundwater. It is not within the scope of the GSP nor necessary to meet SGMA requirements to go into the level of detail requested by the commenter.

O12-22 The GSA acknowledges the commenter's concerns about groundwater quality. The GSP adequately describes groundwater quality problems, including specific areas of concern. This information is primarily found in GSP Section 2.2.2.4, but is succinctly summarized in Chapter 4, pg. 4-30, which states,

> naturally occurring poor water quality has been identified in specific areas: near the margins of the Subbasin where unconsolidated sediments are in contact with fractured bedrock; for select wells screened predominantly in the lower aquifer of the South Management Area that have concentrations of arsenic above the drinking water maximum contaminant level; and near the Borrego Sink where elevated sulfate and TDS [total dissolved solids] are likely associated with dissolution of evaporites from the dry lake.
>
> Historical groundwater quality impairment for nitrates is noted for select portions of the Subbasin predominantly in the upper aquifer of the North Management Area underlying the agricultural areas and near high density of septic point sources. The source of nitrates is likely associated with either fertilizer applications or septic return flows.

In addition, the GSP has been amended to clarify that BWD does not have wells in the Borrego Sink area, and utilizes wells that produce water meeting Title 22 requirements without further treatment.

O12-23 The GSA acknowledges the commenter's opinion that the GSP should go into detail on the water quality characteristics for SDAC users' wells, and speculate as to users' needs, costs, and/or resources to treat a presumed water quality issue. The GSP includes adequate information that addresses water quality concerns within

the Subbasin. It is not within the scope of the GSP nor necessary to meet SGMA requirements to go into the level of detail requested by the commenter.

O12-24 The GSA acknowledges the commenter's objection to including domestic/de minimis users' water uses into the larger municipal beneficial use umbrella. The GSP includes adequate information on groundwater conditions in the Subbasin, including the water budget. The commenter is referred to the master responses for the baseline pumping allocation and on the initial estimate of sustainable yield.

O12-25 The GSA acknowledges the commenter's opinion that the GSP should define management areas based on vulnerable drinking water sources, and that a map of drinking water systems, DACs, and groundwater levels should be provided. As discussed in the GSP, management areas are defined through a combination of criteria, one of which includes the predominant uses of groundwater (i.e., agricultural, recreational, or municipal). The commenter is referred to Figure 2.1-2 for a map of BWD's water service area and identification of small water systems. The commenter is referred to Figure 3.2-4 for a map that approximates the location, depth, and available water for de minimis users, as well as their location relative to BWDs drinking water distribution system.

O12-26 The GSA acknowledges the commenter's opinion that the GSP's sustainability goal and sub-goals are too brief and overly broad.

O12-27 The GSA acknowledges the commenter's statement that the GSP considers only three of the six possible sustainability indicators. The GSP considers all six sustainability indicators but has determined that undesirable results for seawater intrusion, land subsidence, and interconnected surface waters are not presently occurring or likely to occur over SGMA's planning and implementation horizon. For this reason, the GSP does not establish sustainable management criteria for those three indicators, as discussed in GSP Section 3.2.

O12-28 The GSA acknowledges the commenter's concerns about how the GSP's sustainable management criteria for chronic lowering of groundwater levels is protective of domestic and de minimis well users. The minimum threshold justification (GSP Section 3.3.1.1) is equally applicable to domestic and de minimis well users as it is to municipal beneficial uses served by BWD. Specifically, it states that an undesirable result would occur if groundwater level declines "lower the rate of production of pre-existing groundwater wells below that necessary to meet the minimum required to support the overlying beneficial use(s), where alternative

means of obtaining sufficient groundwater resources are not technically or financially feasible."

Furthermore, GSP Section 3.2.1 provides additional information about domestic and de-minimis wells: "an important objective in this GSP is that access to the upper aquifer or upper middle aquifer be maintained, as much is practicable, in areas with de minimis and other domestic wells not currently served by municipal supply (Figure 3.2-1 and Figure 3.2-2)." The GSA's groundwater level monitoring network is sufficient to detect whether significant groundwater depressions and/or accelerated rates of decline might affect domestic and/or deinimis well owners, and such information will be included in annual reports and 5-year GSP evaluations. However, it is neither within the scope of the GSP nor feasible at this time to identify conditions in each private/domestic de minimis well or predict whether or to what degree individual's well yields might be affected in the future. Regarding inactive wells, it should be noted that PMA No. 4 (Water Quality Optimization) (described in GSP Section 4.6.1) includes consideration for proactive abandonment of inactive wells to minimize migration pathways.

O12-29 The commenter is referred to response to Comment O12-28.

O12-30 The GSA acknowledges the commenter's inquiry on how the measurable objective and interim milestones protects domestic and/or de-minimis well owners. The commenter is referred to response to Comment O12-28.

O12-31 This comment appears to have been truncated, but is interpreted as asking how the sustainable management criteria for lowering of groundwater in storage will impact the San Diego General Plan and Borrego Springs Community Plan. As described in the GSP (Section 2.1.3), "At the next County General Plan update, land use policies will be brought in line with the sustainability goals of this GSP. This will be done by considering the sustainability goals and the projects and management actions of the GSP in the updated community plan and through revisions to the County's groundwater ordinance."

O12-32 This comment appears to be incomplete, but is interpreted as asking how the GSA intends on monitoring and evaluating the sustainable management criteria for groundwater quality. The commenter is referred to GSP Sections 3.3.4, 3.4.4, and 3.5.

O12-33 The GSA acknowledges the commenter's notes on minimum thresholds and measurable objectives. The GSP does not fail to indicate how minimum thresholds and measurable objectives will be met. The commenter is referred to Chapter 3 and

Chapter 4 of the GSP. The remainder of the comments do not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

O12-34 The GSA acknowledges the commenter's statement that it is unclear how PMA's will impact domestic/small water system users. As de-minimis users are not subject to the pumping reduction program, implementation of PMAs are expected to result in improved groundwater conditions when compared to the impacts of doing nothing. For small water systems considered as non-de minimis users, the commenter is referred to the master response on the baseline pumping allocation and pumping reduction program.

O12-35 The GSA acknowledges the commenter's assertion that PMA's were not put before stakeholders. The commenter is referred to GSP Appendix C2, which includes a list of public meetings. Public meetings that reviewed PMAs in full, or aspects of PMAs, occurred on May 31, 2018; August 30, 2018; November 29, 2018; and January 31, 2019. Both AC and community meetings are open to the general public.

Comment Letter O13

From: Diane E.P. Johnson <depjohnson@aol.com>
Sent: Tuesday, May 21, 2019 5:01 PM
To: LUEG, GroundWater, PDS
Subject: Stewardship Council comments on BVGSP

Borrego Valley
Stewardship Council

May 21, 2019

County of San Diego

Planning & Development Services

C/O: Jim Bennett

5510 Overland Avenue, Suite 310

San Diego, CA 92123

Re: Groundwater Sustainability Plan

Borrego Valley Groundwater Basin

Borrego Springs Sub-basin

Dear Mr. Bennett,

1

The Borrego Valley Stewardship Council (BVSC) submits the following comments in reviewing the Draft Groundwater Sustainability Plan.

I. Introduction

The Borrego Valley Stewardship Council is a convening entity, guided by the Borrego Valley Geotourism Charter, that regularly brings together a collection of civic and community organizations, government officials, agency staff, academic institutions, and interested citizens to address major issues of concern impacting the Anza-Borrego Desert State Park, the Valley, and residents. The Council was formed in 2014 in cooperation with the National Geographic Society's Geotourism Program and the University of California, Irvine Steele/Burnand Anza-Borrego Desert Research Center. Signatories include Anza-Borrego Desert State Park--California State Parks; Borrego Water District; Borrego Springs Unified School District; Borrego Art Institute; Anza-Borrego Foundation; Anza-Borrego Desert Natural History Association; Borrego Modern; Borrego Springs Chamber of Commerce & Visitors Bureau; Borrego Village Association; Tubb Canyon Desert Conservancy; Borrego Outfitters; Borrego Springs Homeowners Association; de Anza Country Club; La Casa del Zorro; and The Springs at Borrego RV Resort. These organizations comprise virtually all the major NGOs and businesses in town. (http://www.borregovalleystewardshipcouncil.org/home.html)

The BVSC wishes to thank you, and the BVGSA Core Team and Dudek for tremendous efforts in producing such a substantial Draft GSP. A remarkably wide breadth of skills and types of work were required. As the Stewardship Council representative to the GSA Advisory Committee, I attended many meetings and witnessed the dedicated, on-going efforts put forth.

O13-1

II. Background of intent: SGMA and related water law

SGMA has opened a new era in California water law, with its emphasis on *local* solutions to *local* groundwater basins. The DWR website on SGMA and Groundwater Sustainability Agencies states, "The Sustainable Groundwater Management Act (SGMA) established a new structure for managing California's groundwater resources at the local level by local agencies." (https://water.ca.gov/Programs/Groundwater-Management/SGMA-Groundwater-Management/Groundwater-Sustainable-Agencies)

The San Diego County SGMA website states: "The intent of the law is to strengthen local groundwater management of basins most critical to the state's water needs with an understanding that groundwater is most effectively managed at the local level. SGMA requires basins to be sustainably managed by local public agencies (e.g., counties, cities, and water agencies) who become groundwater sustainability agencies, or GSAs. The primary purpose of the GSAs is to develop *and implement* [italics added] a Groundwater Sustainability Plan (GSP) to achieve long-term groundwater sustainability." https://www.sandiegocounty.gov/pds/SGMA.html

It is important to note that, just as the Bill of Rights is predicated on the existence of the U.S. Constitution, SGMA was written in the context of the long-established and regularly updated and reaffirmed California Water Plan. The Plan underlies all state water legislation and programs, emphasizing four societal goals in addition to the traditional hydrologic goals of state water law:

"Update 2018 organizes the intended outcomes that have been expressed by the water community around four broad categories of public benefits, or "societal values."

2

- **Public Health and Safety** — All Californians are protected from health and safety threats and emergencies.

  Comment: This includes guaranteed access to safe drinking water, as expressed in the Human Right to Water Act, AB 685, ch. 524, 2012 Cal. Stat. 91 (Codified at Cal. Water Code § 106.3 (West 2012). AB685 is "a comprehensive law guaranteeing the right to safe, affordable water without discrimination, prioritizing water for personal and domestic use and delineating the responsibilities of public officials at the state level. AB 685 specifically charges relevant California agencies with fulfillment of the law's mandate by considering the human right to water in policy, programming, and budgetary activities."
  https://www.law.berkeley.edu/files/Water_Report_2013_Interactive_FINAL(1).pdf]

- **Healthy Economy** — A strong, diverse economy provides satisfying ways of life and well-being, as well as opportunities for economic prosperity, for all Californians.

  Comment: The economy of Borrego Springs is totally dependent on its groundwater aquifer. Beneficial users in Borrego Springs include not only its 3500 residents (who pay over $300,000,000 to the County in property taxes each year), but also visitors – numbering in the hundreds of thousands annually -- to the town and to the Anza-Borrego Desert State Park. If water becomes so unaffordable to municipal water users (residents and businesses) that the Borrego Water District cannot be sustained, then both residents and the Park – an important State resource – are irreparably damaged.

- **Ecosystem Vitality** — Ecological functions and processes that sustain ecosystems and fish and wildlife habitat are maintained and improved.
- **Opportunities for Enriching Experiences** — All Californians have opportunities for cultural, spiritual, recreational, and aesthetic experiences."

O13-1
Cont.

III. Stewardship Council comments on the Draft GSP

A. The underlying assumptions of the Draft GSP are more reflective of the long-time California tradition of conflating property rights with water rights, and regarding water as a privately-held resource free to its owners. Water is now recognized as a public common-pool resource, and the right to potable water is a basic human right in California Moreover, the Draft GSP breaks the tenet of local control. Its hard line on across-the-board proportional reductions to pumping allocations comes not from any one sector of the local Borrego stakeholder ecosystem, but is instead being driven by Sacramento-based large agricultural interests funding attorneys to assist them in resisting change. AS shown above, SGMA says that decisions should be derived locally, so as not to perpetuate the inequitable water interests that have made California the last state in the nation to adopt integrated watershed management planning. Borrego Springs should not be held hostage to the interests of state-level big agriculture.

O13-2

B. Collaborative governance and transparency are also tenets in SGMA; the law makes clear that the relevant County is an important part of the local control it encourages. It's hard to see how, after accepting a special grant given to Borrego because it is an SDAC, the GSP can both ignore SDACs in its contents and its intentions. The County, including its trong property-rights advocates, would be better served to be at the table than ceding control to the state Water Boards.

O13-3

3

C. The Stewardship Council would also like to reiterate its 2016 letter to the county in which it encouraged fully embracing the GSP process; particularly around inclusion, equity, and transparency. Including SDAC communities and Tribes/native Americans, equity in water allocation, land use and economic development. Transparency in water transfers and land use decisions is required.

O13-3 Cont.

Sincerely,

Diane E. Johnson

4

Letter O13

Commenter: Diane Johnson, Borrego Valley Stewardship Council
Date: May 21, 2019

O13-1: The Groundwater Sustainability Agency (GSA) acknowledges the commenter's assertion that Sustainable Groundwater Management Act (SGMA) was developed in the context of the long-established California Water Plan. It should be noted that the Groundwater Sustainability Plan (GSP) was developed in compliance with the SGMA of 2014 (California Water Code Section 10720–10737.8, et al.) and the Department of Water Resources (DWR) GSP Regulations (California Code of Regulations, Title 23, Section 350 et seq.). Appendix A of the GSP includes the Preparation Checklist for GSP Submittal, which identifies where in the GSP each of the statutory requirements of SGMA are addressed.

OS13-2: The commenter alleges the Draft GSP breaks the tenet of local control and is in objection to proportional reductions.

In response, the GSP does not set specific groundwater use reductions. The GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the basin pumpers is a possible scenario where groundwater use reductions could be developed.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

O13-3: The GSA acknowledges the commenter's assertion that the County should be at the table rather than the State Water Board. The GSA further recognizes the commenter's concern regarding ignoring the Severely Disadvantaged Community (SDAC). In response, the GSA sought grant funding to prepare the GSP and identify vulnerabilities and potential impacts from the GSP process on SDAC-related issues (e.g., water supply, cost, and infrastructure concerns). Besides defraying costs for the community, the work conducted for the grant will provide insight for Borrego Water District's (BWD's) future decision-making efforts, both of which are beneficial to the SDAC. The GSA intends to continue to pursue future grant opportunities for the benefit of the SDAC and the entire Borrego Springs community.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment Letter O14

May 15, 2019

County of San Diego,
Attn Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Dear Jim

As you already know, Borrego Water District retained the services of Environmental Navigation Services, Inc. (ENSI) to provide a variety of studies related to the implementation of the Groundwater Sustainability Plan (GSP) for the Borrego Springs Subbasin (Basin) of the Borrego Valley Groundwater Basin and its possible impacts upon BWD infrastructure and the Borrego Springs Economy. All of the Reports have now been completed and BWD is submitting them to The County and become part of the public record for the comment period of this Basin's GSP.

O14-1

Sincerely

Kathy Dice, President
Board of Directors

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Letter O14

Commenter: Kathy Dice, President, Borrego Water District
Date: May 15, 2019

OS14-1: The Groundwater Sustainability Agency (GSA) has added the Environmental Navigation Services Inc. studies provided by Borrego Water District to the public record. The letter does not address the adequacy of the Draft Groundwater Sustainability Plan (GSP), and therefore, no further response is required or necessary.

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Comment Letter O15

BVEF
BORREGO VALLEY
ENDOWMENT FUND

P. O. Box 2714, Borrego Springs, CA 92004
Phone: 760-767-9919

May 21, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Re: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett,

Since its inception, the mission of the Borrego Valley Endowment Fund has been inextricably linked to the health and well being of the residents of the Borrego Valley. In fulfillment of its mission The Fund has supported efforts to improve healthcare delivery, to ensure sustainable water supply, and to promote clean air.

We are writing today regarding our concerns about clean air in the Borrego Valley. **We note that Section 5 of the Groundwater Sustainability Plan contains no costs associated with Air Quality Monitoring, which we believe is a significant deficit of this draft of the GSP.**

Attaining the goals of the GSP will necessitate the fallowing of thousands of acres of agricultural land, and fallowed agricultural lands have the potential to significantly and adversely impact the Air Quality of the Valley through increased air pollution. For the past three years The Fund, in partnership with the University of California, Irvine and the Borrego Water District, has supported Air Quality monitoring in the Borrego Valley, with particular attention to particles measuring 2.5 um and 10 um.

O15-1

BVEF
BORREGO VALLEY
ENDOWMENT FUND
May 21, 2019

Page 2

Air pollution poses a great environmental risk to health. Outdoor fine particulate matter (particulate matter with a diameter <2.5 µm) exposure is the fifth leading risk factor for death in the world, accounting for 4.2 million deaths and > 103 million disability-adjusted life years lost according to the Global Burden of Disease Report.

Air pollution can harm acutely, usually manifested by respiratory or cardiac symptoms; as well as chronically, potentially affecting every organ in the body. It can cause, complicate, or exacerbate many adverse health conditions. Tissue damage may result directly from pollutant toxicity because fine and ultrafine particles can gain access to organs, or indirectly through systemic inflammatory processes. Harmful effects occur on a continuum of dosage and even at levels below air quality standards previously considered to be safe.

The issue of Air Quality is of particular concern for the Borrego Valley given our demographic shift toward older age groups and the greater susceptibility to air pollution of those older groups.

Thus, we are writing to suggest that the costs associated with Air Quality monitoring be included in the GSP. We believe Air Quality monitoring will be an essential tool for compliance with the California Environmental Quality Act as the GSP is implemented and agricultural lands are fallowed.

O15-1
Cont.

Thank you,

Bob Kelly
President, BVEF

Letter O15

Commenter: Bob Kelly, President, Borrego Valley Endowment Fund
Date: May 21, 2019

O15-1 The Groundwater Sustainability Agency (GSA) appreciates your comments on the Draft Groundwater Sustainability Plan (GSP) and commends your mission to support efforts to improve healthcare delivery, to ensure sustainable water supply, and to promote clean air. The GSA notes your comment that Section 5 of the Draft GSP contains no costs associated with air quality monitoring, which you believe is a significant deficit of the Draft GSP. The GSA also note your comment that attaining the goals of the GSP will necessitate the fallowing of thousands of acres of agricultural land, and fallowed agricultural lands have the potential to significantly and adversely impact the air quality of the Borrego Valley through increased air pollution. In addition, the GSA acknowledges your partnership with the University of California, Irvine (UCI), and the Borrego Water District (BWD) to support ongoing meteorology and particulate matter monitoring with particular attention to particulate matter with an aerodynamic diameter of 10 microns or less (PM_{10}) and monitoring for particulate matter with a diameter of 2.5 microns or less ($PM_{2.5}$). The GSA acknowledges your request that the costs associated with air quality monitoring be included in the GSP.

The GSA notes that UCI implemented a research study to evaluate, model and attribute particulate matter air quality in Borrego Springs, California. The three year program evaluated current and historical air quality trends, developed and calibrated a particulate matter air quality model of the region and is in the process of attributing likely air quality sources of degradation (UCI 2017, 2018). Data for this research was provided from the installation and monitoring of five new weather stations in Borrego Springs by real-time continuous airborne particle nephelometers. Nephelometers measure the visual quality of local ambient air by measuring the scattering of light due to particles in continuous air samples. Nephelometers do not make direct measurements of mass but instead measure secondary properties of particles from which the mass must be inferred to compare to regulatory particulate matter requirements. Light scattering technologies must be calibrated against the Environmental Protection Agency (EPA's) Federal Reference Method. UCI's weather stations are primarily for scientific research and are not intended to meet regulatory mass-balance stations requirements used to determine compliance with federal EPA National Ambient Air Quality Standards or state ambient air quality standards. Additional information regarding particulate matter monitoring requirements is

available from the California Air Recourses Board at: https://www.arb.ca.gov/aaqm/partic.htm.

The GSP includes Project and Management Action No. 4 – Voluntary Fallowing of Agricultural Land. As indicated in the GSP, the GSA will prepare policy development and the California Environmental Quality Act (CEQA) documentation after GSP adoption in advance of considering formal adoption and implementation of a voluntary fallowing program.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment Letter C1

Borrego Springs Community Sponsor Group
Comments on the Draft Groundwater Sustainability Plan (GSP)
Borrego Valley Groundwater Basin

1. The Borrego Springs Community Sponsor Group (BSCSG) would prefer no reductions in water use for the municipal sector. Proportional reductions are a major concession to non-municipal sectors. BWD's Baseline Pumping Allocation (BPA) should remain at 2461 af/yr as proposed to the Advisory Committee or at the full 2700 or so af/yr that was the highest single year water use for the municipal sector in 2010, and not be reduced further in addition to the concession of proportional reductions. Proportional reductions are only acceptable as long as the amount of water used under Human Right to Water provisions of state law is not subject to reductions for municipal users under the GSP. If other sectors do not agree to sign the GSP, BWD should fully assert its interest and seek current water use and water for the future with no reductions. C1-1

2. Water reductions should be front-loaded (using a fixed percentage of the Baseline Pumping Allocations to calculate yearly reductions rather than a fixed volume of water as is currently indicated in the GSP) so that higher reductions in water use occur early. This will save significantly more of the water in our aquifer than the current reduction method will, and safeguards against water quality and water management issues that will be too late to adequately address if they occur later in the reduction period after the aquifer has been dewatered more significantly. Changing methods for calculating mandatory water reductions saves as much aquifer water as shortening the reduction period to from 20 years to 15 years using the current method. C1-2

3. The Sponsor Group supports the mandatory metering program as detailed in Appendix E of the draft GSP and its immediate implementation upon GSP approval, and would like the GSP to describe that program, not as an "approach" in the section on the mandatory metering program, GSP p. 3-36, second full paragraph, but rather as a requirement that is detailed in Appendix E, so that the mandatory requirements are emphasized in all parts of the GSP. Similarly, p. ES-5, PMA #3, last sentence, should affirmatively read that Mandatory water metering..."will" take place rather than "is proposed to take place following adoption of this GSP." C1-3

4. Water quality is an essential concern. Better data must fill the data gaps for water quality in the North Management Area. New monitoring wells for water quality that are not quite yet in place, and additional wells now in the process of being C1-4

secured for water quality monitoring, won't yield usable initial data once installed for about three years (and then it will show the beginning of a likely trend). The Sponsor Group would like the GSP to explicitely specify that the governing body that implements the GSP has the authority to impose mandatory water quality monitoring of any major wells in the subbasin, including any agricultural wells, so that any needed comprehensive data is made available. The GSP should also address who will pay for addressing water quality issues that arise in agricultural areas, including under a water trading program.

C1-4 Cont.

C1-5

5. The GSP should list Ratepayers and the Sponsor Group as stakeholders in the discussions and crafting of a Water Trading Program because what happens to pumped water in Borrego Springs is a matter of public concern about a public resource, and also because of land use impacts of such a program.

C1-6

6. There should be consideration in the GSP for our SDAC (Severely Disadvantaged Community) status: cost impacts that can affect water rates must be considered.

C1-7

Borrego Springs Community Sponsor Group
Approved for Submission at the May 2, 2019 BSCSG Meeting

Rebecca Falk

Rebecca Falk, Chair, BSCSG

RTC.4 COMMUNITY GROUPS

Letter C1

Commenter: Rebecca Falk, Chair, Borrego Springs Community Sponsor Group
Date: Undated.

C1-1 The Groundwater Sustainability Agency (GSA) acknowledges the Borrego Springs Sponsor Group's opposition to any groundwater use reductions for the municipal sector. While the Groundwater Sustainability Plan (GSP) does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers or GSA adoption of an interim ramp down schedule are two possible scenarios where pumping reductions could start prior to CEQA review completion.

The portion of this comment regarding future groundwater reductions does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

The GSA acknowledges the Borrego Springs Sponsor Group's request for Borrego Water District (BWD) baseline pumping allocation to be increased to approximately 2,700 acre-feet per year or remain at 2,461 acre-feet per year. The GSP has been revised to reflect 2,731 acre-feet per year as the baseline pumping allocation for BWD. This has been revised up from 2,122 acre-feet per year to include water that was provided in 2010 by BWD to the Rams Hill Golf Course.

C1-2 The GSA acknowledges the Borrego Springs Sponsor Group's request to front load groundwater reductions. While the GSP does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of a specific ramp down schedule. The GSP also indicates an agreement among the pumpers or GSA adoption of an interim ramp down schedule are two possible scenarios where pumping reductions could start prior to CEQA review completion.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

C1-3 The comment suggests that the language within the body of the Draft GSP regarding Mandatory Water Metering should be strengthened to ensure that the provisions specified in Appendix E are in fact mandatory. Revisions have been made to page 3-39 to clarify that the details within Appendix E are mandatory requirements. Page ES-5 has also been clarified that mandatory metering "will" take place following adoption of the GSP.

C1-4 The GSA acknowledges the Borrego Springs Sponsor Group's request to explicitly state within the GSP specific authorities the governing body will have upon adoption of the GSP to impose mandatory water quality monitoring on any wells in the subbasin. The GSP indicates that the GSA continues to work with private landowners to expand the monitoring network.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

C1-5 When and if water quality becomes a concern that may require mitigation within any portion of the Subbasin, the GSA may consider implementing Project and Management Actions No. 4 – Water Quality Optimization and/or No. 5 – Intra-Subbasin Water Transfers Program. Funding sources for the Project and Management Actions (PMAs) will be considered by the GSA prior to implementation.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

C1-6 The GSA acknowledges the Borrego Springs Sponsor Group's request to add the Sponsor Group and Ratepayers to the GSP as stakeholders for development of the Water Trading Program. The GSP outlines the anticipated development approach of the Water Trading Program by the GSA to identify stakeholders/participants and conduct interviews and meetings to receive input and identify concerns to be addressed in program development.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

C1-7 The GSA acknowledges the Severely Disadvantaged Community (SDAC) status of Borrego Springs. The GSA will take this comment into consideration when considering imposing fees to fund GSP implementation.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment Letter I1

From: Janet Johnson <fishandwhistle65@gmail.com>
Sent: Saturday, May 18, 2019 9:37 PM
To: LUEG, GroundWater, PDS
Subject: Proposed Borrego Valley Groundwater Sustainability Plan

Mr. Jim Bennett:

My husband and I have a home at the Borrego Air Ranch. I appreciate the efforts involved in creating a sustainable plan for water in the future of the Borrego Valley and certainly think it is an important issue to tackle. However, I would like to share our thoughts on the fairness of the proposed plan.

First, it seems like those who use proportionally little of the water in the valley are being asked to decrease water usage by the same amount as the higher users who have had a bigger role in the progressive depletion of the aquifer. If the agricultural interests have used 70% of the water in the past, they should reduce their water usage by a higher percentage than residences which have had a much lighter role in decreasing the water table. If golf courses have used 18% of the water in the past, they should also reduce their water usage more than residences, perhaps making a bigger use of grey water to maintain the course. Requiring a 75% water reduction across all segments of the community will do a great harm to the community and hurts those most who have not had the biggest role in depleting the aquifer.

Secondly, The Borrego Air Ranch has its own two wells, which have been drawn from a water table that has not been decreasing. The BAR water levels have been stable for more than 50 years. Having the 75% water reduction over the next 20 years will not affect the rest of the Borrego Valley aquifer. The BAR residents are already very careful with their water in order to maintain this stability. Forced reduction in water usage would have a very negative effect on the air ranch community, would affect health and safety, and would of course decrease property values (as it would in other residential areas of Borrego.)

While applauding that there is a tentative plan, we would urge you to make the mandatory reduction for residents a lower percentage and if possible, to leave the Borrego Air Ranch out of the mandatory requirements. The Borrego Valley is a wonderful place with many exciting, progressive things going on. We hope this unfair water reduction plan will not bring this to an end.

Sincerely,

Mary Janet Johnson

I1-1

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RTC.5 INDIVIDUALS

Letter I1

Commenter: Janet Johnson (Air Ranch Community Member)
Date: May 18, 2019

I1-1 The Groundwater Sustainability Agency (GSA) acknowledges your proposed approach of non-proportional cutbacks of water use for beneficial users of groundwater in the Borrego Springs Subbasin. It should be emphasized that, the GSP would not necessarily result in any reduction of physical water use by the Borrego Air Ranch. Rather the Air Ranch would be assigned a baseline pumping allocation (BPA) that would ramp down over the 20 year implementation period.

The BPA assigned to the Air Ranch is 12 acre-feet per year (AFY) based on previous estimates of water use for the Air Ranch by the U.S. Geological Surey (USGS 2015). No pumping data was provided by the Air Ranch to the GSA to document historical use. If the Air Ranch uses water in excess of their BPA in any given year, a water trading program, once implemented, would allow air ranch to acquire additional BPA from other users in the Subbasin. The GSP approach allows for continued use of groundwater by the Air Ranch for existing and planned future beneficial use.

As shown in GSP Figure 2.2-13F, the groundwater level contours in the vicinity of air ranch suggests that average groundwater levels have decreased by 1 to 1.5 feet over the past 8 years. The depth to water in a well on Air Ranch (SWID No. 011S007E30L001S) was measured in Fall 2016 to be 85.1 feet bgs and measured in Spring 2019 to be 88.5 feet bgs. Again, there is no forced physical reduction of Air Ranch water use. While the BPA ramps down over time, the Air Ranch can either implement conservation and acquire BPA once a water trading program is implemented to maintain existing beneficial water use or even increase water use provided sufficient BPA is obtained from users who have either fallowed land or reduced water use.

For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I2

From: Bill Carpenter <billbar7@gmail.com>
Sent: Friday, April 26, 2019 7:38 AM
To: LUEG, GroundWater, PDS
Cc: Bill Carpenter
Subject: Borrego Valley Groundwater Sustainability Plan (GSP)

County of San Diego Planning & Development Services
c/o: Jim Bennett
PDS.LUEGGroundWater@sdcounty.ca.gov
5510 Overland Ave. Suite 310
San Diego CA 92123

Mr. Jim Bennet,
The Borrego Air Ranch is a residential airport community located in the southern management area of the Borrego Springs Subbasin. The Air Ranch has been in existence since 1945; the subdivision map was created in 1948. There are currently 24 residential units in the community. It has been classified as 'Other' in the Groundwater Sustainability Plan (GSP). A Baseline Pumping Allocation (BPA) of 12 acre-feet per year has been assigned to the community. It appears the Air Ranch will be required to cut back its usage of water by 75% over the period covered by the Plan. That would result in an allocation of 3 acre-feet per year to be shared by 24 residences or 0.125 acre-feet per residence per year. This would essentially result in the closing of the community and the Air Ranch Airport.

The Air Ranchers have always been good stewards of water usage. The Air Ranchers do not maintain any common property which requires water. There is minimal use of non-native vegetation and external watering has been kept to an absolute minimum at the individual residences. The community elected to be served by a single community owned and operated water system rather than drilling and maintaining individual wells. It should be noted that if the community had elected to source their water by individual wells, they would not be subject to any cutbacks under the GSP. Their well usage would be well under 2 acre-feet per year per residence; they would be classified as de minimus users.

The Air Ranchers have been assigned a BPA of 0.5 acre-feet per year per residence. Air Ranchers are able to live within the BPA. They will, however, not be able to survive cuts of 75% to the Air Ranch BPA. It will likely result in the elimination of a community with a long established tradition of living and working with a minimal usage of water in a desert community. The Air Ranchers wish to continue this tradition and should be exempted from cutbacks to their BPA. Such an exemption will have almost no impact on the goals of the Borrego Valley GSP. Cutting back the Air Ranch allocation from 12 to 3 acre-feet per year will have very little impact on achieving the Borrego Springs Subbasin goal of 5700 acre-feet per year of water usage but it would almost certainly result in the elimination of this unique community. The Air Ranch should be exempted from cutbacks to their assigned BPA.

I2-1

Willard (Bill) Carpenter & family
Borrego Air Ranch (full time resident)

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Letter I2

Commenter: Bill Carpenter (Air Ranch Community Member)
Date: April 26, 2019

I2-1 We appreciate your concern that the Air Ranch would be required to reduce water use from a baseline pumping allocation (BPA) of 12 acre-feet per year (AFY) that ramps down to approximately 3 AFY assuming a 75% reduction over a 20-year implementation period; however an actual physical reduction in water use is not required to be shared by the 24 residents of the Air Ranch. The Air Ranch can secure additional BPA via the water trading program, once implemented, from other users in the Subbasin to maintain water use or even increase water use.

It is noted that if residents of the Air Ranch had individual domestic wells that they would be considered de minimis users. It is also noted that the Air Ranch is a State Small Water System No. and similar to other retail water users such as the Borrego Water District (BWD) have not been assigned a per-dwelling allocation. Implementation of the Groundwater Sustainability Plan (GSP) requires participation and stewardship by all beneficial users of groundwater to ensure a sustainable future for Borrego Springs. For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I3

From: Lee Grismer <lgrismer@lasierra.edu>
Sent: Monday, May 20, 2019 11:40 AM
To: LUEG, GroundWater, PDS

Dear Mr. Bennett:

I would like to add my voice to the growing concerns surrounding the Borrego Valley Groundwater Basin Sustainability Plan (GSP). Rather than contribute to the already well-articulated and logistically infallible arguments of my neighbors at the Borrego Air Ranch, I would like to address these issues from a completely different perspective. I am a professor of Biology and the Director of Research in the Biology Department of La Sierra University in Riverside and I have been a property owner at the Air Ranch since 1986. Although I applaud the conservation premise of the GSP, I believe it is short-sighted from an ecological perspective as those who drafted the plan were unaware of other activities that take place at the Air Ranch. We at the Air Ranch have always been a small, ecologically minded community and conscientious stewards of OUR water. My residence also serves as a non-profit research retreat and training centered for ecologist and their students from around the world. Myself and my son, Dr. Jesse Grismer—also a biologist—regularly host training and research workshops on various aspects of conservation—one of which involves water conservation. To date, we have hosted professors and their students from all over the United States as well as from Cambodia, Vietnam, Malaysia, and México. These scientists take what they learn from the workshops and from the habitat surrounding the Air Ranch back to their home countries and incorporate these data into their classroom curricula and research labs. The point here being that the Borrego Air Ranch has a tangible international impact on conservation efforts in other countries. Locally, I have students doing non-take recapture population studies on some of the species of reptiles that are Red-Listed by the International Union for Conservation of Nature (IUCN) that occur on the Air Ranch. Additionally, I have been using my residence at the Air Ranch as a base station to support my field research on the amphibians and reptiles of Anza-Borrego since 1986. Asking Air Ranch residents to cut their water usage by 75% would completely deconstruct the utility of my property as a base station, research retreat, and intermittent residence. I3-1

Mr. Bennett, ultimately the larger issue here I believe is the far-reaching impact the Air Ranch has on conservation overall—not just one of its subcategories of water management. I sincerely hope that a broader, more agnostic view of international conservation and the realization of the role the Borrego Air Ranch bears on this issue will work its way into the decision-making process. If conservation is truly the end game here, then shutting down the Borrego Air Ranch would be analogous to trying to build a new build while simultaneously putting a moratorium on nails.

I would be happy to meet with you any time at your convenience if you have any or concerns or issues you would like to discuss.

Sincerely,
L. Lee Grismer, Ph.D.
Professor of Biology and Director of Research
Department of Biology
La Sierra University

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L. Lee Grismer, Ph.D.
Director of Research
Department of Biology
La Sierra University
4500 Riverwalk Parkway
Riverside, CA 92515-8247, USA
Tel. 951-785-2345

"A risk free world is a very dull world, one from which we are apt to learn little of consequence." - Geerat Vermeij

"If people are good only because they fear punishment, and hope for reward, then we are a sorry lot indeed." - Albert Einstein

Letter I3

Commenter: Lee Grismer (Air Ranch Community Member)
Date: May 20, 2019

I3-1 The Groundwater Sustainability Agency (GSA) appreciates your information relating to population studies on some of the species of reptiles that are Red-Listed by the International Union for Conservation of Nature (IUCN) that occur on the Air Ranch. We hope that you can share some of your research with the GSA to determine whether areas in the vicinity of the Air Ranch or greater Subbasin are suitable for habitat conservation as part of developing Groundwater Sustainability Plan (GSP) projects and Management Actions. See above responses to comments concerning future water availability to the Air Ranch. For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I4

From: John Geyer <John@jgeyerplumbing.com>
Sent: Tuesday, May 21, 2019 8:01 AM
To: LUEG, GroundWater, PDS
Subject: Borrego Valley Groundwater Sustainability Plan Comments

County of San Diego Planning & Development Services
c/o: Jim Bennett

I am the owner of a vacant lot at the Borrego Air Ranch. The lot was purchased 40 years ago with the plan to build when I retire. The Borrego Valley Groundwater Sustainability Plan(GPS) would make my parcel unbuildable.

The Air Ranch water table has been steady for the last 40 years and is not impacting the northern basin. Please exclude us from the GPS.

I4-1

Regards
John Geyer
619.820.8537

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Letter I4

Commenter: John Geyer (Air Ranch Community Members)
Date: May 21, 2019

I4-1 The Groundwater Sustainability Agency (GSA) appreciates your concern regarding the ability to develop your vacant subdivided parcel at the Air Ranch. As discussed in the master response on the Baseline Pumping Allocation and Pumping Reduction Program, water can be obtained via a water trading program, once implemented, to develop your property. Also, as described in response to Comment Letter I1, groundwater levels in the vicinity of the Air Ranch have declined over the last 10 years. For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I5

From: Eric Nessa <ericnessa8@aol.com>
Sent: Saturday, May 04, 2019 8:28 PM
To: LUEG, GroundWater, PDS
Subject: GSP Comment

I am a home owner at the Borrego Air Ranch (BAR). I have reviewed the proposed GSP and personally believe that it treats me and the other residents of the BAR unfairly. The BAR has been a good steward of the water under our immediate area for over 60 years. The residents have been educated in efficient use of household water, and in the efficient use of landscape irrigation. The proposed GSP requires all non-de-minimis pumping sectors to make exactly the same percentage of reductions from their Base Allocation. I object to the proposed GSP because the reduction is equally applied to all sectors despite facts that contradict GSP's shotgun approach logic.

The GSP's stated mandate is to bring the aquifer into sustainable equilibrium. That is exactly what the Borrego Air Ranch has done with the aquifer under our feet..... **it has been for years, and is in equilibrium today**!!

The Borrego Air Ranch has long history of conservative water use, which is demonstrated by the fact that our water levels are stable and have not gone down over the past 60 years. The BAR should not be punished by being forced to make the same reductions as a other sector pumpers that have depleted the aquifer under their wells. It is the Borrego valley agriculture industry that has squandered the water under their feet over the past 60 years. It is the Ag Sector that has drawn the water table down 126 feet in their area. It is the Ag Sector who has placed the entire Borrego community at risk. It is the Ag Sector who should have to reduce their usage by whatever percentage required, or stop pumping until the aquifer in their area is in equilibrium. To hold the BAR to the same reductions as Ag or other over users is not logical; it is not equitable; it is not fair. The BAR should get a Medal of Merit for keeping our aquifer in sustainable equilibrium!!!

I5-1

Thus, I as a resident, respectfully request that the Borrego Air Ranch be exempted from the proposed GSP

Respectfully submitted,

Eric Nessa

2727 Borrego Air Ranch Rd

Borrego Springs CA 92004

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Letter I5

Commenter: Eric Nessa (Air Ranch Community Member)
Date: May 4, 2019

I5-1 We acknowledge your concern regarding the baseline pumping allocation (BPA) rampdown for the Air Ranch. The Groundwater Sustainability Plan (GSP) includes participation by all beneficial users of groundwater in the Subbasin to ensure stewardship of water resources. As described above, groundwater levels in the vicinity of the Air Ranch have been declining over the past several years. Stewardship requires continued metering, monitoring and management of the entire Subbasin. For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I6

From: Carlsbad Raceway Office <carlsbadraceway@verizon.net>
Sent: Tuesday, May 21, 2019 11:06 AM
To: LUEG, GroundWater, PDS
Subject: Borrego Valley Groundwater Sustainability Plan (GSP)

Dear Mr. Bennett,

Our family owns two lots on the Air Ranch plus a residence. I also own 5 acres on the north end of the Air Ranch and 5 hangars.

In agreement with the other objection letters submitted from Borrego Air Ranch residents, including letters from my two sons, in my opinion the idea of limiting residential water that won't use as much in a year as one golf course does in a month is not only disagreeable but ridiculous. We have owned property there since 1986 bought directly from Mr. Fletcher and to this point had no interest in selling it. The proposed GSP will have severe impact on property values. Don't like much getting into politics but sometimes it's necessary.

I6-1

In closing I disagree and will do all I can to work against what you are trying to do to the Air Ranch.

Larry Grismer
Borrego Air Ranch

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Letter I6

Commenter: Larry Grismer (Air Ranch Community Member)
Date: May 21, 2019

I6-1 The Groundwater Sustainability Plan (GSP) secures water resources for responsible and sustainable development of the Borrego Springs community. The GSP provides the framework for securing water via a water trading program, once implemented for your properties. For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I7

May 4th, 2019

To: County of San Diego Planning & Development Services
c/o: Jim Bennett
PDS.LUEGGroundWater@sdcounty.ca.gov
Subject: Comment to the Borrego Valley Groundwater Sustainability Plan (GSP)

Dear Mr. Jim Bennett,

I am writing you in response to an opportunity to comment on the Borrego Valley Groundwater Sustainability Plan.

I believe the goal of any plan is to enhance awareness and take care of the environment while taking care of our responsibility to our water supply. I bought my property at the Air Ranch back in the 70's. My goal has always been to have a small retirement home which also houses my airplane. Everyone at the ranch prides themselves on taking care of the environment and being very frugal with water consumption. We all want to be good stewards of our dessert and continue to live at The Borrego Air Ranch. The plan currently does not include our small community as a de minimis user given by the general reference to acreage in the GSP. We respectively request that since we are a de minimis user, the acre feet definition not be the only way in addressing communities such as ours and language be added to allowing those who have a de minimis effect on the aquifer be included regardless if they meet the acre feet definition. I7-1

If this change to the plan does not occur, we will lose our community and retirement plan. We can't imagine your organization wanting to eliminate our community. Please hear our voice and make the critical change to the GSP.

Respectfully submitted,

Linda Goodrich

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Letter I7

Commenter: Linda Goodrich (Air Ranch Community Member)
Date: May 4, 2019

I7-1 De minimis is defined by Sustainable Groundwater Management Act (SGMA) as water use less than 2 acre-feet per year (AFY). The Air Ranch is estimated to currently use approximately 12 AFY and is not considered a de minimis user. For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I8

From: Pat Hall <path@told.com>
Sent: Sunday, April 28, 2019 4:30 PM
To: LUEG, GroundWater, PDS
Subject: RE: Borrego Valley Groundwater Sustainability Plan
Attachments: Borrego Valley Water Basin .pdf

County of San Diego Planning & Development Services

c/o: Jim Bennett

I am the owner of a home located at Borrego Air Ranch, 2756 Airstrip Borrego CA, 92004. The owner's association has had much discussion about the Borrego Valley Groundwater Sustainability Plan(GPS) and I would like to get my comments and thoughts on the record.

I8-1

There are several issues that are on all our minds however, there are two major ones I wish to address in this email. First is the fact that the Air Ranch water levels have remained stable for the entire time we have been monitoring them, which is more than half a century. The other issue is that we are already a very efficient community from a water conservation standpoint.

As to my first point regarding our stable water levels in our water wells, I will quote one of the knowledgeable resources on the valley's water issues, John Peterson, "Water levels don't lie". His comments maintain that the water levels in the Northern Borrego Basin are being impacted by over usage, which has resulted in dramatic overdraft and therefore the change in water well depths. However, if you look at all the facts, the Borrego Air Ranch, which you can see by the attached diagram, is located downstream from the Northern Borrego basin as well as the Borrego sink. Therefore, any change in our usage will not impact water levels upstream. This is evidenced by the fact that our water levels have remained stable while the Northern Borrego basin continues to be depleted. If there

I8-2

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was an interaction between the Borrego Air Ranch location and the community of Borrego Springs, logic would dictate that we would have seen some change in our water levels over the years. It has been stated by a few who have studied this issue that the southern basin has either a different source or is so far removed from the northern basin that it would take hundreds of years for any draw down in the Southern Borrego basin to impact the Northern Borrego basin.

For the record the following is the complete quote from Mr. Peterson: "Water levels don't lie. It is comparable and equivalent to looking at your banking account, and seeing whether or not you've got more money coming out of your account than going in. That's an overdraft and the balance is going down," Peterson said. "We're pumping out a lot more water than is being naturally recharged."

This condition is clearly not the case for the Borrego Air Ranch. Therefore, I request that you not include us in your GSP recovery plan. We are not part of the problem and therefore any change in our current usage will not impact the required solution.

I8-2 Cont.

As to my second point, we are already an efficient community when it comes to water usage. We don't have lush lawns or tree orchards. All the homes have very modest desert landscaping. Therefore, the only way we can cut back our usage further would be to significantly change our lifestyle and personal hygiene. By forcing a cutback to the level that has been suggested, the GPS will make our properties potentially uninhabitable, destroy our community as well as the value of our property.

I8-3

If this plan, as we understand it, is implemented throughout the Borrego Springs area the community will sustain significant damage. A more reasoned approach would be to move the agriculture users to a location that can provide the water they need, and require the recreational users install gray water recycling systems that will allow continued watering of their golf courses. These two actions alone would prevent overdraft of the basin.

I8-4

If you move forward with the plan to reduce the usage by all categories equally, this will not only destroy the future growth of Borrego Valley, It will most certainly negatively impact the current economic renewal that Borrego Springs is experiencing. I8-5

Best Regards,

V. PAT HALL

PATH@TOLD.com

DIRECT PHONE (818) 466-0222

DIRECT FAX (818) 466-0232

MOBILE (805) 402-2106

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Letter I8

Commenter: Pat Hall (Air Ranch Community Member)
Date: April 28, 2019

I8-1 The Air Ranch provided no groundwater level, production or water quality data as requested on multiple occasions. As described in response to Comment I1-1, groundwater levels in the vicinity of the Air Ranch have been declining. For additional information on this response, the commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

I8-2 The Groundwater Sustainability Agency (GSA) acknowledges the conservation and stewardship efforts by the Air Ranch

I8-3 As explained in response I11-2, costs will be necessary to obtain additional water via the water trading program, once implemented.

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Comment Letter I9

From: Mike Himmerich <borrego.it@att.net>
Sent: Tuesday, May 21, 2019 12:28 PM
To: LUEG, GroundWater, PDS
Cc: Mike Himmerich
Subject: Borrego Basin Groundwater Sustainability Plan - GSP

County of San Diego Planning & Development Services.
C/O: Jim Bennett
5510 Overland Avenue Suite 310
San Diego, CA 92123

Mr Jim Bennett,

I would like to add my review and comments on the proposed Borrego Basin Groundwater Sustainability Plan - GSP

I am a full time, year round resident of the Borrego Valley at the Borrego Air Ranch. My family first visited Borrego Valley in the 1940's and has resided here for the past quarter century.

I attended most of the public planing sessions for the GSP. As well as many of its predecessor, the borrego water coalition.
This is our first real opportunity to comment on the GSP. I don't believe all of the residents, property owners and tax payers were directly contacted via personal letter, phone call or notation on our property tax bills and informed of the plan and their potential impacts.

The Borrego Air Ranch is a planned residential airpark community started in 1945 at about the time electric was first brought into Borrego. It is one of the oldest residential airpark in the nation.

One of the many considerations for moving across the country to the Air Ranch was the availability of water. Water is supplied by our long-established Borrego Air Ranch Mutual Water and Improvement Company. Water is Life in the desert. Its' availability and the construction of water infrastructure to all properties in our long planed residential community is the difference between open desert land that is worth about $200 an acre and our land values of up to around $75,000 an acre.
Attempts to reduce our already frugal water usage by 75% is would make the current and future homes on the ranch unlivable and uninhabitable. Resulting in a defacto regulatory taking.

I9-1

We also have some lots that do not currently have homes constructed on them, the owners have been working hard toward retirement and then building their dream home. That will be impossible without the access to water they always believed was secure by purchasing in a planed community with its own private water system.

In the published GSP, Appendix D2 Figures 2A and 2B the groundwater flows shown in the USGS Hydrogeology, Hydrologic Effects models - show our water source is separate from the parts of the valley that overdrafts the water in their areas. Our groundwater flow runs to the north and west away from us, toward the Borrego sink area.

Our water use has no effect on the other areas of Borrego Valley.

There is no other source of water for the Air Ranch other than our wells. We are outside the Borrego Water District, as such they provide no beneficial use or service to the Air Ranch.

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The Borrego Air Ranch property owners and it's Mutual Water Company have always been a good stewards of it's overlying and beneficial water rights since 1945. Our community water well levels havealways had stable water levels.

We will continue to be a good steward as there is no feasible alternativesource of water.

I would like consideration of a permanent exclusion to the Borrego Valley GSP in the Borrego Air Ranch and our mutual water company.

1. We are outside the Borrego Water District service area, they can not and do not provide a beneficial use or service to us. They are unaccountable to the residents of the Air Ranch as we are not part of their voting district. They provide no representation for us.

2. The USGS hydrological models show we have no effect on the rest of the Borrego Valley Basin.

Comments on the full plan.

The expense of establishing and maintaining a new multi-million dollar agency in a small ecconmic disadvantaged community to monitor water levels and manage, study and adjust the plan and endlessly sustain it, is prohibitively expensive. Residents will be forced out and leave Borrego. The new agency is unaccountable to all residents of Borrego.

The ecconmic impacts have not been considered. As residents leave costs and taxes on water will continuously and exponentially rise on individual residents. Land and property values will fall, wiping out peoples life saving. As the schools close, businesses fail Borrego will become a ghost town.

Much of the residential use is already tailored to desert living, domestic water usage and evaporative coolers to withstand the desert heat. For most of us further reductions are impractical and impossible.

Thank you for you consideration and opportunity to comment.

Mike Himmerich
2765 Borrego Air Ranch
Borrego Springs, CA 92004

I9-1
Cont.

Letter I9

Commenter: Mike Himmerich (Air Ranch Community Member)
Date: May 21, 2019

I9-1 The commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

I9-2 The commenter is referred to response to Comment I1-1.

I9-3 Comment noted.

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Comment Letter I10

From: JeffGrismer@FlyingForFilm.com
Sent: Tuesday, May 21, 2019 5:03 PM
To: LUEG, GroundWater, PDS
Subject: Borrego Air Ranch GSP

Mr. Jim Bennett,

My family currently owns and has owned numerous properties at the Air Ranch since 1986 individually and as partners. I agree with the numerous other letters objecting to the Borrego Valley GSP and note that each one offers distinctly different and valid objections to the plan.

While it might make me feel good to go on and on expressing my feelings, I'll skip the folderol of emotion and just make a couple points I haven't seen delineated in others' letters.

A cursory look at the Air Ranch proves the extremely limited use of water for anything except that required for human existence and exemplifies the lack of productivity to cutting our tiny usage by 75%.

12 x .75 = 9 acre-feet per year saved of the 5700 acre-feet goal. That is .001578 of the goal, roughly one and a half tenths of one percent. .1578% in exchange for destruction the Valley's asset that has existed for 74 years and forcing the abandonment of 24 residences to become public liabilities.

I10-1

Here's the two outcomes I foresee:

1. It is impossible for residents of the Air Ranch to survive in the extremes of the Borrego Dessert with a 75% water cut. Everyone will be forced to abandon their homes and relocate to survive. The Air Ranch, a once beautiful asset to the Valley, will become a haunt for vagrants, vandals and the lawless.

2. I believe I've researched the pumping numbers accurately enough to generalize a second scenario. Current BPA for the Air Ranch is 12 acre-feet per year. To prevent the inevitable #1. scenario above, all 24 residents will be forced to drill individual wells, each having a BPA of 2 acre-feet per year. This plan thus may result in quadrupling the available usage and becomes counter productive to the GSP's stated goal.

Respectfully,

Jeff Grismer
President, Carlsbad Raceway Corp.

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Letter I10

Commenter: Jeff Grismer (Air Ranch Community Member)
Date: May 21, 2019

I10-1 The Groundwater Sustainability Agency (GSA) appreciates that the Air Ranch represents a small percentage of Subbasin pumping. The GSA implemented the Sustainable Groundwater Management Act (SGMA) definition of de minimis users when determining required participation in the Plan. The GSA may consider requiring even de minimis user to also participate in the Plan in the future. To clarify on the Groundwater Sustainability Plan (GSP), the Air Ranch can acquire additional BPA to maintain or even potentially increase water use. The commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I11

From: Bill Bancroft <billbancroft@patrol-one.com>
Sent: Tuesday, April 30, 2019 8:40 AM
To: LUEG, GroundWater, PDS
Cc: Bill Carpenter
Subject: GPS

County of San Diego Planning & Development Services
c/o: Jim Bennett

I am the owner of a home located at 2773 Borrego Air Ranch Rd., Borrego Springs, CA, 92004. Please allow me to add my comments to those of fellow Air Ranch owners in regard to the Borrego Valley Groundwater Sustainability Plan(GPS). I am the current Borrego Air Ranch Water Systems Manager. I've held this position for the past more than ten years.

During my tenure as Water Systems Manager I have measured the water table at our primary well on a weekly basis. The water table has, over that period of time remained at an average depth of 92 feet, never varying other than at brief intervals (30 minutes or less) when the pump is replenishing the storage tank.

I have monitored and documented individual household water consumption and overall system consumption in an effort to find and repair any leaks. I can state, unequivocally, individually and collectively residents have been excellent water stewards during my tenure as Water Systems Manager. Additionally, in my review of historical records, it's clear that current stewardship is reflective of the past performance of our residents. I11-1

My strong conclusions are:

- If included in the GSP the impact of the Borrego Air Ranch would be so deminimus as to be unmeasurable
- However, impact of GSP, as currently planned, on the Borrego Air Ranch would be disastrous in terms of livability and property values

In short, we have "no dog in this fight" and respectfully ask to be excluded from the GSP.

Sincerely,

Bill Bancroft
Borrego Air Ranch
Water Systems Manager
Airport Manager
714.306.6600 (Cell, 24/7/365)

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Letter I11

Commenter: Bill Bancroft (Air Ranch Community Member)
Date: April 30, 2019

I11-1 The Groundwater Sustainability Agency (GSA) appreciates information pertaining to documentation of groundwater levels at the Air Ranch. As described in Comment Letter I1, groundwater levels in the vicinity of the Air Ranch are demonstrated to be declining over the past several years.

I11-2 The commenter's assertion that the Groundwater Sustainability Plan (GSP), as currently planned, on the Borrego Air Ranch would be disastrous in terms of livability and property values is not supported. The GSP indicates an annual fee for GSP implementation of approximately $50 per acre-foot pumped to cover operations and monitoring costs, management, administration and other costs such as reserved. This cost does not include additional potential fees required to implement projects or management actions. Additionally, if the Air Ranch secures additional water via the water trading program, once implemented there would be cost involved with acquisition. The commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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Comment Letter I12

From: Steve & Debbie Riehle <sdriehle@gmail.com>
Sent: Thursday, May 02, 2019 11:17 AM
To: LUEG, GroundWater, PDS
Subject: Borrego Air Ranch: Groundwater Sustainability Plan (GSP)

Good Morning Mr. Bennet,

My wife and I own a home located at the Borrego Air Ranch, 4211 Cessna Lane, Borrego Springs CA, 92004. The owner's association has had much discussion about the Borrego Valley Groundwater Sustainability Plan(GSP) and we would like to get our concerns on the record.

There are several issues that are on all our minds however, there are two major ones we wish to address in this email. First is the fact that the Air Ranch water levels have remained stable for the entire time we have been monitoring them, which is more than half a century. The other issue is that we are already a very efficient community from a water conservation standpoint. I12-1

As to our first point regarding our stable water levels in our water wells, we will quote one of the knowledgeable resources on the valley's water issues, John Peterson, "Water levels don't lie". His comments maintain that the water levels in the Northern Borrego Basin are being impacted by over usage, which has resulted in dramatic overdraft and therefore the change in water well depths. However, if you look at all the facts, the Borrego Air Ranch is located downstream from the Northern Borrego basin as well as the Borrego sink. Therefore, any change in our usage will not impact water levels upstream. This is evidenced by the fact that our water levels have remained stable while the Northern Borrego basin continues to be depleted. If there was an interaction between the Borrego Air Ranch location and the community of Borrego Springs, logic would dictate that we would have seen some change in our water levels over the years. It has been stated by a few who have studied this issue that the southern basin has either a different source or is so far removed from the northern basin that it would take hundreds of years for any draw down in the Southern Borrego basin to impact the Northern Borrego basin. I12-2

As to our second point, we are already an efficient community when it comes to water usage. We don't have lush lawns or tree orchards. All the homes have very modest desert landscaping. Therefore, the only way we can cut back our usage further would be to significantly change our lifestyle and personal hygiene. By forcing a cutback to the level that has been suggested, the GSP will make our properties potentially uninhabitable, destroy our community as well as the value of our property. I12-3

If this plan, as we understand it, is implemented throughout the Borrego Springs area the community will sustain significant damage. A more reasoned approach would be to move the agriculture users to a location that can provide the water they need, and require the recreational users install gray water recycling systems that will allow continued watering of their golf courses. These two actions alone would prevent overdraft of the basin. I12-4

If you move forward with the plan to reduce the usage by all categories equally, this will not only destroy the future growth of Borrego Valley, It will most certainly negatively impact the current economic renewal that Borrego Springs is experiencing. I12-5

Thank you for your attention to this most important matter.

Steve and Debbie Riehle

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Letter I12

Commenter: Steve and Debbie Riehle (Air Ranch Community Members)
Date: May 2, 2019

I12-1 The commenter is referred to response to Comment I1-1.

I12-2 The Groundwater Sustainability Agency (GSA) acknowledges your request that Air Ranch not be required to managed pursuant to Sustainable Groundwater Management Act (SGMA) due to its location. In response, Air Ranch is located within the South Management Area (SMA) of Department of Water Resources (DWR) defined Borrego Spring Subbasin and subject to the requirements of SGMA.

I12-3 The commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

I12-4 The fallowing of agricultural properties is described in Chapter 4 of the Groundwater Sustainability Plan (GSP). As discussed in GSP Section 2.2.3.8, recycled water use has been studied extensively and is not economical at this time. As documented in the Draft GSP, stormwater retention will be evaluated on a case-by case basis in conjunction with future development in the Subbasin.

I12-5 Securing a reliable and sustainable water supply for Borrego Springs will ensure availability for sustaining the community and future growth.

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Comment Letter I13

To: County of San Diego Planning & Development Services
c/o: Jim Bennett

PDS.LUEGGroundWater@sdcounty.ca.gov

Subject: Comment to the Borrego Valley Groundwater Sustainability Plan (GSP)

Dear Mr. Jim Bennett,

We are owners of a house at the Borrego Air Ranch. We have two concerns. The first is that we believe the definition of "*de minimis* user" is too narrow and should be revised. The Borrego Air Ranch should be designated as a *de minimis* user by a text change in the GSP allowing those who have a *de minimis effect* on the aquifer to be included regardless if they meet the acre feet definition.

The dictionary definition of *de minimis* is "inconsequential, insignificant, trivial, of minor importance." The proposed GSP uses an acre foot usage definition for *de minimis* to identify those users who have an insignificant, as opposed to a significant, effect on the aquifer. The Borrego Air Ranch's water level has historically been very stable. Therefore the effect of our use of water is *de minimis* and insignificant *in fact,* if not as defined by the acre foot test. Given the extraordinary inaccuracies likely in attempting to map out the details of how water flows underground in this great valley, it is overconfident and inaccurate to designate a small user that has had a stable well water level for half a century as non-*de minimis* and lump it in with the agricultural and recreational over drafters who have caused this dilemma. The Borrego Air Ranch is a small community that has not contributed to the overdraft and is not affected by it. We have stable water levels and we really have little effect on the rest of the aquifer and truly are "inconsequential, insignificant, trivial, of minor importance."

A text change could be made to the GSP that excludes any of the four small users that would otherwise be in the "Other" non-*de minimis* category from that category if that user has stable water levels. Stable water levels proving this *de minimis effect* should be considered. The acre foot requirement of the *de minimis* category was created to *try to identify a de minimis effect*. Stable water levels *show* a *de minimis* effect. A text change could allow a user with a demonstrably *de minimus effect* to be included in the *de minimus* category rather than be excluded by the overly broad acre feet definition. It would seem facts should win out over theory. The Borrego Air Ranch stands apart from the problem in both its stable water level and in physical distance from the overdraft areas.

The Borrego Air Ranch is one of only four users who use very little water and yet are defined as non-*de minimis*. The drafters did not want the four included with the big three categories because they called us "Other." It is evident the drafters of the GSP thought putting the Borrego Air Ranch into the same non-*de minimis* category as the agriculture and recreational industries whose excessive use has placed the entire Borrego community at risk is not logical, equitable or fair. But with only an acre foot criteria for *de minimis* use they had tied their own hands. But they probably didn't realize that *de minimis effect* could be shown another way than acre feet and probably would have welcomed the idea. These comments give us an opportunity to correct that.

I13-1

Our second concern is that reducing the usage to 24% across all users creates serious problems.

I13-2

The proposed GSP reduction of everyone's water usage to 24% of their prior use *sounds* reasonable but it would result in massive damage to the domestic water usage community and an unrecognized benefit for the agriculture community. Let me explain.

The GSP provides for an equal percentage reduction of use based on prior use. The reduction *percentage* is equal but the *impact* greatly favors those who have drained the aquifer and destroys those who have not. Agricultural users of historically massive amounts of water would retain ¼ of their huge use and switch to other profitable uses of their still plentiful allocation. Domestic users would retain ¼ of their minimal use and because it would be insufficient to support dwellings their properties would be abandoned and lost to tax sales.

The proposed plan would allow the users of the most water who drained the aquifer to still use plenty of water for many useful purposes, including residential homes while the previously minimal users will have no options.

According to the University of Arizona Cooperative Extension mature citrus trees use about 60 inches [5 ft] of water per year. That is 5 acre feet per acre of trees.
https://**extension.arizona.edu**/sites/**extension.arizona.edu**/files/pubs/az1151.pdf.
After the proposed reduction of 76% you have an allocation of 1.2 acre feet left which is enough to supply domestic water to 3 houses per acre. So as far as water supply available, the farmers can just build and sell up to 3 houses per acre on their hundreds of acres while current house owners will be unable to live here and abandon their houses. Essentially current housing could be abandoned as new houses could appear in the agricultural sector. The effect would be that the agricultural users who have massively drained the aquifer would be left with the right to most of the water once again and just change their business to building and selling houses, which may be more profitable anyway. It is entirely possible that under this GSP homeowners like those at the Borrego Air Ranch would have to abandon their current homes and buy new houses built by the farmers on their former grapefruit groves since they would still retain enough water allocation. Or the farmers could just switch to growing crops that need less water while the homeowners leave the valley.

I13-2 Cont.

We need to view the aquifer as a shared community resource and recognize that users of massive amounts of water should not be left very usable allocations while homeowners are left with insufficient water to survive here. When water is endangered domestic use should take priority over farming. Possibly a base minimum but reasonable allocation for all current houses and building lots would be better and then any other reductions necessary could be made against any other properties.

As the first community to have a GSP, Borrego Springs will be the template for GSP's for other communities. If we do not replace unworkable notions of across the board reductions with a more realistic model allowing for adequate domestic allocations then the damage this GSP causes here will spread to many other communities as unforeseen consequences finally become apparent down the road as allocations are reduced to critical levels over 20 years. We have to have the courage to get this one right no matter what.

I13-3

Respectfully submitted,

Terry and Pam Rhodes

Letter I13

Commenter: Terry and Pam Rhodes (Air Ranch Community Members)
Date: May 4, 2019

I13-1 De minimis is not defined by the Groundwater Sustainability Plan (GSP). De minimis is defined by Sustainable Groundwater Management Act (SGMA). Under SGMA, the Air Ranch is defined as a non-de minimis user. The GSP uses the SGMA defined definition to determine users that are required to be included in the Plan.

I13-1 The commenter is referred to response to Comment I1-1.

I13-1 The baseline pumping allocation (BPA) is proposed to reduce by 75% over the GSP's 20-year implementation period, however this does not require a physical reduction by Air Ranch. Additional water can be purchased via the water trading program, once developed and implemented. The commenter is referred to the master response on the Baseline Pumping Allocation and Pumping Reduction Program.

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(h) California Native American tribes.

(i) Disadvantaged communities, including, but not limited to, those served by private domestic wells or small community water systems.

(j) Entities listed in Section 10927 that are monitoring and reporting groundwater elevations in all or a part of a groundwater basin managed by the groundwater sustainability agency.

I14-2 Cont.

The Borrego Water District has commissioned reports from Environmental Navigation Services, Inc (ENSI) that should be reviewed to help address SDAC interests in the Borrego Valley Basin GSP. The report for task 2, dated April 15, 2019, entitled "SDAC Impact/Vulnerability Analysis" and the report for task 3, dated May 13, 2019, entitled "Decision Management Analysis," have important analyses of the factors that will impact our community and will be needed for a consideration of our interests as an SDAC in the GSP.

I14-3

We are a small town, with a few thousand residential and commercial meters to cover any costs that ratepayers must bear for the drafting and implementation of plans to bring our sole-source aquifer into sustainable use. We are likely to have to purchase water from other sectors for municipal needs going forward. The economics of the town will be altered as a result of groundwater management, and that will affect employment, schools, and plans for a viable economy. We will need to make sure that the Borrego Water District remains financially sound to maintain water delivery for the town despite that Borrego Springs is an economically severely disadvantaged community. All of these factors are challenged or put at risk by potential side effects of the plan or plans to reach sustainable water use. The Borrego Valley Basin Groundwater Sustainability Plan has to avoid killing the patient while curing the disease by making sure these risk factors are included and addressed.

I14-4

Sincerely,

Rebecca Falk

Rebecca Falk

Falk Comment Letter, Draft GSP Borrego Valley Basin 2

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Letter I14

Commenter: Rebecca Falk
Date: May 17, 2019

I14-1 The Groundwater Sustainability Agency (GSA) acknowledges the commenter's assertion that the Groundwater Sustainability Plan (GSP) fails to consider Severely Disadvantaged Community (SDAC) interests.

I14-2 The BWD placed into the administrative record the SDAC Impact/Vulnerability Analysis (Task 2 Report) prepared by Environmental Navigation Services Inc., dated April 15, 2019. Besides defraying costs for the community, the report was prepared to understand the implications that the implementation of Sustainable Groundwater Management Act (SGMA) will have on the SDAC population of Borrego Springs. The report describes specific vulnerabilities, including challenges associated with potential loss of seasonal jobs in the agricultural and recreational sectors, funding and access to public schools, and water rate impacts to the lowest income portion of the community. The 20-year SGMA compliance period does provide time for the community to adapt. The potential to use Borrego Water District's (BWD's) tiered rate structure and the GSA's commitment to seeking state funding to support the SDAC are the primary mitigation strategies to address SDAC concerns. GSP Section 2.1.5 has been amended to briefly summarize the results of BWD's Impact/Vulnerability Analysis. The commenter is also referred to response to Letter O12, which addresses how the GSP considers SDAC interests.

I14-3 The GSA acknowledges the commenter's remarks on employment, schools, and economic vitality.

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Comment Letter I15

Comment on the Draft Groundwater Sustainability Plan (GSP)
Borrego Valley Groundwater Basin
May 20, 2019

Regarding Integration of a possible negotiated settlement/stipulated agreement among major pumpers and the GSP

Information is hard to come by as current negotiations between attorneys of major pumpers, including the Borrego Water District (BWD), are not transparent to the public, but it seems water rights and more are currently being negotiated.

I and other members of the public sincerely hope that this agreement, if it is reached, will not negate the GSP work done to date but we do not know if the substantive GSP provisions will still be upheld if such an agreement with the pumpers is reached. As an AC representative to the GSA developing the GSP for the basin, I also sincerely hope that there will be a public comment period on such a negotiated agreement before it is submitted to a court for affirmation. Will the public have the option to comment on the provisions of such an agreement? Will there be any chance of a change as a result of public comments? Do we know what the process for decisions about this might be?

The intention of this comment letter is to point out that such private negotiations do not conform to the public participation aspects of SGMA, and that in such negotiations, the Borrego Water District is one pumper among others, instead of being acknowledged as the one pumper who represents thousands of residents and visitors, and who is responsible for delivering water that will make the town of Borrego Springs viable into the future. One voice for the town of Borrego Springs is not sufficient.

The Draft GSP leaves virtually all of the controversial decisions to be made in a future time. When the stakeholder GSP Advisory Committee meetings were occurring, we were advised by the GSA, that is by representatives of San Diego County and the Borrego Water District, that there would be a fully transparent public process to determine the Projects and Management Actions that would govern the parts of the GSP that are mentioned there but were left to be determined in the future, like the water reduction program, fallowing program, and water trading program.

Now we understand that key parts of these are being negotiated in private, along with water rights.

The GSP can address this. Now that we know that stipulated agreement negotiations are likely going to determine many aspects of the programs mentioned in the draft GSP, as well as water rights, ***the GSP can protect its validity and the intent of SGMA by specifying that the process for drafting the Projects and Management Actions and any agreements that will determine the content of these programs must be conducted in a transparent way with public participation.***

There should be a representative of the town present at negotiations for a stipulated agreement, in addition to BWD, who isn't a representative of either the agriculture, golf or recreation sectors, because that voice for the well-being of the town wouldn't be restrained by the many responsibilities and matters BWD has to juggle in its many-faceted role.

I15-1

Falk Comment Letter, Draft GSP Borrego Valley Basin, Negotiated Settlement and GSP 1

I request that the GSP include provisions to provide for the above italicized/bolded recommendations. We are all in new territory with the Borrego Valley GSP. The future of the town is being decided in great part right now. Public participation and broad stakeholder involvement have to be part of that decision-making process. Isn't that the strong message the legislature sent by passing SGMA, despite any overly cautious legal interpretations that tend to weaken that intent?

I15-1 Cont.

Sincerely,

Rebecca Falk

Rebecca Falk
P.O. Box 922
Borrego Springs, CA 92004

Letter I15

Commenter: Rebecca Falk
Date: May 20, 2019

I15-1 The commenter suggests language to be included in the Groundwater Sustainability Plan (GSP) to mandate public participation in development of projects and management actions, and that a representative of the community be present at stipulated agreement meetings. Although the stipulated agreement process is a separate process from GSP development, the Groundwater Sustainability Agency (GSA) recognizes the importance of public participation in developing the GSP and a potential stipulated agreement. In response, on July 9, 2019, the Borrego Water District (BWD) held a public meeting in which proposed stipulated agreement terms were made public.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I16

Comment on the Draft Groundwater Sustainability Plan (GSP)
Borrego Valley Groundwater Basin
May 20, 2019

I am concerned that the language in the body of the GSP for Mandatory Water Metering is weak (conditional, suggests rather than stipulates), even though the language in Appendix E, the Program itself, is strong (assertive of rules and mandates). Since this is the one action the farmers have agreed to as of this writing, and it is critically important, the language in the body of the GSP should be revised to mirror the strength of the language in Appendix E, to avoid giving the impression that all the Program's mandatory provisions aren't in fact mandatory. See draft GSP, pp. 3-39, 2nd paragraph, and E-S5, PMA #4, last sentence.

See for example (italics and bold mine):
(Executive Summary, ES-5, PMA #4, last sentence) "Mandatory water metering for all non-de-minimus groundwater extractors ***is proposed*** to take place following adoption of this GSP." *Why not,* ***will take place****?*
(Monitoring Network, 3-39, 2nd full paragraph) First there is a strong sentence: "Upon Plan adoption all non-de-minimus groundwater extractors **will be required** to record monthly groundwater production and report to the GSA on an annual basis." But this sentence is followed by weak statements: "***It is expected*** that the property owner (or third party contractor acceptable to the GSA) ***would*** monitor/read the meter on a monthly basis." And: "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...." The paragraph ends with another weak statement: "***The approach*** for well metering is detailed further in the Groundwater Extraction Metering Plan provided as Appendix E."
Again, why not ***will*** *instead of* ***would*** *in the above sentences? Why not* ***'The property owner ...will monitor/read'****, and why not '****The Groundwater Extraction Metering Plan (Appendix E) provides further details?***

Why not put Appendix E into the body of the GSP under Monitoring Network?

Sincerely,

Rebecca Falk

Rebecca Falk

I16-1

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Letter I16

Commenter: Rebecca Falk
Date: May 20, 2019

I16-1 The comments suggest that the language within the body of the Draft Groundwater Sustainability Plan (GSP) regarding Mandatory Water Metering should be strengthened to ensure it is clear that all the provisions specified in Appendix E are in fact mandatory. Revisions have been made to page 3-39 to clarify that the details within Appendix E are mandatory requirements. Page ES-5 has also been clarified that mandatory metering "will" take place following adoption of the GSP.

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Comment Letter I17

To: Rebecca Falk; Crow, Leanne
Subject: RE: public comments GSP Borrego

From: Rebecca Falk <rebfalk7@gmail.com>
Sent: Thursday, April 25, 2019 8:44 AM
To: Bennett, Jim <Jim.Bennett@sdcounty.ca.gov>; Crow, Leanne <Leanne.Crow@sdcounty.ca.gov>
Subject: public comments GSP Borrego

Jim and Leanne,

Here is my first comment, more to come:

<I am concerned that the language in the body of the GSP for Mandatory Water Metering is weak (conditional, suggests rather than stipulates), even though the language in Appendix E, the Program itself, is strong (assertive of rules and mandates). Since this is the one action the farmers have agreed to as of this writing, and it is critically important, I strongly feel the language in the body of the GSP should be revised to mirror the strength of the language in Appendix E, to avoid giving the impression that all the Program's mandatory provisions aren't in fact mandatory. See draft GSP, pp. 3-39, 2nd paragraph, and E-S5, PMA #4, last sentence. I17-1

Becky

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Letter I17

Commenter: Rebecca Falk
Date: April 25, 2019

I17-1 The comments suggest that the language within the body of the Draft Groundwater Sustainability Plan (GSP) regarding Mandatory Water Metering should be strengthened to ensure it is clear that all the provisions specified in Appendix E are in fact mandatory. Revisions have been made to page 3-39 to clarify that the details within Appendix E are mandatory requirements. Page ES-5 has also been clarified that mandatory metering "will" take place following adoption of the GSP.

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Comment Letter I18

From: DIANE JOHNSON <depjohnson@aol.com>
Sent: Tuesday, May 21, 2019 2:58 PM
To: LUEG, GroundWater, PDS
Subject: Comment on Borrego Valley Draft GSP (1)
Attachments: Borrego GSP Comment Risk Brief.docx

Please see attached file. If you prefer that I copy the file into its own email message, please let me know.

Diane Johnson
Borrego Springs

1

21 May 2019

To: County of San Diego
Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

From: Diane E.P. Johnson, Borrego Springs

Re: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett,

I wish to submit the following Risk Brief as a Public Comment. As you are aware, but as others might not be, Lyle Brecht has been an active member of the Core Team of the Borrego Valley GSA, and the Borrego Water Coalition before that. His business and academic background give him a particular expertise in discerning both potential risks and potential ways to mitigate those risks. I am commending his careful and comprehensive risk analysis to you analysis to you because the hydrologically-oriented structure of SGMA and the GSP do not lend themselves to the kind of economic, and social, aspects of sustainability that Mr. Brecht discusses here. I imagine that this is because SGMA's authors did not hold a place like Borrego Springs in mind when they crafted the law.

As you are well aware, the Borrego basin and community are almost -- or are in fact -- unique in California in that we have and likely will never have access to water from a source other than our aquifer. We are very isolated geographically; our municipal water district is very small, with roughly 2000 customers; and the entire community is designated as an SDAC by DWR Yet the community has outsized importance in that it is the sole provider of hospitality services to visitors to Anza-Borrego Desert State Park, which attracts up to a million visitors (regional, American, and international) per year.

Clearly, our groundwater usage must be reduced to a sustainable level in order for the aquifer, the town, and the Park to survive. But it's also essential that the quality of our potable water remains high.

We cannot import cleaner water to dilute any well water that has become contaminated with pesticides (there are a few thousand acres of agricultural land here, and farming has gone on since the 1950s) or naturally occurring contaminants. Thus if water quality gets low enough, our small municipal water district would face building an extremely expensive water treatment plant, which would be ruinous and could in fact lead to the death of our community. And because we are the only community around to offer visitor services to the Anza-Borrego Desert State Park (the largest in California), that public resource/benefit would be heavily impacted as well.

Mr. Brecht backs up these points and raises many others as well in the following Risk Brief. We look forward to seeing these issues addressed in a revision of the Draft GSP.

I18-1

FOR BORREGO RISK BRIEF ONLY
by BWD Director Lyle Brecht

The present March 2019 draft Groundwater Sustainability Plan (GSP) for the Borrego Springs Subbasin (Subbasin) of the Borrego Valley Groundwater Basin is the result of thousands of hours of expert analysis. The GSP has cost approximately $6 million since 2010 (see attached) to arrive at a scientifically and legally defensible, carefully crafted approach to addressing the overdraft.[1] The draft GSP is a monumental step forward after so many years of neglect.[2]

I have a few technical concerns mostly related to the over reliance on adaptive management driven changes to the plan to potentially correct for starting assumptions, given such a short 20-year planning period.[3] These technical concerns primarily arise from the variability and frequency distribution of Subbasin physical recharge events over the US Geological Survey (USGS) numerical model calibration period (see attached).[4] Many of these technical concerns

I8-2

[1] SGMA sets an arbitrary date of January 1, 2015 for *reimbursement* of GSP development-related expenses. However, what I am accounting for in the approximately $6M GSP actual development costs to date are the direct costs of the technical, legal, and administrative work necessary for developing the Subbasin GSP. For example, the draft GSP as it stands would not have been possible without the previous grant and BWD ratepayer funded studies by the USGS that provided a numerical model of the Subbasin that establishes a defensible sustainable yield; the US Bureau of Reclamation that establishes that running a pipeline to Borrego is economically infeasible; the USEPA that establishes that there are no economically available water sources from aquifers over the next hill; DWR's extensive data collection efforts; Dudek's various analytical work on issues of critical concern to the GSA such as Subbasin boundaries; Raftelis's estimates of potential financial costs to ratepayers from SGMA; Best Best & Krieger's legal work on the intersection of GSP requirements, CEQA and California water law; Downey Brand's legal work on water law and MOU development; the gracious contributions of time by citizens of Borrego with special expertise in hydrology, planning, field biology, fundraising, civic organization, and government relations, etc.

[2] About thirty-five years ago, a USGS study, funded by San Diego County, unequivocally established that the Subbasin was in severe overdraft. But, 35-years have gone by with no reduction of the annual overdraft. Between 1982 and 2010, the annual overdraft more than

doubled and is now considered *critical* by DWR. The overdraft is economically expensive (water supply uncertainty is an impediment to growth). This expense for municipal ratepayers only increases with time as the overdraft continues.

[3] Assuming that a*daptive management measures* can correct for the entirely of systemic risk is not warranted. See Holly Doremus, Professor of Law, University of California, Berkeley, *Adaptive Management as an Information Problem* (2011). "Faced with the reality that adaptive management is not a panacea, policymakers may have to directly confront difficult questions about the relative costs of different sorts of errors and develop forthright approaches to making decisions in light of uncertainty."

[4] Due to the variability and frequency of natural recharge events based on the USGS 66-year calibration period, statistically it is highly unlikely that by altering a reduction schedule based on 5-years of new recharge data one can improve the odds of reaching a sustainable yield target by year 20. Instead, it is more likely one would decrease the probability of reaching the desired sustainable yield target.

are discussed and enumerated in the studies performed for the Subbasin Groundwater Sustainability Agency (GSA) under a California Department of Water Resources (DWR) Severely Disadvantaged Community (SDAC) Proposition 1 grant to the Borrego Water District (BWD) by Environmental Navigation Services, Inc. (ENSI).[5]

However, my comments on the draft primarily are focused on risk.[6] My contention is that bringing the Subbasin into sustainable use by January 2040 is *path dependent*. That is, one could potentially bring the Subbasin into sustainable use by 2040, but do it in a manner that causes water rates to rise so high and so fast that some of the customers of BWD would not be able to afford to continue to live in Borrego.[7] The problem with the loss of municipal customers is the potential for creating a vicious circle where loss of customers causes yet more increasing rates, given fixed costs that continue to drive even greater rate increases with less customers. This may seem far-fetched to some, but when I was consulting with the US Environmental Protection Agency, Office of Water, in Washington, DC, I saw firsthand that this has happened in other places. *Path dependency* matters.

I18-2 Cont.

Below are my comments that derive from this risk management perspective:

1. Insufficient Addressing of SDAC Considerations

   - Under GSP Regulations Section 355.4: "Criteria for Plan Evaluation by DWR:" Whether the interests of the beneficial uses and users of groundwater in the basin, and the land uses and property interests potentially affected by the use of groundwater in the basin, have been considered;[8]

I18-3

[5] ENSI, *Methodology To Examine Future Groundwater Overdraft In Terms Of The Overall Hydrologic Water Balance Considering Recharge Variability And Parameter Uncertainty* (September 12, 2018); *Water Quality Review and Assessment: Borrego Water District (BWD) Water Supply Wells* (December 7, 2018); *Assessment Of Water Level Decline, Hydrogeologic Conditions, and Potential Overdraft Impacts For Active BWD Water Supply Wells* (January 7, 2019); *Comparison of Pumping Rate Reduction Schedules Under SGMA* (February 11, 2019); Decision Management Analysis (April 16, 2019).

[6] Risk in complex systems = sum (probability of an adverse event occurring X its attendant costs). Thus, low probability, high consequence events are not excluded from one's analysis. Risk in this context results in a dollar amount. Groundwater basins are a complex system. Linear analysis only approximates the physical reality of the system. See Stefan Thurner, Rudolf Hanel, and Peter Klimek, Introduction to the Theory of Complex Systems (Oxford, UK: Oxford University Press, 2018).

FOR DISCUSSION PURPOSES
ONLY

[7] Based on the data, so carefully and thoughtfully presented in the draft GSP, bringing the Subbasin to sustainable use as quickly as economically feasible is necessary for future sustainable economic activity and development opportunity in the Borrego Valley.

[8] See draft GSP (March 2019), Appendix A: "DWR Preparation Checklist for GSP Submittal."

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From the draft GSP text, it is not clear that the interests of municipal customers of BWD in a SDAC have been adequately *considered* or *addressed*.[9] The projected approximately $20 million cost to implement the proposed GSP may drive water rates for municipal customers beyond affordability for some BWD SDAC customers.

For example, as an SDAC community, many of the BWD ratepayers are rate sensitive. Water rates are not infinitely elastic and undue risk that puts pressure on water rates can have a deleterious impact, not only on BWD's finances, but the economic viability of the Borrego community and its embedded property values served by municipal water service.[10] Future water rates, driven by SGMA implementation costs may become a primary factor in future economic development opportunities for Borrego Springs.[11]

I18-3 Cont.

2. Assumptions of Business-As-Usual for San Diego County Administrative Practices & Policies

Business as usual by the County may render the efforts of the GSA to bring the Subbasin into sustainable use no later than January 2040 with no undesirable results extremely unlikely.[12] The end result is that BWD ratepayers may experience a disproportionate amount of risk.[13]

I18-4

An important issue regarding risk is that without adequate management of this risk, it can become destructive of the BWD's credit. Give the capital intensity of BWD's business, BWD requires good credit in order to borrow for adequately maintaining its municipal water and ~~sewer system.[14]~~ Loss of credit would put undue pressure on water rates.

[9] See draft GSP (March 2019) pp. 36, 58, 203, 213, 315, 421-2, 588.

[10] It is uncertain that the District's SDAC customer base would be able to afford the resultant water rates. See Raftelis Financial Consultants, *Borrego Water District County Zoning and SGMA Impact Assessment* (November 17, 2016) and *Borrego Water District Water Rates Affordability Assessment* (October 4, 2017); LeSar Development Consultants, Borrego Springs Community Characteristics Report (1/30/2019) and ENSI, SDAC Impact/Vulnerability Analysis (Task 2) (April 15, 2019).

[11] Water rates are what they are to provide **potable water** to Borrego's homes & businesses. Under State law, the District is required to charge rates that produce revenues to cover its *costs*. So, the deeper issue is not rates, but *costs* to provide potable water. Rates are a direct result of the District's *costs*. The District share of projected GSP implementation costs are likely to increase future water rates.

[12] SGMA states that sustainability must be achieved within "20 years of implementation of the plan." (Water Code, § 10727(b)(1).

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[13] "Managing risks [is] an act of the imagination…" See Michael Lewis, The Fifth Risk (New York: W. W. Norton & Company, 2018), Location 577.

[14] The current replacement cost of BWD's municipal water, sewer, and wastewater system is approximately $62.5 million.

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- *Land Use Decisions*: Full general plan buildout of existing approved zoning, given permitting constraints is presently presumed to add an additional 3,000 residential, 215 commercial, 108 public agency, 207 irrigation and 179 multiple unit EDU to the basin for a total of 6,811 EDUs. Applying the current residential water demand of 0.55 acre-feet per account would result in a future municipal water demand of 3,746 acre-feet per year, which is about 66% of the basin sustainable yield of 5,700 acre-feet per year. The estimated future municipal water demand of 3,746 acre-feet per year combined with the existing golf course water demand of 2,852 acre-feet per year is 6,598 acre-feet per year or 116% of the sustainable yield. This indicates that the municipal water demand at the already County-approved zoning buildout, assuming the current water use per EDU, combined with existing recreational water demand, will consume all available supply and that there would be limited to no available supply for agriculture.[15] This situation appears to be a result of the County's past policy to approve new development independent of the water supply availability to serve such new development.

- *Well Abandonment Enforcement*: San Diego County Code, Sections 67.401 through 67.424 provide the regulatory authority to abandon wells. In addition, Section 67.421 adopts standards from Department of Water Resources Bulletin 74-81 and 74-90 (i.e., California Well Standards) for the construction, repair, reconstruction, or destruction of wells. Chapter 4, Wells Section 67.401 states: "It is the purpose of this Chapter to provide for the construction, repair and reconstruction of wells to the end that the ground water of this County will not be polluted or contaminated and that water obtained from such wells will be suitable for the purpose for which used and will not jeopardize the health, safety or welfare of the people of this County, and for the destruction of abandoned wells or wells found to be public nuisances to the end that such wells will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of this County" (Amended by Ord. No. 10238 (N.S.), effective 1-4-13). Section. 67.402. defines Abandoned and Abandonment. The terms "abandoned" or "abandonment" shall apply to a well that has not been used for a period of 1 year, unless the owner declares in writing, to the director his intention to use the well again for supplying water or other associated purpose (such as a monitoring well or injection well) and receives approval of such declaration from the director. All such declarations shall be renewed annually and at such time be resubmitted to the director

I18-4
Cont.

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[15] Dudek, *Theoretical Water Demand at Buildout of Present Unbuilt Lots Under County's Current Zoning in Borrego Springs* (October 4, 2016) and draft GSP (March 2019) Section 2.1.3 "Land Use Considerations" pp. 2-17-20.

for approval (Dudek research). Presently, Dudek estimates approximately 50 improperly abandoned wells in the Subbasin at a cost of approximately $40,000/well to properly abandon (draft GSP estimate). Without adequate and timely enforcement of State and County well abandonment regulations, this approximate $2.0 million cost potentially jeopardizes adequate management of the Subbasin for no undesirable results.[16]

- *Ministerial Well Permitting*: Under SGMA, assessment of well interference and impacts of new wells on pumping allowances will be required to adequately manage the Subbasin for no undesirable results;[17],[18]

- *Land Restoration Sureties*: Pre-SGMA land fallowing standards may not have had to meet California Environmental Quality Act (CEQA) requirements. It is anticipated that CEQA requirements will have to be met for all fallowing under the Groundwater Sustainability Plan and for any land that is fallowed in the Subbasin with public or private funds for water transfer purposes. Anticipated additional CEQA requirements beyond proper well abandonment include soil stabilization, Phase I Environmental Site

I18-4
Cont.

[16] Proper well abandonment enforcement may be a pre-requisite for sound Subbasin management. For example, in May 2000 in Walkerton, Ontario, a town of 5,000 people, a perfect storm of a broken water main, a sick animal, heavy rains, poor maintenance and repair practices, and operator error combined to introduce *E coli 0157:H7* into the public water supply sickening 2,300. Hundreds were hospitalized, and seven people died. The ultimate villain was an improperly maintained, barely used well. In other words, protecting groundwater quality is a big deal for the ongoing economic security of a community that is too often taken for granted. Lack of proper well abandonment enforcement may threaten the entire population of municipal ratepayers who represent approximately $300 million in assessed property value in the Borrego Valley.

[17] "The passage of SB 252 added Article 5, Wells in Critically Overdrafted Groundwater Basins, to chapter 10 of the California Water Code requiring collection of specific information for water wells proposed in critically overdrafted groundwater basins. To facilitate the collection of the required information, San Diego County Department of Environmental Health (DEH) has revised the Well Permit Application and created a Supplemental Well Application. The Supplemental Well Application is included in the Well Permit Application and must be submitted for wells proposed in the Borrego Springs Subbasin. Wells drilled by the BWD to provide water solely for the residents are exempt from this requirement. The provisions of SB 252 are effective until January 30, 2020." See draft GSP (March 2019, Section 2.1.2 "Water Resources Monitoring and Management Programs," p. 2-17.

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[18] Annual groundwater extractions exceeding the amount that a groundwater user is authorized to pump under regulations adopted by the GSA may be subject to fines or penalties under Water Code section 10732. The fine may be up to $500 per acre-foot extracted in excess of their authorized amount (Water Code §10732 (a)(1)), as well as potential additional fines under Water Code, 10732(a)(2).

Assessment (ESA), and removal of existing infrastructure.[19] Based on Dudek's analysis of land restoration costs, the County's sureties on existing land that was cleared for its approved solar farms may be only approximately 50% of the actual costs to properly return the land to acceptable condition once the economic useful life of these projects has run its course. Having an adequate surety for these projects is important since the experience nationally is that oftentimes once the project reaches its useful economic life, the project owner declares bankruptcy, leaving those land restoration costs to the public sector not covered by the original surety.

I18-4 Cont.

3. Water Quality (WQ) Issues (See draft GSP (March 2019) Section 2.2.2.4 "Groundwater Quality, pp. 2-55-64)

- *The potential degradation of WQ due to the critical overdraft of the basin is the #1 risk factor for the District and its ratepayers.* This risk factor is due to the potential treatment and/or well abandonment/re-drilled/or replaced costs associated with degrading water quality from the *critical* overdraft.[20] The degradation of WQ in the basin is a low probability high consequence concern. These days, a new municipal well is an approximately $1.5 million cost. Already, the upper aquifer of the basin, where the highest water quality is found has largely been dewatered in the Central Management Area due to the overdraft. Thus, the majority of municipal pumping is now from municipal wells screened in the middle and lower aquifers;[21]

- *Historically (over the past 50-years), the most expensive WQ problem for municipal water supplies has been degraded WQ from septic tank effluent.* As many as 4 municipal wells have either been abandoned or had to be re-drilled or replaced due to nitrate contamination from septic tanks (ID4-1, ID4-4 (deepened), WC #1, Roadrunner);[22]

I18-5

[19] "The GSA also has authority to 'provide for a program of voluntary fallowing of agricultural lands or validate an existing program" (CWC, Section 10726.2(c))." See draft GSP (March 2019) Section 4.2.1 "Water Trading Program Description," p. 4-7. A passive restoration of disturbed land can take many years, and even decades, in a desert environment.

[20] Dudek, *Water Replacement and Treatment Cost Analysis for the Borrego Valley Groundwater Basin* (November 24, 2015).

[21] ENSI, *Water Quality Review and Assessment: Borrego Water District (BWD) Water Supply Wells*

(December 7, 2018).

[22] ENSI, *Water Quality Review and Assessment: Borrego Water District (BWD) Water Supply Wells* (December 7, 2018).

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- *Historically, 2 municipal wells (ID-1 & ID1-2) have been abandoned due to naturally occurring contaminants that exceed Minimum Contaminant Levels (MCLs);*[23]
- *Historically, BWD presently knows of no municipal wells that have been adversely affected by pollution from return flows from agricultural pumping.* However, return flows from agricultural irrigation are highly polluted with salts and chemicals.[24] Return flow water is non-potable. This water would need to be treated before it was suitable for human consumption.[25] The precautionary principle suggests that the GSA should today plan for an uncertain future and make allowances for the potential treatment of historical return flows from agricultural irrigation;[26]
- *Presently, the District is closely watching water quality trends for one production well showing potential arsenic concentrations that may exceed MCLs for arsenic in the near future.* Thus, BWD is planning on replacing this well with a new production well in the near future;
- *Waiting to see if pollution of municipal supplies occurs sometime in the future is not the most prudent approach to managing the potential risks to public health.*[27]

I18-5
Cont.

[23] These wells, no longer useful for municipal use, were conveyed to the owners of the Rams Hill Golf Course for golf course irrigation use.

[24] A list of the toxic pesticides, herbicides and pesticides applied to land in the Borrego Valley is sourced from the California Pesticide Information Portal (CALPIP) hosted by the California Department of Pesticide Regulation. Site is as follows: http://calpip.cdpr.ca.gov/main.cfm.

[25] ENSI, *Assessment Of Water Level Decline, Hydrogeologic Conditions, and Potential Overdraft Impacts For Active BWD Water Supply Wells* (January 7, 2019).

[26] Testing for Emerging Contaminants of Concern (COCs) is expensive and may not be identified by traditional Mann-Kendall Trend Analysis until after-the-fact. Some chemicals such as 1,2,3 TCP toxic concentrations for drinking water are presently measured in parts per trillion (ppt). Large molecules (traditional with many pesticides) that sorb with soils do not typically make their way to the groundwater table. Many pesticide molecules can make their way into a drinking water supply from surface runoff into surface water bodies. Since the BWD does not rely on any surface water for its municipal drinking water supply, exposure to some COCs may be limited. However, the issue in Borrego is that we have approximately 50 improperly abandoned wells in the Basin, so an assumption that a large molecule toxin will not reach the water table may not be a good assumption.

[27] In April 2014, a decision to cut Flint, Michigan's water supply budget caused widespread lead poisoning of children in Flint, MI. Lead poisoning is an irreversible neurotoxin that interferes with the development of

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the nervous system in children, causing permanent learning and behavioral disorders. Additionally 10 people have died from Legionnaires' disease amidst a surge in infections caused by water-borne bacteria. The costs for attempting to save $2 million/year is expected to reach $1 billion.

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Letter I18

Commenter: Diane Johnson
Date: May 21, 2019

I18-1 The commenter includes a risk brief prepared by Lyle Brecht of the Borrego Water District and a request to revise the Groundwater Sustainability Plan (GSP) based on these comments. The commenter does not offer suggested edits to the GSP. Therefore, the comment does not address the adequacy of the Draft GSP, and no further response is required or necessary.

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Comment Letter I19

May 21, 2019

County of San DiegoMay 14, 2019
Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-

Re: Suggested changes to the Groundwater Sustainability Plan Draft for the Borrego Valley Groundwater Basin (SGMA Draft): Promote Bioretention Basins and Greywater Systems

Dear Mr. Bennett

I have several suggested changes and additions to the Groundwater Sustainability Plan Draft for the Borrego Valley Groundwater Basin (SGMA Draft).

The SGMA Draft states that "There are currently no managed stormwater recharge facilities in the Plan Area." Thus, recharge is limited to natural infiltration of stormwater, and to a lesser degree, return flows of applied irrigation water and septic recharge." (2.45) Additionally, poor water quality associated with irrigation return flow and septic recharge has percolated to the aquifer and has the potential to migrate laterally as a result of pumping. (3.29) Septic systems have polluted several BWD wells and resulted in the need to drill expensive new wells.

"The source of nitrates is likely associated with either fertilizer applications or septic return flows." (4.30) "Home septic tanks, when used in high concentrations and built to poor or outdated standards" (2.46) and agriculture petrochemical fertilizers, herbicides and pesticides are contributors to groundwater quality degradation.

Since recharge is often polluted by septic and agriculture return flows, infiltration of stormwater in bioretention basins could dilute these toxic return flows. The use of existing natural and extensive man-made stormwater drainage channels could substantially reduce construction costs, increase the basin recharge, mitigate pollution from septic and agriculture return flows and the runoff to the Borrego Sink that could results in higher TDS levels.

Runoff in the Borrego Sink could also damage the middle and upper aquifers so stormwater should be captured and allowed to percolate into the aquifer before it

I19-2

I19-2

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reaches the Sink. "The Borrego Sink, similar to dry lake beds that occur in the desert, is a location where water evaporates and minerals will accumulate and can form evaporite deposits. Historically similar conditions occurred as sediments were deposited. Thus, the middle and upper aquifers have the potential to include evaporite deposits that can re-dissolve and lead to elevated concentrations of sulfates and carbonates that result in corresponding increase in TDS." ENSI: DRAFT 12/7/2018, page 9.

I19-2 Cont.

There is plenty of evidence that stormwater runoff exists and can be captured on a cost effective basis:

- There are years in which the frequency, intensity and/or duration of runoff events were sufficient to initiate substantial stream recharge (e.g., water years 1967, 1977, 1979, and 1992)." (2.79)
- "The runoff into the Subbasin from the 24 entry points was as much as 44,000 AFY with an average annual rate of 3,600 AFY." (2.75)
- "Storm flows may occasionally be adequate in intensity and duration for recharge to be initiated through deep percolation of storm runoff." (2.66)
- The runoff that is not recaptured is lost to evaporation in the Borrego Sink or leaks out of the aquifer in the southern basin.
- "The contributory watersheds are approximately 400 square miles (mi2) and much larger in area than the approximately 98mi2 Subbasin as illustrated in Figure 1." (p. 532)
- "Stream and flood flows from the adjacent watersheds provide the bulk of the water that enters the Subbasin." (p. 532)
- There are existing infrastructure improvements (drainage channels) that can be utilized to increase runoff into bioretention basins and reduce construction costs. (See the attached Rams Hill example)

I19-3

The Summary of General Plan and Community Plan Land Use Policies Relevant to Groundwater Sustainability in the Plan Area also encourages stormwater infiltration. It specifies the following:

> COS-4.3 Maximize stormwater filtration and/or infiltration in areas that are not subject to high groundwater by maximizing the natural drainage patterns and the retention of natural vegetation and other pervious surfaces.
>
> COS-5.2 Require development to minimize the use of directly connected impervious surfaces and to retain stormwater runoff caused from the development footprint at or near the site of generation.

Furthermore, Rick Alexander recently wrote a California Water Board Grant Application request for a Coyote Creek grant to research the capture groundwater in ponds. His requests should be expanded to include the Rams Hill, and de Anza areas.

I19-4

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Through Title XVI Reclamation Research Grant Program:

1. Stormwater Capture/Groundwater Infiltration Opportunity/Feasibility Study

   Specifically, BU Rec is interested in funding a Research Grant to explore feasibility of groundwater capture in ponds during vernal, or storm events, from the Coyote Creek Watershed. Captured water would percolate into the aquifer providing recharge rather than running-off and evaporating as now occurs. Coordination/cooperation of planning with ABDSP would be a critical component of such a study. Taking advantage of potentially fallowed agricultural lands could provide opportunities for location of stormwater capture basins.

3. Watershed Management Programs
   The Cooperative Watershed Management Program (CWMP) provides funding to watershed groups to encourage diverse stakeholders to form local solutions to address their water management needs. By providing this funding Reclamation promotes water reliability and cooperation between stakeholders to reduce conflict, facilitate solutions to complex water issues, and stretch limited water supplies. Funding is provided on a competitive basis for development of watershed groups and implementation of watershed management projects.

I19-4 Cont.

Therefore, the SGMA Draft Stormwater Capture and Infiltration sections should be rewritten with the emphasis on the positive rather than the negative. Grants and bond funding should be pursued and incentives offered to homeowners and large property owners who have the ability to build bioretention basins.

I19-5

"There is an average of about 40 gallons per person per day available for graywater recycling and the average family can reduce their freshwater use by as much as 30% by using graywater for irrigation (SOW 2019)" (4.17). Those who capture filtered household greywater and collect stormwater from roofs, driveways and yards by contouring their property so the water flows into underground tanks, would also experience lower water bills and the satisfaction of helping the community.

Although experts have made rough stormwater runoff estimates, accurate Borrego runoff data does not exist. Specifically, the annual precipitation data doesn't accurately indicate the amount of runoff and its potential recapture. The SGMA draft states "Winter and summer rain storms produce different amounts of runoff. For example, in a year of unusually high precipitation from extended periods of winter drizzle, there may be high amounts of precipitation but very little runoff. In other years, although the annual precipitation may be low, a single August storm could dumped a huge amount of rain in a few hours and create flooding. This type of storm would produce a huge runoff that could be captured and allowed to percolate into the aquifer. Precipitation patterns in the Plan Area are influenced by two distinct sources. The first source is

I19-6

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Pacific frontal systems that bring regional rain bands to Southern California, typically between October and April.

The second source is isolated and scattered thunderstorms that occur when moisture from the Gulf of California advects from south to north through the Plan Area. This phenomenon, commonly referred to as the "monsoon" season, is strongest in the summer months, but is not a regular or consistent occurrence. Occasionally, the decaying remnants of former tropical storms or hurricanes can pass through the area and in some years these further enhance the precipitation totals during the monsoon season. As a consequence of these disparate influences, the precipitation record is highly variable both seasonally and annually (Figure 2.2-3 and Figure 2.2-4). This makes defining the parameters of "wet" or "dry" years difficult **(e.g., one thunderstorm may drop half of the yearly total in an otherwise dry season).**" (2.36)

There are existing areas with extensive drainage systems that enhance their ability to capture stormwater at substantially lower construction costs (e.g. Viking Ranch and Rams Hill). Property owners could contribute the use of their land to Bioretention Projects and receive some form of compensation.

The Draft currently negatively states:

> "The infrequent occurrence of rainfall in the region results in extended periods of zero-recharge. Additionally, design criteria for capturing and infiltrating desert flood events, as well as removal and disposition of accumulated sediment from large storm events, is costly (USBR 2015). **Therefore, while this potential supplyside project requires additional analysis, the costs to construct this as a stand-alone project outweigh the benefits at this time.** Stormwater retention will be evaluated on a case-by case basis in conjunction with future development in the Subbasin "

I19-6 Cont.

This section should be rewritten as follows:

There are a number of reasons bioretention basins should be built in Borrego.

1. Stormwater runoff that reaches the Borrego Sink doesn't recharge the aquifer, it is lost to evaporation.
2. "The Borrego Sink, similar to dry lake beds that occur in the desert, is a location where water evaporates and minerals will accumulate and can form evaporite deposits. Historically similar conditions occurred as sediments were deposited. The middle and upper aquifers have the potential to include evaporite deposits that can re-dissolve and lead to elevated concentrations of sulfates and carbonates that result in corresponding increase in TDS." ENSI DRAFT 12/7/2018, page 9.
3. Bioretention basins would reduce flood damage.
4. Bioretention basins would support endangered ecosystems.
5. Experts lack accurate data on Borrego's rainfall intensity and duration, so their predictions are flawed.
6. Experts lact accurate data on streamflows. "The highest levels of uncertainty in the model were from agricultural pumping, specific yield, and streamflow entering the valley." (2.80) In the fall of 2017, there was a precipitation event in the Coyote Creek watershed that produced runoff in Coyote Creek; however, no stream flow measurements are available for this event. Dudek 10329.001 Feb. 2019.
7. Septic system and fertilizer pollution, that threatens water quality, can be diluted with the addition of natural recharge from bioretention basins.
8. The existing costly flood channel infrastructure, such as the extensive natural and man made drainage channels in the Rams Hill area, will reduce bioretention basin construction costs.
9. There are government programs that encourage bioretention basins construction in areas such as the Viking Ranch.
10. "There is runoff into the Subbasin from 24 entry points with as much as 44,000 AFY (2.75)."
11. Since grants and bond financing for the capture and infiltration of stormwater are available, they should be aggressively pursued.
12. Incentives can be offered to encourage the construction of multiple bioretention basins.

Therefore, bioretention basin construction costs may be quite reasonable and the benefits to Borrego's critical water problems substantial.

I19-7

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The draft should also be strengthened with these three provisions:

1. Prohibit the concentration of septic tanks that are threatening our water quality.
2. Wherever possible, eliminate home septic systems by connecting homes to the BWD sewer system.
3. All homes should be obligated to install greywater systems and capture stormwater from roofs, driveways, and direct flows from contoured land to bioretention basins and/or in underground tanks for landscape irrigation.

I19-8

Everyone agrees that Borrego needs every drop of water it can save whether it's through changing to drip irrigation and native landscaping, installing home and commercial greywater systems, initiating turf reduction programs, or constructing large and small bioretention basins.

For these reasons, the SGMA draft should encourage, not discourage, the capture of stormwater runoff in bioretention basins.

I19-9

Regards,

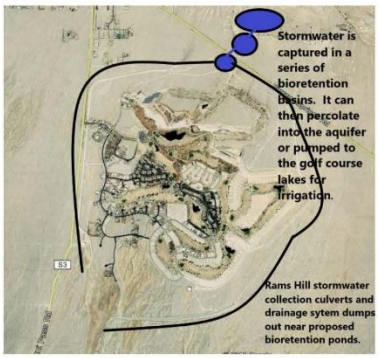
Bill Berkley
SGMA Advisory Committee representing Borrego recreation

The Rams Hill Drainage Channels:

In the Rams Hill area extensive existing drainage channels collect runoff from thousands of acres and direct it to a small central collection point at the bottom of the hill where a series of bioretention basins can be built. This system could save thousands of acre feet over a decade. Therefore, the cost to build a series of bioretention basins would be relatively small when weighed against the benefits and Borrego's critical water situation.

The world has been experiencing climate change, particularly in precipitation extremes that generate peak runoff flows which if captured and saved, would increase water supplies.

Rams Hill's 3,200 acres and the thousands of park acres drain into the extensive natural and manmade drainage systems that collect stormwater and funnels it down to a central location that's perfect for the construction of a number of cascading bioretention ponds. The water can then percolate into the aquifer or be pumped immediately into Rams Hill's lakes where it can then irrigate the course.



The entire 200 acre Rams Hill Golf Course is a bioretention basin that currently captures water from hillsides, roads, parking lots, and roofs so that it can percolate into the aquifer. Some of the stormwater flows into the golf course lakes and is reused for irrigation which eliminates the need to pump water from the aquifer.

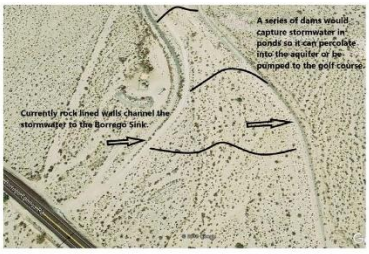
This picture of the sixth hole at Rams Hill was taken in February 2019. It demonstrates that the golf course is a large bioretention basin that has captured hundreds of acre feet of stormwater runoff that has recharged the aquifer over the years.

William J. Berkley, WJBerkley@Gmail.com 858-395-8709 7

I19-10

This picture shows the existing rock lined channels (east of Borrego Springs Road and near the BWD Reclamation Plant) that direct stormwater to the Sink. If the 4 acres between the rock lined channel walls were excavated to an average depth of 10 feet, they could capture 40 acre feet from one storm. While these storms may be infrequent, climate change may result in more storm events in the future.

Why miss an opportunity to capture stormwater before it is lost to evaporation in the Borrego Sink?



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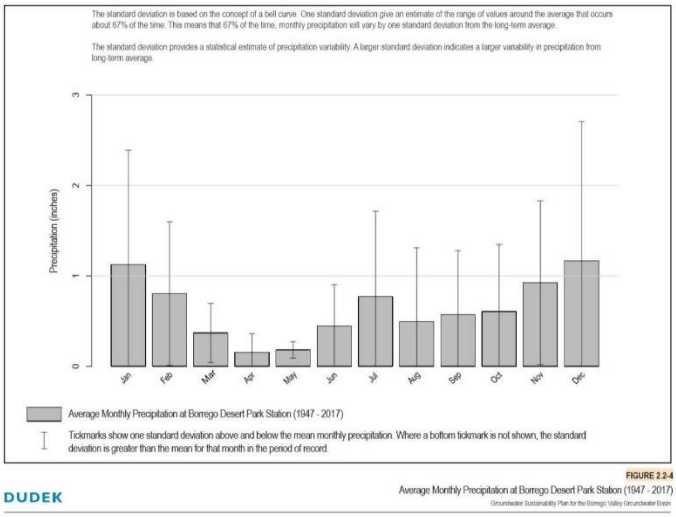

FIGURE 2.2-4
DUDEK
Average Monthly Precipitation at Borrego Desert Park Station (1947 - 2017)
Groundwater Sustainability Plan for the Borrego Valley Groundwater Basin

Letter I19

Commenter: Bill Berkley, Advisory Committee Member
Date: May 21, 2019

I19-1 The Groundwater Sustainability Agency (GSA) acknowledges your comments and suggested changes on the Draft Groundwater Sustainability Plan (GSP). In particular you are interested in the potential of stormwater capture and recharge using bioretention basins that could dilute pollutants from other sources of return flow such as irrigation and septic recharge. You also indicate that existing natural and extensive man-made stormwater drainage channels could substantially reduce construction costs and increase the basin recharge

I19-2 The GSA notes your comment that runoff should be captured prior to discharge to the Borrego Sink because of the potential for the dissolution of evaporite deposits that could result in poor water quality.

I19-3 The GSA notes the documentation you provide as evidence for the potential of stormwater capture and recharge including reference to the General Plan and Community Plan land use policies.

I19-4 The GSA notes your comment that Rick Alexander recently wrote a California Water Board Grant Application request for a Coyote Creek grant to research the capture groundwater in ponds. The GSA is unaware of this Water Board Grant Application request for a Coyote Creek and requests that you or Rick Alexander provide the grant information to the GSA for review. The GSA also notes your comment to expand the study to the Rams Hill and de Anza areas.

I19-5 The GSA notes your suggestion to incorporate potential stormwater capture and recharge projects in the Draft GSP. In addition, the GSA notes your comments that grants and bond funding should be pursued and incentives offered to homeowners and large property owners who have the ability to build bioretention basins, and the potential for use of residential greywater systems and rainfall capture.

I19-6 The GSA notes your excerpts from the GSP pertaining to the duration and intensity of rainfall patterns in the Borrego Springs area. In addition, you indicate that there are existing areas with extensive drainage systems that enhance their ability to capture stormwater at substantially lower construction costs (e.g., Viking Ranch and Rams Hill) and that Property owners could contribute the use of their land to bioretention projects and receive some form of compensation. Also, the GSA

acknowledges your impression that the potential for stormwater capture and recharge is negatively reflected in the Draft GSP.

I19-7 The GSA acknowledges your comment that the Draft GSP should be revised to indicate that there are a number of reasons that bioretention basins should be built and that bioretention basin construction costs may be quite reasonable and the benefits to Borrego's critical water problems substantial.

I19-8 The GSA acknowledges your comment that the Draft GSP should include provisions to (1) prohibit the concentration of septic tanks, (2) eliminating home septic systems wherever possible and connecting to the BWD sewer system, and (3) obligate installation of greywater systems and capture stormwater from roofs, driveways, and direct flows from contoured land to bioretention basins and/or in underground tanks for landscape irrigation. The GSA notes that expansion of the Borrego Water District (BWD) sewer system has been studied as part of the *Final Tertiary Treatment Conversion Project Feasibility Study* (Dudek 2018). This report concluded that the expansion of the BWD sewer collection system for the three alternatives evaluated was not cost effective at this time.

As such, expansion of the BWD sewer system was not considered for a project in the Draft GSP. Installation of greywater systems and domestic stormwater capture are potential project-level actions to be considered as part of GSP implementation. Use of greywater systems may be evaluated as part of the Water Conservation Project and Management Action as indicated on Draft GSP page 2-32. Rainwater harvesting from roofs though rain barrels or cisterns could be evaluated as a project-specific management action. The GSA notes that similar rebate programs exist in the County however; the cost/benefit of such a program should be considered taking into account low rainfall in Borrego Springs.

I19-9 The GSA notes your comment that everyone agrees that Borrego needs every drop of water it can save. The GSA emphasizes that the Projects and Management Actions described in Chapter 4 of the Draft GSP prescribe a systematic process to evaluate the cost/benefit of various water conservation projects and contemplates securing funding such as through existing and future grants and low interest loan programs. The GSA also acknowledges your comment that the Draft GSP should encourage, not discourage, the capture of stormwater runoff in bioretention basins.

I19-10 The GSA acknowledges your proposed bioretention project at Rams Hill using the existing flood control system that collect stormwater and funnels it down to a central location that's perfect for the construction of a number of cascading

bioretention ponds. In addition, the GSA notes you comment that the entire 200 acre Rams Hill Golf Course is a bioretention basin that currently captures water from hillsides, roads, parking lots, and roofs so that it can percolate into the aquifer and that some of the stormwater flows into the golf course lakes and is reused for irrigation which eliminates the need to pump water from the aquifer. As documented in the Draft GSP, stormwater retention will be evaluated on a case-by case basis in conjunction with future development in the Subbasin.

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Comment Letter I20

Jack and Linda Laughlin
P.O. Box 626
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Email: desert.two@gmail.com

May 3, 2019

County of San Diego
Planning and Development Services
% Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Reference: Comments on the Borrego Valley Draft Groundwater Sustainability Plan

Dear Jim,

First of all let me say that after many years of effort to create a sustainable water management plan for the Borrego Valley it is rewarding to see in the draft GSP a roadmap to achieve this goal. This letter presents some relevant background from my perspective and comments on selected issues.

BACKGROUND

I am a retired registered professional engineer and have maintained an interest in the Borrego Valley aquifer overdraft problem since John Peterson began his well monitoring program in the early 1980's. My engineering work has been largely associated with water and power projects throughout the U.S. and overseas including work with California's water and electric utilities and California's state and federal agencies.

My involvement in past Borrego water management issues included leading a two year effort in the 1990's to confirm that the aquifer was in severe overdraft, examine alternatives for imported water sources, conduct community outreach meetings and draft a concept for a Borrego Valley water management plan. This effort included the State Park, DWR, USGS, San Diego State University and the Bureau of Reclamation. The program was discontinued because of a lack of support by the County and the BWD board of directors at the time. The positive outcome was a general acceptance of the aquifer overdraft problem, the conclusion that no viable alternative for imported water sources was likely and an interest by the state and federal agencies in participating in a future program if they received the necessary support to become involved.

1

Since that time BWD went through a difficult period that drained their finances but then recovered through the efforts of the recent and present board of directors and staff. While BWD will now be facing some difficult questions generated by the GSP process I feel they have made a great deal of progress in achieving financial viability, hiring competent contractors and focusing on the aquifer overdraft issue. Water conservation measures developed by BWD have significantly reduced the rate of domestic water use.

Golf courses have generally acknowledged the need for water conservation but have been hampered by changes in ownership and financial difficulties. While Rams Hill has been able to purchase water credits from agriculture to expand their golf courses, other golf courses are struggling financially. None has taken steps to significantly reduce water use through targeted design and other methods such as those being used in Phoenix and other desert cities. This would require capital investments that may be beyond their capability. The need to obtain water credits through fallowing agricultural land would add to their dilemma.

Agriculture has been at the heart of Borrego's evolution from an open desert to what it is today. Other than native Americans, explorers and miners, the people that populated the Borrego Valley were farmers. The people that invested in the major residential, commercial and recreational infrastructure of Borrego Springs came here originally to farm. Their families have been, and continue to be, some of Borrego's largest donors.

While the original major farming companies turned to development, the availability of unlimited free groundwater attracted the farming operations we see today. The USGS modeling studies conducted in the late 1970's as part of the Rams Hill permitting process assumed that water use for farming would be negligible in future years, leaving the rest of the newly defined aquifer to development interests. This conclusion probably resulted from the fact that the developers of Rams Hill were the farming companies that had recently discontinued intensive water use for grape vineyards and had influence on the study assumptions. In reality, citrus and tree farms were coming into full swing at the time. The concept that there was unlimited water in the aquifer came into question when John Peterson, San Diego County Hydrogeologist, found through his well level monitoring program that the aquifer was in a state of rapid depletion.

Because of the political influence of the developers and agricultural interests, both BWD and the County chose to deny the existence of the overdraft problem. This prompted community members with technical backgrounds to take the actions which led to the attempt to create a water management plan in the mid to late 1990's. While these efforts failed, the USGS aquifer model developed for the Rams Hill project was found to be basically sound and provided useful information for the modeling upgrades performed by graduate students from San Diego State University and subsequently by USGS and Dudek.

After several years of denial, agriculture was faced with published information that they were using about 70% of the aquifer extraction and that the aquifer was in severe overdraft. Instead of being considered an asset, agriculture began to look like a villain.

2

The owners of the major citrus and tree farms include both long-term family operations with close ties to the Borrego Springs community and large corporations whose interest would be primarily profit. Some of the operations have made substantial efforts to achieve efficient water use and an in-depth understanding of aquifer water quality in their area of extraction. The advent of SGMA and the sustainable yield mandate will result in a quantum change in agriculture as it now exists. How to incorporate the impact of that eventuality is undoubtedly the GSP's biggest challenge.

THE COUNTY'S ROLE

For many years the Borrego Springs community has enjoyed a high level of support from the County Commissioners, especially exemplified by Bill Horn in our new library and park complex and numerous other benefits he has bestowed. Jim Desmond has indicated that he will continue that precedent. The water issue, historically speaking, has not been treated so well. That has now changed.

Because BWD controls only a small part of the overall water use in the valley, it will be up to the County, its contractors and DWR to manage the overall GSP implementation effort which includes all three categories of water users. This is a complicated task involving technical, economic and political issues as well as policing and communications. I hope that you receive all the support you need to meet the challenge. Borrego's future depends on it.

COMMENTS

My comments are offered in a generalized manner because, other than being a reviewer of the recent USGS modeling program, I have not had a direct involvement with BWD in the meetings and work leading to the preparation of the draft GSP document.

Overview

I look at the draft GSP from the point of view of a project manager who has spent years dealing with large start-to-finish water-related projects with the attendant planning, permitting and project implementation elements. I am impressed by the scope and presentation of what you, along with your agency and contractor participants, have accomplished. I imagine that you are "breaking ground" in responding to SGMA's requirements and that there are few, if any, existing examples to follow.

One thing I feel is particularly important is the incorporation of tasks for adjusting the initial GSP assumptions. At the starting point there will be numerous uncertainties that will be clarified as new data and experiences are acquired. While there will be issues raised in the draft GSP responses, I feel that the basic road map you have created is a good working document for reaching the goals of compliance.

3

Data Acquisition and Aquifer Modeling
The selected sustainable yield estimate of 5,700 AF/Y is based on the best available information and a logical analysis of contributing sources developed in the USGS aquifer modeling program. Dudek's update of the modeling results shows some differences but confirms that the sustainable yield number is reasonable under present circumstances. The number, however, has an uncertainty factor due to the nature of estimating the selected stream inflows and the absence of metered data to confirm outflows.

The draft GSP includes creating a water balance of inflows and outflows based on increased flow metering, stream gauges and well level monitoring to calibrate the model and refine the sustainable yield factor. This task is particularly important because the water balance can encompass the assumptions for irrigation return flows, septic system return flows, evapotranspiration, etc. that are, in some cases, debatable. This represents a significant improvement of aquifer characterization, but one that is dependent on the cooperation of all involved water user groups to provide timely and credible data.

Past experiences have shown that agriculture when represented as a collective group has been very resistive to agency monitoring of flows or chemistry. Their position has been that any data released by the owners should take place out of the public domain and under their complete control. This resistance may have changed during the cooperative sessions conducted before and during preparation of the draft GPS, however I feel we need to take extra steps to ensure that data accuracy and availability do not become an impediment to accurate annual updates of aquifer status.

Considering history, I feel that the flow monitoring data should be openly submitted to the County on a monthly basis and that the County check the meters on a quarterly basis, carefully confirming that the data being collected by the owners is credible. Monthly tracking by the County would identify any apparent discrepancy in the instrumentation or in the frequency of data taking. Any problems could then be addressed quickly to ensure the viability of the data stream. Quarterly checking and calibration of the equipment by the County would ensure the accuracy of the annual results. The frequency of these tasks could be reduced over time as indicated by experience.

If well level measurements and water quality sampling are carried out by agency staff or their contractors, and access is not restricted, data management for these tasks shouldn't be a problem. If not, special care should be taken as suggested for flow monitoring.

Water Use Allocation
The compliance allocations for domestic, recreational and agricultural water use shown in the draft GSP are controversial. As expressed in the Ratepayers community meetings, people can't understand why domestic use should be penalized at the same rate as agriculture when domestic water use has been reduced through BWD conservation measures and agriculture's use has not. They feel that BWD may have capitulated to agriculture in fear of potential

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litigation, significantly raising future domestic water costs as required to purchase water credits from agriculture. They also feel that the community of Borrego Springs, along with the State Park are essential entities whose future viability must be guaranteed.

Lacking direct knowledge of how the water allocation decisions were made, or what negotiations may be ongoing, it seems to me that the issue is important and definitely needs to be clarified. If the reference period for domestic and agricultural water use does not truly reflect domestic water reduction, the water allocation should be reconsidered. Or, it seems to me that if the final domestic water allocation were set at the present usage rate, or a usage rate that is achievable through reasonable continuing conservation measures with a small contingency for future growth, that community viability would be protected without the need to buy water credits from agriculture. It is true that the increment of water allocation required to do this is nearly insignificant compared with agriculture's use.

20 Year Compliance Period

Another issue that has been raised is the need to reduce the 20 year period of the compliance schedule to retain as much aquifer storage as possible, thus minimizing the impacts of declining water table on water cost and environmental damage. The 20 year schedule may have been deemed necessary to account for the complications that large farming operations in California may face in adjusting to compliance, especially considering the importance of these operations to California's economy. There is a clear incentive, however, to reduce Borrego's time table.

While there are a lot of uncertainty factors involved in minimizing the schedule, it appears to me that the draft GPS addresses a majority of the individual issues. From a project management standpoint it might make sense to add a line item task that consolidates the issues with a stated objective of achieving the shortest possible compliance schedule. Thus, the goal could be tracked, reported and kept in focus.

Burden of GSP Program Costs on BWD Ratepayers

The draft GSP shows a concerted effort to estimate the cost of both the overall compliance program and the potential impacts on the cost of domestic water. Again, the number of variables creates a high degree of uncertainty for the accuracy of the estimates. This is especially true considering the possibility of future bond issues, changes in anticipated state or federal funding, as well as the difficulty of anticipating what the cost of downsizing agriculture will actually be.

My particular concern is the direct burden BWD will have to bear as a result of the GSP implementation process. The ratepayers of Borrego Valley represent a small group facing a large number of potential new expenses. It is my hope that the GSP team will be diligent in keeping the near-term and long-term expenses for BWD as low as possible.

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CONCLUSION

I realize that this letter is long on history and short on the condensed comments that would normally be associated in a draft review of this kind. Being in my 80's now might give me some excuse for the tendency to look back and to add an educational tone to my response. I hope, however, that looking back will be of some help in moving forward with a successful water management program for the Borrego Valley. My best wishes toward that end. There is no need to reply to this letter.

Sincerely,

Jack K. Laughlin, P.E., ret.
Cc: Kathy Dice, President, BWD Board of Directors

6

Letter I20

Commenter: Jack K. Laughlin
Date: May 3, 2019

I20-1 The Groundwater Sustainability Agency (GSA) wants to acknowledge the comments that provide a breadth of historical perspective and insights from decades of participating and an ongoing interest in Borrego Springs water supply issues. Per commenter's request, no responses to comments are being made.

The comment letter does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary

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Comment Letter I21

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

April 24, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennet:

In the final GSP for the Borrego Basin, the human consumption and use of water must have priority over agricultural and recreational claims. There cannot be any equal proportional reduction by all users. Such an argument for that position from anyone ignores the fact that for 70 years agriculture has been profiting from and over-drafting the basin and consuming 70% of the aquifer use on an annual basis. Even in recent years when Borrego Springs ratepayers have reduced their usage from 2,400 afy to 1,700 afy, agriculture has continued its same excessive consumption rate, if not more. The public record is clear. Twenty-five (25) agricultural corporate interests farming 4,000 acres do not deserve equal treatment and a financial reward for decades of aquifer abuse. We believe water case law in California supports this position of human consumption priority. I21-1

Borrego Springs must survive as a retirement and service-related community of 3,000 to 10,000 (including snowbirds) residents. Perhaps even more importantly, the town provides a destination and hub for thousands of annual world visitors, hikers, and campers to the largest desert state park in the nation, Anza-Borrego Desert State Park. Borrego Springs has been designated one of the few international dark sky communities easily accessible to the public. That basic survival requires a minimum of 1700 annual feet of water per year to be protected under the GSP for the use of ratepayers and visitors. Without that minimum amount of water, property values will plummet, and Borrego Springs could die. Such a demise would also threaten the communities of Ocotillo Wells, Ocotillo Wells Off Road State Vehicular Recreation Area, Ranchita, and Warner I21-2

Springs which all depend on the convenient goods and services found year-round in Borrego Springs.

I21-2 Cont.

Implementation of the GSP cannot wait 20 years. The threat of decreased water quality as the aquifer declines mandates a much sooner completion timetable.

I21-3

If the GSP fails to provide the 1700 afy of water Borrego Springs ratepayers and visitors need annually just to preserve the status quo, the State of California and the County of San Diego must provide the Borrego Water District with the necessary funding to buy out farming interests. Neither the community nor the water district have such assets.

I21-4

Sincerely,

Richard W. Walker and Artemisa Walker
Borrego Springs residents for 16 years
373 Ocotillo Circle
92004-2053
Ph #760-767-4928
E-mail: casadelacholla@sbcglobal.net

Letter I21

Commenter: Richard and Artemisa Walker
Date: April 24, 2019

I21-1 The Groundwater Sustainability Agency (GSA) acknowledges your opposition to proportional reductions by all users and human consumption and use of water must have priority over agricultural and recreational water uses. While the Groundwater Sustainability Plan (GSP) does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I21-2 The GSA acknowledges your opposition to any groundwater use reductions for the municipal sector. While the GSP does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

The GSP further includes Project and Management Action No. 1 – Water Trading Program. The GSP states that the Water Trading Program would allow groundwater users (including the Borrego Water District) to purchase needed groundwater allocation from others to maintain economic activities in the Subbasin. The GSP indicates preparation of a Water Trading and Policy document is intended to begin upon adoption of the GSP. The timetable for implementation of the Water Trading Program is dependent upon whether implementation of the program requires CEQA review.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I21-3 The GSA acknowledges your request for the implementation of the GSP to be less than 20 years. While the GSP does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I21-4 The GSA acknowledges the request for the State of California or County of San Diego to provide the Borrego Water District funding to buy water rights if Borrego Water District is subjected to groundwater use reductions below 1,700 acre-feet per year.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment Letter I22

County of San Diego Planning & Development Services May 2, 2019

C/O Jim Bennett

I am a resident of Borrego Springs. I have read the proposed GSP and have the following personal comments:

The proposed GSP demonstrates a flawed and incomplete understanding of how a community such as Borrego Springs survives and prospers. As it is proposed, the GSP simply uses the amount of water pumped as the basis upon which all data is gathered and all plans are made. This is an incomplete view of the Borrego Springs environment and shows a lack of fundamental understanding of what sustains and drives our community. **It is the economic benefit, that the USE of the water brings to the community, that should be the key consideration.** This economic benefit should be taken into account when deciding how to mandate sector reductions. I22-1

In the Borrego Valley, the Municipal, Recreation and "Other" Sectors bring considerable economic benefit to the Borrego community when measured on a per acre foot of water used basis. However, the Agriculture Industry Sector brings relatively little economic benefit to the community when considered on an acre foot of water used basis. I22-2

A new plan should be considered which incorporates the dollar benefit on a per acre foot of water used basis. The new Plan should assess the acre feet used by each pumping sector and mandate reductions in water use until the dollar benefit per acre foot of water used, of each sector, is equal. The Municipal Sector (BWD) is made up of domestic and commercial users, where each brings value to the community by their domestic income stream or commercial business income. The Recreation Sector brings value to the community by providing a draw for golfers and sportsman thus adding that local spending to the community. The "Other" category is made up of both recreation and domestic users, each bringing their value to the community as mentioned above. The Agriculture Sector does provide some jobs that do add income streams to the community. However, when these income streams of this sector are considered on an acre foot of water used basis, the value to the community is small.

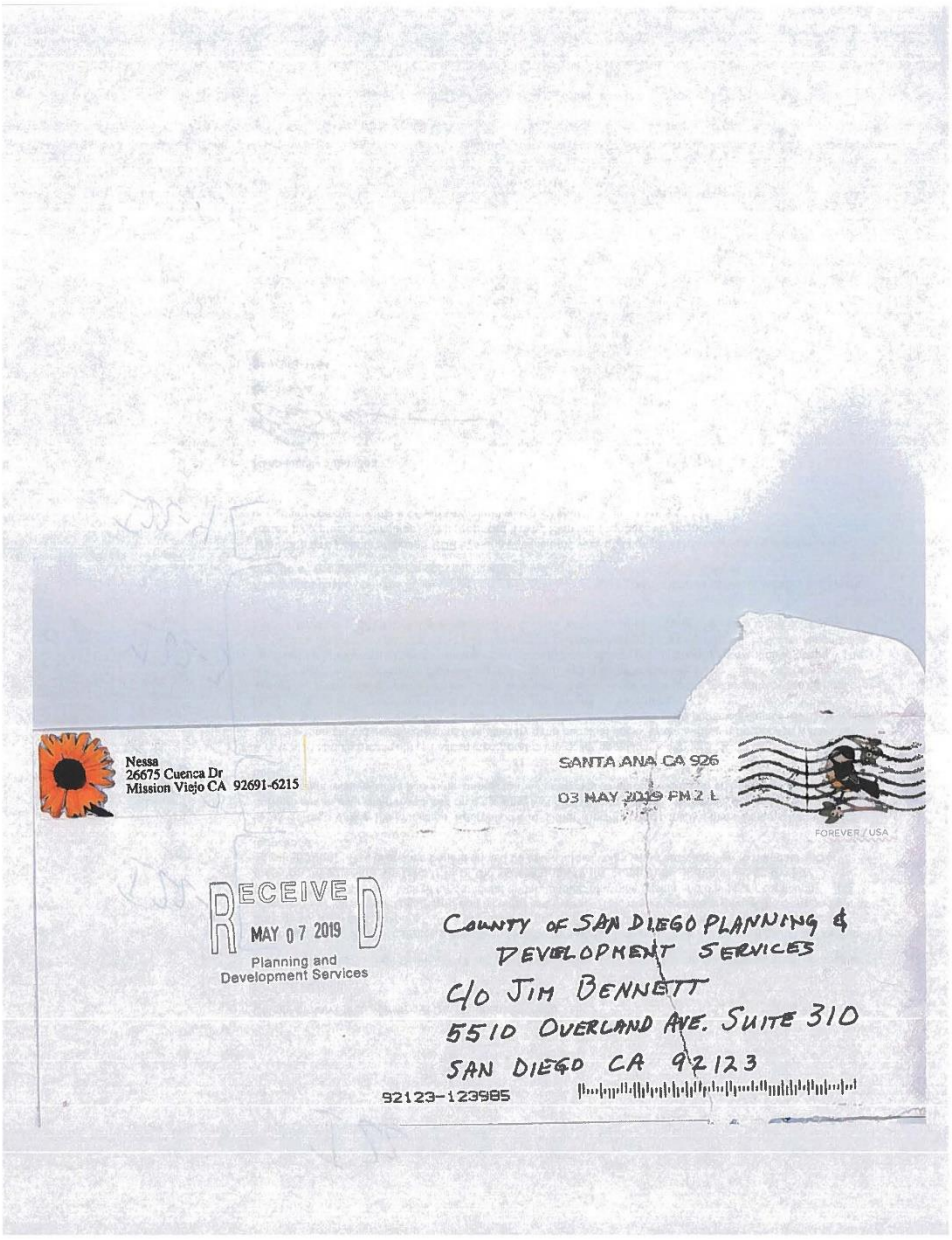
A new plan based upon the dollar benefit on a per acre foot of water used would be fair to all sectors, and would provide an economically stable community while bringing the aquifer back into equilibrium. I22-3

The State and County proposed GSP is a one dimensional view of a complex economic environment which is limited by a precious resource. The proposed flawed Plan will economically devastate Borrego Springs and turn our quaint community into a desert wasteland within 20 years. I22-4

Respectfully submitted

Eric Nessa

949-348-1764



Nessa
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MAY 07 2019
Planning and
Development Services

COUNTY OF SAN DIEGO PLANNING &
DEVELOPMENT SERVICES
C/O JIM BENNETT
5510 OVERLAND AVE. SUITE 310
SAN DIEGO CA 92123

92123-123985

Letter I22

Commenter: Eric Nessa
Date: May 2, 2019

I22-1 The Groundwater Sustainability Agency (GSA) acknowledges your disagreement with the approach to the Groundwater Sustainability Plan (GSP) and your opinion that the focus of the GSP should be the economic benefit that the use of water brings to the community. In response, the GSP was developed in compliance with the Sustainable Groundwater Management Act (SGMA) of 2014 (California Water Code Section 10720-10737.8, et al.) and the Department of Water Resources (DWR) GSP Regulations (California Code of Regulations, Title 23, Section 350 et seq.). Appendix A of the GSP includes the Preparation Checklist for GSP Submittal, which identifies where in the GSP each of the statutory requirements of SGMA are addressed.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I22-2 The GSA acknowledges your opinion that the municipal, recreation, and other water sectors bring considerable economic benefit to Borrego Springs versus the agricultural industry brings little economic benefit on a per acre-foot basis.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I22-3 The comment suggests a new plan be considered which incorporates the dollar benefit on a per acre foot of water used basis. In response, please see response to Comment I22-1.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I22-4 The comment provides a conclusory statement that the Plan is flawed and will economically devastate Borrego Springs and turn the community into a desert wasteland within 20 years.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I23

From: Marsha Boring <wmb0911@gmail.com>
Sent: Monday, May 13, 2019 2:37 PM
To: LUEG, GroundWater, PDS
Subject: Draft GSP comments

I am a year-round resident of Borrego Springs and also a member of the Borrego Water Coalition. I have attended many meetings, including the presentation of the GSP to the group. I've also just reviewed the GSP and overall find it to be comprehensive and well-planned. I23-1

I do have some serious issues with the water pumping reduction and the BPAs. Project and Management Action #3 recommends an across the board reduction of 74%, which would maintain the current distribution percentages. The residential water use has already been cut from a reported historic high of 3500 acre feet/year to the current level of 1700 acre feet/year, a cut of 50%. Our community has done this through the conscious effort of removing fountains and swimming pools, grass and water intensive landscaping, converting to low-flow toilets, and overall conservation efforts. I23-2

The recreational and agricultural users have been slow or completely unwilling to make similar reductions, continuing to deplete our aquifer. Clearly the major contributor to the aquifer overdraft has been and continues to be agriculture. Although agriculture has been an important part of our community, it is unreasonable to assume that farming should continue to use 70% of the allocated water. I23-3

There is no reason to assume or plan for the historic water use percentages to remain at current levels. I believe that the municipal water allotment should not be lowered beyond the current level. That level of 1700 acre feet/yr would still be only 30% of the total 5700 acre feet/yr, which I believe is entirely reasonable. I23-4

Sincerely,
Marsha Boring
PO Box 2054
575 Pointing Rock Drive
Borrego Springs, CA 92004

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Letter I23

Commenter: Marsha Boring
Date: May 13, 2019

I23-1 The Groundwater Sustainability Agency (GSA) acknowledges this introductory comment. No response is necessary.

I23-2 The GSA acknowledges your concerns to groundwater use reductions/baseline pumping allocations (BPAs) and your comment that residential water use has already been cut by 50%. The Groundwater Sustainability Plan (GSP) specifies that 74% reductions are needed but it does not set specific groundwater use reductions by sector. As indicated in the GSP under Project and Management Action No. 3 – Pumping Reduction Program, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I23-3 The GSA acknowledges the comment that recreational and agricultural users have been slow or completely unwilling to make similar reductions as residential water use and it is unreasonable to assume farming should continue to use 70% of the allocated water.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I23-4 The GSA acknowledges your opposition to any groundwater use reductions for the municipal sector. While the GSP does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

The GSP further includes Project and Management Action No. 1 – Water Trading Program. The GSP states that the Water Trading Program would allow groundwater users (including the Borrego Water District) to purchase needed groundwater allocation from others to maintain economic activities in the Subbasin. The GSP indicates preparation of a Water Trading and Policy document is intended to begin upon adoption of the GSP. The timetable for implementation of the Water Trading Program is dependent upon whether implementation of the program requires CEQA review.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment Letter I24

May 15, 2018

Jim Bennett, County Groundwater Geologist
Borrego Valley Groundwater Sustainability Agency
5510 Overland Avenue, Suite 310
San Diego Ca. 92123

Subject: Response to Comments GSP for Borrego Valley March 2019.

Dear Mr. Bennett

It is encouraging to see the progress that has been made regarding the hydrological parameters of the Borrego Valley aquifer. This basin has been monitored for almost 40 years and it has been long established as being in critical overdraft. The work completed for the GSP is positive steps to alleviate this adverse condition. I24-1

In my review of the draft GSP I would like to offer the following comments in the record regarding the document:

1) On page ES-2 it is stated that "*In the southeastern part of the Subbasin, where less groundwater has been pumped, groundwater levels have remained relatively constant during the same time period.*" This does not adequately cover the hydrographic trends within this area of the Valley. As an example the Well MW-5, which is located east north east of the Borrego Sink, has fallen 8.94 feet in the last 10 year (49.22 feet below ground surface in October 2008 to a current level of 58.38 ' in November 2018). This well is located in the discharge area of the basin and likely reflects groundwater level declines in the Mesquite Bosque which in in critical decline. Also this statement "relatively constant" does not document significant groundwater level declines (greater than 3 feet per year) in the southeastern portions of the basin. Specifically Monitoring well MW-3 has shown a substantial decline (57.51 feet below ground surface November 2015 to 70.65 feet in March 2019). This is also seen in Figure 2.2-13E where well number 011S006E23J002S has almost a 20 foot decline in 3 years. The report must reflect accurate trends in the basin and should be modified to represent current groundwater trends in this area of the basin. I24-2

2) It has been well known and long established that Borrego Valley drains (flows) toward the Borrego Sink and down Borrego Sink Wash toward the east. Various technical studies including those from the USGS and DWR point toward the basins discharge point being through the Borrego Sink wash. Figures 2.2-13 C and 2.2-13 D accurately reflects this flow path. However Figures 2.2-13 A (Spring 2018) and 2.2-13 B (Fall 2018) represents a different flow path with the discharge point (or basin low) appearing to be near the Borrego Valley Airport. Also on page 2-51 the statement is made that groundwater flow is "*toward the center of the valley near Palm Canyon Drive about 2 miles north of Borrego Sink*". This "reversed northern flow direction from the sink" would be significant modification to historical flow path within the basin. This condition would be either produced by 1) a significant overdraft occurring in the area of the Borrego Springs Airport produced by extensive production (which we know is not the case), or 2) the potential incorrect interpretation of the data due to extreme lack of adequate groundwater level data from monitoring wells in this area of the basin. As given in response #5 below there is a significant data gap on a north\south line (almost 6 miles long) from the north of Henderson Canyon Road to the County Road Station. Along this path only one data point exists (at the County Airport). It is very hard to accurately produce a groundwater level flow contour map with little to no data. If the contour lines are estimated or guessed they should be dashed and/or left out entirely. These two figures imply something that is very important (reserved flow direction north toward the airport from the sink) and it is based on extremely limited information. In science we should not arrive at a conclusion unless there is significant data to support that conclusion.

I24-3

3) Just as a correction Figure 2.2-15 has our town center (Christmas Circle) listed as an active hazmat cleanup site as the Carrizo Impact Site. The text on page 2-61 provides additional detail that the Carrizo Impact bombing range covers ~400 square miles. It is suggested that some detail be added to the Figure to clarify this point.

I24-4

4) Figure 2.2-21 B documents water use within the basin between 1945 and 2017. The figure identifies a significant decrease in annual total water use from ~18,500/yr. to ~14,500/yr. This is a significant trend of approximately 20%. If this is true why isn't the decline in water extraction reflected in Figure 2.2-22 B which represents the cumulative change in storage by year? This figure (2.2-22 B) implies a constant rate of consumption. The only way

I24-5

both figures would be correct is if a significant decrease in the amount of groundwater recharge had occurred and this is not considered to be the case. There seems to be a disconnect between Figure 2.2-21B which shows a significant decrease in extraction and Figure 2.2-22B which represents a consistent change (depletion) in storage over the same period. I24-5 Cont.

5) Monitoring well distribution is discussed on page 2-54, where it is concluded that lateral distribution of monitoring wells "appears adequate to meet SGMA requirements within all of the management areas". However within the eastern central portions of the basin (south of Henderson Canyon road, east of Borrego Valley road and north of La Casa Del Zorro) there are only 4 monitoring wells. This area covers almost 25 square miles making an overall density of 1 monitoring well per 6 square miles. Also three of the four monitoring wells are clustered along Palm Canyon Drive near the County airport. Given that almost 90% of 25 square miles have no monitoring wells it is hard to understand how it has been deemed that the distribution of wells is adequate. The gross number of wells likely meets the minimum requirements of SGMA but that is not the important issue. The problem is that the **distribution and location** of wells within and central eastern portion of the basin is clearly not adequate. This is also shown and represented in Figure 2.2-12. It is suggested that this region be identified as a data gap and that efforts be completed in the future to add additional monitoring wells within this area of the basin. I24-6

6) I totally support the conclusion regarding identified data gaps within the groundwater quality network (pages 2-63 and 64). Monitoring groundwater quality trends is vital to the long term survival of the community and the basin. As identified in item #5 above the central eastern portion of the basin is not adequate covered by monitoring wells to estimate trends within the groundwater system. This includes both for groundwater levels and for groundwater quality. It is vitally important to develop a basic understanding of baseline groundwater characteristics throughout the basin. The central eastern portion of the basin (which is located in both the Central and Southern Management Areas) is under represented for monitoring wells. The GSP identifies this as a data gap for groundwater quality but ignores the data gap for groundwater levels. I24-7

7) On page 2-70 it refers to the Horse Camp well within the section addressing the GDE Unit 2 Palm Canyon area. The Horse Camp Well is in the Unit 1 Coyote Creek area. I24-8

8) Figure 3.3-1 "Key Indicator Wells" shows the significant gap in monitoring wells in the eastern central portion of the basin. Only one well (the Airport Well) is located in 20 square miles. This is clearly not adequate to represent the basin. Also Section 3.5.1 describes the monitoring network. Specifically Section 3.5.1.1 states that the ***density*** of wells meet the CASGEM requirements. As previously stated the issue with the draft GSP is not the number of wells rather the adequate ***distribution*** of monitoring wells. It goes without saying that you can have adequate **number** of wells (say 50 wells) in an area 30 square miles, but if all of those wells are located within a small specific area of 10 square miles the average density is adequate but the well distribution is inadequate. Throughout the GSP reference is made to the adequate number of wells. However what is ignored is if the distribution of wells is adequate. This issue should be identified as a clear data gap within the GSP. Specifically section 3.5.4.2 does not identify this area of the basin as an area that requires additional data points.

I24-9

9) Appendix D2 by ENSI appears to be a high quality comprehensive report. It is the best water quality summary that I have seen for the basin. Overall it is a great job! However comments include: 1) No title page is offered for the ENSI team. No license numbers or contact information has been included with the report (as required by our State licensing Board). The only contact information I could find is in the title box of the figures. 2) Figure 5 shows a graphic representation for groundwater quality in the basin. However the locations of the data sites appears to be incorrect. The data is spread out throughout the basin, as an example many sites are shown in the northeastern area of the basin. However Figure 4 shows no monitoring wells in the area. There appears to be a disconnect between the wells shown in Figure 4 and the data presented in Figure 5. And 3) Appendix A of this report is from DWR? It is quite confusing on the reprinting of the various data. Is this one report or two? Many of the figures within the original report are also in the Appendix. Is this two reports using the same data? I cannot figure this out.

I24-10

In summary it appears that significant technical work has been completed to assist in the development of the Borrego Valley GSP. However it is my professional opinion that a number of issues remain outstanding. These include:

I24-11

1) Characterization that the southeastern portion of the basin have had stable groundwater levels.
2) Groundwater flow maps showing that the basin discharge has moved north to near the Borrego Springs Airport and away from the Borrego Sink.
3) Figure 2.2-21B represents that annual water use has declined by ~20% but Figure 2.2-22 B indicates a constant rate of groundwater overdraft.
4) Monitoring well distribution is not identified as a data gap in the report, although the central and southeastern portions of the basin are severely underrepresented with wells. The document states in a number of areas of the report that the number of wells meet the requirements of SGMA. That is NOT the issue. The issue is if the distribution of wells allows for an adequate technical understanding of the hydrological parameters of the basin. This is clearly not the case within the central eastern portions of the basin.

I24-11 Cont.

Thank you for the opportunity to offer these comments to the draft document. Please let me know if I can provide any assistance with this issues.

Sincerely

John Peterson
California Certified Hydrogeologist #90
P.O. Box 512
Borrego Springs Cal. 92004
petersonenv@hotmail.com
858-220-0877

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Letter I24

Commenter: John Peterson, California Certified Hydrogeologist (No. 90)
Date: May 15, 2019

I24-1 The Groundwater Sustainability Agency (GSA) welcomes your comments on the Draft Groundwater Sustainability Plan (GSP) and acknowledgment of the positive steps the Draft GSP makes to achieving sustainability.

I24-2 The executive summary has been revised to clarify the location of wells where groundwater levels have remained stable at the edge of the Borrego Springs Subbasin compared to other areas of the South Management Area (SMA) where groundwater levels have been documented to be declining.

I24-3 The GSA notes your comment that it has been well known and long established that Borrego Valley drains (flows) toward the Borrego Sink and down Borrego Sink Wash toward the east. The groundwater water level contour maps produced in the Draft GSP are for the Spring of 2018, Fall 2018, 2010 and 1945 (Figure 2.2-13A-D). As pumping ramped up in the basin groundwater that flowed and discharged to the Borrego Sink under the pre-pumping conditions has been captured as evidenced by dry springs and wells, and desiccation of the honey mesquite bosque. Two pumping-related depressions are exhibited in the data collected, one centered on the agricultural areas north of Henderson Canyon Road, and possibly another centered around a cluster of wells north of the Ram's Hill Country Club (Figure 2.2-13A).

Best available data for developing groundwater level contours maps indicate that groundwater flow that historically moved to the Borrego Sink is being captured by pumping. That is the cone of pumping depression in the North Management Area (NMA) is broadening from the pumping center outward to the Borrego Springs Airport. As pumping currently greatly exceeds inflows to the Subbasin, it is expected that pumping centers will dramatically disrupt the natural groundwater flow gradients including intercepting flow that once traveled to the Borrego Sink and down Borrego Wash. While additional monitoring wells could improve development of groundwater level contours in the area of the County Airport, the lack of additional monitoring wells is not identified as a substantial data gap for GSP implementation at this time. That said, the GSA is reviewing the potential for funding additional monitoring wells throughout the Borrego Springs Subbasin.

I24 -4 The GSA notes your comment that Figure 2.2-15 should be clarified to indicate that the Carrizo Impact bombing range covers about 400 square miles. This is clarified in the GSP text on pg. 2-62.

I24-5 Inflows and outflows reported in the charts come from the Borrego Valley Hydrologic Model (BVHM), and the outputs from the model are included in the model update report (Appendix D1 of the GSP). Figure 2.2-22B represents the total cumulative change in storage, so each point on the graph represents an addition of the storage lost in that year to the total storage lost throughout the model period. Inflows exceed outflows for every year for the past 20 years, so the cumulative change in storage continues on a downward trend.

Additionally, average pumping as reported by the model does not change much during the last 20 years of the model run, with average pumping from the last 20 years of the model run of 16,466 acre-feet per year (AFY), average pumping for the last 10 years of the model run of 16,855 AFY, and average pumping for the last 5 years of the model run of 15,567 AFY. There are slight changes in the slope of the line in water years 2004, 2005, and 2012, when inflows to the basin in the model were higher than other years. The result of this is that the average annual change in storage for the past 20 years is a loss of 11,955 AFY, for the past 10 years is a loss of 13,098 AFY, and for the last 5 years is a loss of 10,604 AFY. Figure 2.2-22A depicts the groundwater inflows and outflows by year for the period 1945 to 2016. The period from 2010 to 2016 occurs during a dry period with low recharge compared to wetter periods. This results in continued loss of groundwater in storage at about the same rate even though groundwater extraction is reduced over this period.

I24-6 Data gap associated with the area north of the Borrego Sink is identified on pg. 2-54, and the GSP has been amended to clarify.

I24-7 As indicated in response to Comment I24-6, the data gap associated with the area north of the Borrego Sink is identified on pg. 2-54, and the GSP has been amended to clarify.

I24-8 GDE Unit 2 Palm Canyon area should reference Anza-Borrego Desert State Park (ABDSP) Well 3 and not the Horse Camp Well. The Draft GSP has been revised with the correct well.

I24-9 As indicated in response to Comment I24-6, the data gap associated with the area north of the Borrego Sink is identified on pg. 2-54, and the GSP has been amended to clarify.

I24-10 The GSA acknowledges your comments on the ENSI report. Figure 5 was produced by Tim Ross of the California Department of Water Resources (DWR). The DWR has data from private wells that are not available to the GSA because of confidentiality agreements between private pumpers and the DWR. As such, the exact location of these private wells is unknown and are therefore not presented on Figure 4. The ENSI Appendix D2 is one report not two. Appendix A of the ENSI report provides the seminal work from DWR referenced in the ENSI Report.

I24-11 The GSA acknowledges your professional opinion that several issues remain outstanding. The commenter provides conclusory remarks, and summarizes the comments provided in the letter. These issues have been responded to above under responses to Comment I24-1 through Comment I24-10.

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Comment Letter I25

Groundwater Management at Borrego Springs

There are two additional sources of underground water flow that should be considered to help solve the issues with the decreasing underground water basin under Borrego Springs.

1. Clark Well, close to Clark Dry Lake between Coyote Mountain and the Santa Rosa Mountains, is one source. However, there might be concern over water quality. Also, going further up Rockhouse Canyon for cleaner water is limited by the Santa Rosa and San Jacinto Mountains National Monument. I25-1

2. San Felipe Wash is a much larger source of water which follows highway 78 to Texas Dip on the Borrego Springs Road and ends less than a half mile from highway 78. It also has drinkable water upstream at Yaqui Well and Tamarisk Grove campgrounds. Additional underground water flow is added from the south side of highway 78 from Pinyon Mountains. All of these sources follow the Felipe Wash to Ocotillo Wells where additional underground flow is added from Fish Creek Mountains to the South. The total groundwater flows south of the Salton Sea toward Brawley and the Mexican border where farming is supported from the Colorado River. I25-2

2.1. It seems like the Narrows Earth Trail point along highway 78 is the optimum spot to tap into this flow for Borrego Springs and will require hydrologists checking into the quality and quantity of water at this point. If tests are okay, pipe can go around the east end of Yaqui Ridge and run downhill to Rams Hill steel tanks with enough water for Rams Hill and Casa del Zorro. I25-3

I recommend that 2.1 be tested A.S.A.P

Robert Kleist
Retired Stanford MSEE

Solar/Electric Management at Borrego Springs

Solar Energy Management (Mgt.) can collaborate with Water Mgt. for storing both water and electric energy for local distribution that needs to be optimized for geographical locations.

1. An example of solar energy generation has been completed at the new library. Here the covering the of the shaded parking has solar panels much like one would find on a rooftop. This type of shaded parking could be extended to schools, businesses, and hotels/motels.

2. Solar Energy Mgt. could collaborate with Groundwater Mgt. to pump water from additional underground water flows to elevations that would store both water and electric energy.

3. Underground utilities for both water and electrical energy have regional populated areas. Connections between these regions should be steel poles with safe conduction in severe weather.

4. The regional availability of water and electric energy at the lowest cost and safety varies geographically. Solar energy is optimal for Borrego Springs with local management and collaboration with Hydrologists.

Robert A. Kleist 5/8/2019

I25-4

I25-5

I25-6

I25-7

Letter I25

Commenter: Robert Kleist, California Certified Hydrogeologist (No. 90)
Date: May 8, 2019

I25-1 The Groundwater Sustainability Agency (GSA) acknowledges your comment that there are two additional sources of water flow that should be considered, including (1) Clark Well and (2) San Felipe Wash. Both of these sources of water supply have been studied extensively by the Borrego Water District who evaluated the feasibility of importing groundwater from the Clark Dry Lake, Ocotillo Wells Subbasin and Allegretti Farms (Ocotillo-Clark Valley Groundwater Basin) (Burzell 2006). The Borrego Water District (BWD) evaluation found these projects to be economically infeasible.

I25-2 As described in response to Comment I25-1, the Borrego Water District evaluated the potential for water supply from the Ocotillo Wells Subbasin near San Felipe Wash and found the project to be economically infeasible.

I25-3 While the Narrows Earth Trail point along Highway 78 has not been studied extensively, the cost for a pipeline to District wells near the intersection of Borrego Springs Road and Highway 78 (closer than the Narrows Earth Trail) was determined not to be economically feasible. Additionally, the Narrows Earth trail is located in the Anza-Borrego Desert State Park (ABDSP) who would likely not approve drilling and construction of wells within the park boundary.

I25-4 The GSA notes your comment that solar energy management can collaborate with water management for storing water and electric energy and that solar energy can be extended to additional facilities.

I25-5 The GSA notes your comment that solar and groundwater management could collaborate to pump water from underground to elevations that would store both water and potential electric energy.

I25-6 The GSA notes your comment that utility connection should be steel poles between regionally populated areas.

I25-7 The GSA notes your comment that solar energy is optimal for Borrego Springs.

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Comment Letter I26

County of San Diego
Planning & Development Services
C/O: Mr. Jim Bennett (by email to: PDS.LUEGGroundWater@sdcounty.ca.gov)
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 21, 2019

CC (by email)
Gary Haldeman, BWD Ratepayer Representative
Borrego Water District

RE: Draft Groundwater Sustainability Plan for Borrego Valley Groundwater Subbasin

Dear Mr. Bennett,

I am a Borrego Springs resident and homeowner and I am writing to comment on the draft Groundwater Sustainability Plan (GSP) for Borrego Springs.

Comment 1

Section 4.1.1, page 4-21 states "The BPA [Baseline Pumping Allocation] is determined to be the maximum annual groundwater extraction during the baseline pumping period… The BPA methodology developed for the subbasin is detailed in Appendix F." It must be noted that the methodology outlined in Appendix F is not a measure of ***water extraction*** over the survey period. It is, rather, a method to estimate the ***irrigation needs*** of agricultural and recreational pumpers in the subbasin.

This is not to say that the methodology in Appendix F is inappropriate – it is certainly better than nothing, but it is a scientific ***wild guess*** rather than a precise measurement. Could the number be off by a factor of 20%? As much as 30% or more? This imprecision was not addressed in the GSP.

This is important because:

1. The calculated BPA for the subbasin – and basis for possible future adjustments – is based on two sets of data: one is an historical record of pumping by the Borrego Water District (BWD), a history that goes back well over 50 years. The other is the estimate of unknown accuracy generated by Mann. The BWD data set should only be subject to future "adjustment" if the data are proven to be in error. Any miscalculation of current water extraction from the subbasin must be assumed to be an error in the ***estimated value;*** any future adjustment to the BPA must only be applied to the ***estimated values***.

2. Table 4-2 on page 4-15 quotes Mann (the author of the methodology in Appendix F): The "potential water savings for agriculture is less than 2% of the BPA…" If the total volume of water extracted by agricultural and recreational interests can be only grossly estimated, it is unreasonable and unscientific to assign a precise value for potential water savings.

Support:

Appendix F outlines a methodology using ***evapotranspiration*** (ET) which estimates water use by an individual plant species in order to estimate the plant's water requirements over time. This number is then used to estimate water use by a field of similar plants. The methodology in Appendix F makes many assumptions about local terrain, temperature, wind conditions, growing seasons, and applies those assumptions to large tracts of land under irrigation in the Borrego Subbasin. One of those assumptions, for example, involves ***soil moisture content*** (SMC).

I26-1

The measurement of SMC is intimately tied to the ET in calculating irrigation needs of plants. SMC is not considered in the methodology outlined in Appendix F because variations in soil properties, terrain, temperature and wind conditions would make the task impossible. The resulting methodology outlined in Appendix F ignores SMC and assumes that all soil under every crop and every section of turf irrigated by agricultural and recreational pumpers is exactly equal. And the value derived, however inexact, is a calculation of the irrigation needs of the subbasin, not a measure of the water extracted over a five year period of time.

Water use by agriculture in the region is an estimate based on numerous factors outlined on page 4-11 of the GSP. Considering all of the unknowns involved in arriving at the agricultural and recreational portion of the 15,729 AFY (Acre Feet per Year) baseline, the accuracy of this number should be questioned or, at the very least, it should be assigned a margin of error to indicate the precision of the approximation. Is the actual number 15,729 AFY +/- 20%? +/- 30%?

Considering the inexact method for deriving the agricultural extraction values, 2% would seem to be well within the range for a rounding error. However the assumption made by Mann in his 2014 analysis is that the "potential water savings for agriculture is less than 2% of the BPA…" The 2% value is illogical and unreasonable, especially when this number (Estimated Potential Water Savings) is used in the calculus to determine the BPA for all users, including BWD ratepayers, where history shows ***actual*** water extraction data for over 50 years, not based on estimates.

I26-1 Cont.

Comment 2

The BWD has recorded over 50 years of pumping data, which represents the ***"best available information"*** for water extraction in the subbasin. Chapter 4, section 4.0 of the GSP states "Under the Regulations, the Groundwater Sustainability Plan (GSP) is to include the following: 3. Projects and management actions [PMA] shall be supported by best available information and best available science." To achieve fidelity with this mandate the entire BWD water pumping record must be considered in the BPA allotment formula, not the narrow window of 2010-2015 which is used in the GSP. Considering only the BWD 2010-2015 usage levels (after significant conservation measures were already in place, reducing water use in the district by over 50%) penalizes municipal water users for their conservation efforts. The BPA for BWD ratepayers must factor in the entirety of the historical usage record.

Support: Applying the 2010-2015 survey period for all entities may seem to level the playing field for all water users in the district, but that is an unreasonable assumption.

The opening of Section 4.3 of the GSP states: "The BWD has historically implemented measures to encourage efficient water use. These include a tiered water rate structure and other incentive programs (BWD 2009). In the past, rebate programs were established for the purchase of low flow toilets, low water use washing machines, and high water use turf removal. [Note: these measures were implemented prior to the 2010-2015 BPA survey period.] The Borrego Springs Community Plan (County 2013) includes a policy requiring the continuation of …aggressive, multi-faceted water conservation programs to reduce existing agricultural, golf course, commercial and residential [water] use."

The irony of this situation is that, even with significant savings by the BWD ratepayers, the water table in our aquifer has continued to drop an alarming rate. The only plausible explanation is that non-metered pumpers have extracted the entire BWD water savings. Using the 2010-2015 dates to calculate the BWD share of BPA perversely increases agriculture and recreation's baseline by adding BWD's water savings to their total.

I26-2

Comment 3

If a 74% reduction must be achieved for all pumpers in the subbasin, the BWD should be awarded a BPA of at least 1,000 AFY. PMA #3 states in part: "Each non-de minimis groundwater user within the subbasin will be assigned an allocation based on its historical groundwater use." To achieve fidelity with PMA #3 the Baseline Pumping Allocation (BPA) for the Borrego Water District (BWD) must be based on the 50 year historical BWD average of over 4,000 AFY. Furthermore, since the BPA for BWD is based on historical fact (unlike the BPA for agricultural and recreational pumpers which is an estimate with an unknown level of accuracy) the BPA for BWD ratepayers must be fixed and not be subject to any downward adjustment in the future. If a downward adjustment in BPA would become necessary in the future it must be borne solely by those entities whose BPA is based upon an estimate.

> **Support:** The BPA is derived from five years of recorded historical data from the BWD and ***an estimate*** of water extraction by agricultural and recreational pumpers from the 2010-2015. Selecting these dates, while ignoring over 50 years of historical pumping data from the BWD places the community of Borrego Springs at an extreme disadvantage because it fails to capture the success of the community's conservation efforts over the past two decades. Our community's population is relatively unchanged in decades but our water use has decreased by well over 50% in the last 20 years. The conservation efforts resulting in those water savings were, for the most part, already in place before 2010. Where actual historical data are available, as in the case of the Borrego Water District, it must be used as specified in PMA #3.

I26-3

Comment 4

PMA #5 discusses Water Quality Optimization but only addresses naturally occurring contaminants. Contamination from outside sources must be considered in the GSP as well. If contaminants are being introduced from an outside source the parties responsible must be held accountable for any remediation that might be necessary.

I26-4

Comment 5

Tourism is the primary industry in Borrego Springs. The 600,000-acre Anza-Borrego Desert State Park which surrounds the town is the largest desert state park in the nation, and attracts hundreds of thousand of visitors every year. Among the most popular local attractions are ***groundwater dependent ecosystems*** (GDEs): palm canyons, maidenhair waterfalls, and mesquite forests. The GSP recognizes that substantial damage has already been done to area GDEs; this damage is especially evident in dead mesquite forests and severely stressed mesquite bosques. GDEs must be given greater consideration in the overall water allocation calculus and timing of reductions. Water set-aside for GDEs are meaningless if the "set-aside water" sits in a drastically reduced water table, unavailable to the ecosystems it is intended to support.

I26-5

Thank you for reviewing and considering my comments. Your efforts are greatly appreciated.

Regards,

Garold L. Edwards
312 Ocotillo Circle; Box # 1858
Borrego Springs, CA 92004
garoldedwards@gmail.com

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Letter I26

Commenter: Garold Edwards
Date: May 21, 2019

I26-1 The Groundwater Sustainability Agency (GSA) acknowledges the commenters concern regarding the lack of specificity and precision in reporting information on baseline pumping allocation. In response, the Groundwater Sustainability Plan (GSP) is explicit about how the baseline pumping allocation (BPA) was determined, including the method to estimate agricultural pumping. Title 23 California Code of Regulations (CCR) Section 354.18(b) states (emphasis added): "the water budget shall quantify the following, either through direct measurements ***or estimates based on data***: […] Outflows from the groundwater system […]." The methodology was not developed by Mann, but by the GSA as provided in Appendix F. The reference to Mann (2014) in Table 4-2 refers only to the estimated water savings that conservation measures might achieve for the agricultural uses in the Subbasin. The footnote to Table 4-2 references 2% as simply the percentage of the total BPA for the agricultural sector that potential water savings consist of. The GSA has edited GSP Section 4.4 (pg. 4-20) to further clarify that the BPA is partially estimated. The GSA acknowledges the comments regarding the methodology.

The GSA has recognized that direct measurement is preferable to estimating water use, and therefore is requiring that all non-de minimis wells in the Subbasin install flow meters, in accordance with the Metering Plan included as GSP Appendix E2.

I26-2 The commenter is referred to the Baseline Pumping Allocation and Pumping Reduction Program master response. While the GSP does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed. In response to establishing 2010 through 2014 as the baseline pumping period, the GSA sought extensive public input prior to determining the time period for the baseline pumping allocation. Please see meeting minutes from September 28, 2017, November 17, 2017, and January 25, 2018. They can be found on the County's SGMA website at: https://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html.

I26-3 The commenter is referred to response I26-2.

I26-4 The GSA acknowledges the comment on Project and Management Action (PMA) No. 5 (Water Quality Optimization). As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of PMA No. 5.

I26-5 The GSA acknowledges the comment on the importance of local attractions to the region's tourism. The commenter is referred to the master response on groundwater dependent ecosystems (GDEs).

Comment Letter I27

Mark C. Jorgensen
Post Office Box 7
665 Tilting T Drive
Borrego Springs, CA 92004

County of San Diego
Planning and Development Services
C/O Mr. Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 17, 2019

Mr. Bennett:

Thank you for your tireless involvement in the development and implementation of the Borrego Valley Groundwater Sustainability Plan. Your keen awareness of our valley overdraft has been key to the progress made by our local Borrego Water District and Ratepayers Committee. Mr. Gary Haldeman has held eighteen public meetings so far to inform local residents and to glean opinions and comments from hundreds of local citizens. Here, I offer my comments to the GSP and I am including data I have gathered from two transects measuring the health status of two separate mesquite bosques in Borrego and Clark valleys. I will be conducting at least three more transects in the Borrego Sink area from Borrego Valley Airport to the southeast margins of the Sink. My data show that in the Clark Valley, a nearby aquifer that is essentially untapped by pumpers, show that approximately 11.8% of the existing mesquite trees are dead, and in the overdrafted Borrego Sink area, I counted 53.8% of the mesquites were dead.

I27-1

I have been a resident of Borrego Springs for more than forty years and have been involved in various water meetings and aquifer reports since the early 1980's. I worked at Anza-Borrego Desert State Park for thirty-three years in the capacity of Park Superintendent, Resource Ecologist, State Park Ranger and State Park Naturalist. I have observed the severe impacts of aquifer overdraft and have documented those impacts in the Mesquite Bosque as well as in the drying of Coyote Creek, where the creek completely dries up at the Second Crossing these days. Since observing Coyote Creek beginning in 1963, I never saw the Second Crossing dry until seeing it completely dry in three or four summers within the last decade.

First I'd like to state that my comments center around five basic principles:

1) A minimum of 2,000 acre feet of water should be allocated for municipal use here the Valley. This will secure future water deliveries for household and small business use and potentially allow for some future development needs.
2) The timeframe originally set in the GSP extends out to 2040 for full implementation. This schedule for full compliance needs to be shortened considerably to preserve our finite groundwater supply. A twenty year timeframe allows for continued drawdown by agriculture, golf courses and households and further jeopardizes our aquifer. My opinion is that a maximum

I27-2

of eight to ten years should be enforced for full compliance. Even in this scenario, our aquifer levels can be expected to decline another twenty feet.

3) Serious consideration needs to be given to water quality as the drawdown continues. As the total supply of water in the aquifer decreases, experts generally agree the quality of our potable water will also degrade.
4) The GSP discounts the impact of continued pumping on Groundwater Dependent Ecosystems. In fact, the plan states there are no GDE's in the Borrego Valley region that fall within the purview of the GSP. This is an absurd point of view. The guidelines set for inclusion of GDE impacts state that no impacts prior to 2015 can be considered. Does this do justice to the known impacts drawdown has obviously had on the Mesquite Bosque plant community? Which water consuming faction does this benefit? Certainly not the small business owners or the residents, but it obviously does benefit the farmers and golf course operators. To conveniently select 2015 as a cutoff date for environmental impacts is ludicrous and defies common sense. Sixty years of agricultural pumping, without consideration of environmental consequences, is what has brought us to this dire situation today. GDE's in Borrego Sink, Lower Willows of Coyote Canyon and Borrego Palm Canyon need to be embraced not rejected.
5) I have been commenting for a couple of decades on the data used to calculate the natural inflow of water into our aquifer as well as the estimated pumping figures. My problems with the numbers are as follows. The numbers have changed over the last fifteen years or so, based on no monitoring stations or well-head gauges on agriculture of golf courses. In the 1990's to early 2000's the figures we were given in public forums were that rainfall and runoff into the valley delivered approximately 4,000-4,500 a/f per year. Extraction figures were considered to be around 24,000 a/f per year. Today, in the absence of accurate measurements, the figures have changed to natural inflow of 5,700 a/f per year and pumping at about 20,000 a/f per year. Where did these data come from? The Coyote Canyon water gauging station was destroyed by flashfloods decades ago and when replaced by a new one at the Second Crossing by DWR, the new station quickly went into disuse. I was informed by DWR monitors the gauge never captured low flows or high water events experienced during flashflood events. The gauge in Borrego Palm Canyon was destroyed in a major flood event so data from that location has also been based on estimates. It appears once again that the changing data does not benefit the local residents or small business but has a definite benefit to future allocations to farmers and golf courses. The figure of 5,700 a/f per year is a benchmark for future allocations to residents, farms and golf courses. My opinion is this figure is high, based on estimates, and does not take into consideration our persistent droughts or future climate change.

I27-2 Cont.

I have concerns with several other aspects of the GSP and statements made within it. General assumptions are made within the Plan stating that water levels in the southeast region of Borrego Valley have remained "fairly constant". Actually, what is constant is the decline of the aquifer in this area, as evidenced by two wells monitored in this portion of the Borrego Sink,

I27-3

Wells MW-3 and MW-5. Well MW-3 has declined more than thirteen feet in the last decade and well MW-5 has been drawn down by almost nine feet. These wells are located in the southeastern margin of our aquifer and this startling decline in indicative of the valley-wide water table drawdown.

Assumptions are made about various regions of the valley and the plan divides the aquifer into three regions, North, Central and South. Many of the wells are concentrated in the north and south, while I find the Central region is grossly under-studied, and therefore conclusions on its status are lacking scientific scrutiny. The area north of Borrego Valley Airport and east and west of Pegleg Road show virtually no monitored wells. There are a score of existing wells that could be studied, but are not. I suggest the County begin manual measurements over time, or that the County partners with the Borrego Water District to install monitors on the many well-heads available. Several of these which could be studied are located on County property at the Borrego Valley Landfill. Other wells are private but could be monitored with landowner cooperation. Data derived from more widespread wells could certainly provide a clear picture of what is really happening valley-wide. You have stated there are plenty of wells being monitored and you see no need to install more monitoring stations. I would agree there "are plenty of monitored wells" but would argue they are not evenly spread throughout the valley to give us a clear picture of the severity and widespread character of the overdraft.

I27-3 Cont.

I thank you for the opportunity to comment during this public comment period and assume I will have another chance to preview the final version of the plan before it goes for final approval. I sincerely hope the timeframe of the implementation can be constrained to less than a ten year period, that GDE's will take a more realistic role in the plan, that a fair portion of available water is allocated to residents and small businesses, and that the figures for natural inflow and realistic pumping can be brought into a more rigorous scientific realm.

I27-4

Sincerely,

Mark C. Jorgensen

Mark C. Jorgensen
Borrego Springs, CA

Attachment: Mesquite Transect 2019

Mesquite Transects, 2019

Clark Dry Lake, West Side, Rockhouse Canyon Road GPS CLKMES Elev. 555'

Start of Transect@ 33.32459N (first mesquite on Rockhouse Canyon Road)
116.28895W

End of Transect@ 33.36090N (Last mesquite north of old rock quarry)
116.30424W

Live Mesquite= 239

Dead Mesquite= 32

Total Mesquite Counted from Road= 271 **Percentage of Mesquite Dead= 11.8%**

Borrego Sink off Yaqui Pass Road GPS MESQ.2 Elev. 469'

(End of YP Road, turn left, 1st fork in dirt road)

Start of Transect@ 33.22811N Begin at 1st Fork in dirt Rd. W. of YP Road
116.33143W

End of Transect@ 33.23412N End at Old House
116.32790W

Live Mesquite= 456

Dead Mesquite= 525

Total Mesquite Counted from Dirt Rd.=981 **Percentage of Mesquite Dead=53.5%**

I27-5 Cont.

Mark Jorgensen
PO Box 7
Borrego Springs, CA 92004

SAN DIEGO CA 920
17 MAY 2019 PM 5 L

County of San Diego
PLANNING & DEVELOPMENT SERVICES
% Mr. JIM BENNETT
5510 OVERLAND AVE. SUITE 310
SAN DIEGO, CA 92123

92123-123985

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Planning and
Development Services

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Letter I27

Commenter: Mark Jorgensen
Date: May 17, 2019

I27-1 The Groundwater Sustainability Agency (GSA) acknowledges the comments about the health status of mesquite bosque communities in the Borrego and Clark Valleys. The commenter is referred to the master response on groundwater dependent ecosystems (GDEs).

I27-2 The GSA acknowledges the commenter's principles and opinions. The GSP adequately complies with Sustainable Groundwater Management Act (SGMA) and gives proper consideration to each issue raised, including baseline pumping allocation (BPA), Groundwater Sustainability Plan (GSP) implementation timeframe, water quality, GDEs, and the water budget. SGMA legislation does not require the GSA correct undesirable results that occurred prior to 2015. As stated in Chapter 3, "it is unfeasible that any PMA [project and management action] developed by the GSA will result in recovery of the honey mesquite GDE." It would require an immediate halt of water use in the Subbasin and an unrealistic reversal of groundwater level trends.

I27-3 With regard to the characterization of groundwater levels and the assertion that the Central Management Area (CMA) has insufficient monitoring data, the commenter is referred to the response to Letter I24, which raises similar concerns.

I27-4 The commenter is referred to response to Letters I47 – I89 regarding the GSP's implementation timeline.

I27-5 The GSA note the data provided by the commenter that measure the health status of the Mesquite Bosque. This information has been considered for inclusion into Appendix D4 of the GSP.

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Comment Letter I28

From: Don <lagoondon@gmail.com>
Sent: Tuesday, May 21, 2019 5:24 PM
To: LUEG, GroundWater, PDS
Subject: Borrego Groundwater Sustainability Plan
Attachments: Comment Letter to Borrego Water District.pdf

Attached is my comment letter on the Borrego Valley Groundwater Sustainability Plan.

Don Rideout
145 Basil St.
Encinitas, CA 92024

1

Comment Letter on Borrego Valley Groundwater Sustainability Plan

Overall the document is well researched and well written. There is no question that sustainability must be the goal and that the recommended reductions in water usage are necessary to ensure that there is adequate water available in the future for any users.

My comments that follow address the question of what happens to agricultural land after it is fallowed. The options are to convert the land to some type of non-irrigated agriculture, to develop the land for residential purposes, or to preserve the land as open space. Preservation of the land as open space will require the most planning by BWD.

When irrigation of agricultural land is discontinued, the effects will depend in part on the type of agriculture being carried out. Citrus and palm groves represent the majority of acreage. In general, the effects of fallowing will consist of invasion by non-native plants and windblown dust. Both effects would be very negative for the valley. As the document notes, active revegetation with native desert plants can be very expensive, requiring irrigation to get the plants established and significant labor to install and maintain the planting.

My recommendation is to pursue passive restoration. The first step should be to not remove existing palms or citrus trees. The roots of these plants are important in retaining the soil and preventing windblown dust. The document notes that dead citrus trees will be unsightly. While this is true, these dead trees also shade the ground, helping to retain moisture after rain. Standing dead trees have some wildlife value, and they will serve as a reminder to us about how we got into our current predicament.

The next step would be to establish a conservancy to take ownership of the land and have management responsibility. I recommend a new conservancy because I doubt that BWD or Anza-Borrego Desert State Park would be interested in taking ownership of these lands. Management of fallowed agricultural land appears to be outside the mission of any existing governmental or non-governmental entity in our area. I envision the conservancy as being primarily volunteer based to keep costs at a minimum. The conservancy can pursue grants to carry out functions such as invasive weed removal, supplemented by volunteers.

In addition, the conservancy can carry out small scale revegetation projects by collecting seeds and cuttings of native plants from private properties in the valley, with permission from the owners. Plants such as creosote bush, burro bush, palo verde, ocotillo, cholla, jojoba, brittlebush, and many others can be started in this manner. Some minor irrigation may be required initially, but the quantity will be vastly less than either existing agriculture, residential development, or irrigation for dust control. Once these plants become established, they will become self-sustaining without need for irrigation, and they will play a major role in preventing windblown dust and invasion by non-native species. In revegetated areas, remaining dead trees can be cut down to a stump and allowed to degrade naturally. Brush piles can be created in selected areas to provide hiding places for reptiles, birds, and small mammals. We will need to have a realistic timeline for passive restoration. In my experience, 10-20 years will probably be needed to get good coverage with native plants. While some residents might want to see this happen faster, we must remember that desert plants grow and propagate at their own rate. We will need to adjust our expectations accordingly.

I28-1

The problem of invasive plant species is an enormous one for the community. The best way to combat these weeds is to encourage native plants. We do not want fallow agricultural land to become a new opportunity for these noxious plants to expand. The conservancy will need to have a strong program of weed removal to accompany the passive restoration efforts. Fortunately, it is easier to keep weeds from fallow land because we will be starting with land that has already been cleared.

As former president of the Anza-Borrego Desert State Park Botany Society, I have some background in this subject. I would be happy to volunteer my time to assist with any of these tasks. I realize that our first step is adoption of the plan. However, agricultural land is already being fallowed, and we need to be ready to take effective management actions as soon as possible. Thank you for considering my comments.

I28-1
Cont.

Don Rideout
145 Basil St.
Encinitas, CA

and

672 Verbena
Borrego Springs, CA

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Letter I28

Commenter: Don Rideout
Date: May 21, 2019

I28-1 The Groundwater Sustainability Plan (GSP) includes Project and Management Action (PMA) No. 4 – Voluntary Fallowing of Agricultural Land. As indicated in the GSP, the Groundwater Sustainability Agency (GSA) will prepare policy development and the California Environmental Quality Act (CEQA) documentation after GSP adoption in advance of considering formal adoption and implementation of a voluntary fallowing program. The commenter is encouraged to review the CEQA document and submit comments on PMA No. 4 at that time.

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Comment Letter I29

Judith R. Davis
P.O. Box 993
Marion MA 02738

May 14, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

I have spent time in the winter in Borrego Springs for the past eleven years and am an active participant in the Borrego community. During this time, I have learned first-hand about the need to conserve water there. I have also learned about the Groundwater Sustainability Plan (GSP) and would like to share with you some of my main concerns about the implementation of the GSP.

The Borrego Valley aquifer has been drastically over-drafted for many years. Borrego Springs must comply with state law, the California Groundwater Sustainability Act, and come into compliance by 2040. Current and historic water use in the basin has been as follows:

- Municipal pumpers (Borrego Water District or BWD) – 10%
- Recreational pumpers (Golf courses) – 20%
- Agricultural pumpers (Citrus, palm trees, herb and vegetable farms) – 70%

The current GSP seems to recommend an across the board reduction of 74%, which would maintain the current distribution percentages. The residential water use has already been cut from a reported historic high of 3,500 acre-feet/year to the current level of 1,700 acre-feet/year, a reduction of 50%. The Borrego Springs municipal ratepayers have done this through the conscious effort of removing fountains and swimming pools, grass and water intensive landscaping, and converting to low-flow toilets.

In contrast, the recreational and agricultural users have been slow or completely unwilling to make similar reductions, continuing to deplete the aquifer. Clearly the major contributor to the aquifer overdraft has been and continues to be agriculture. Although agriculture has been an important part of the community, it is unreasonable to assume that farming should continue to use 70% of the allocated water.

I29-1

Therefore, here are some objectives I believe must be included in the implementation of the Groundwater Sustainability Plan.

- ***The municipal baseline pumping allocation (BPA) should be no less than the 1,700 acre-feet/year currently being used by the BWD.*** This is Borrego's only source of drinking water, which should be a priority for the community. This would allow for some limited growth of homes and businesses.

  Baseline pumping allocations (BPAs) are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to municipal ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3,926 acre-feet/year. In 2010, BWD pumped 2,730.5 acre-feet/year, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1,700 acre-feet/year.

I29-2

During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 acre-feet/year. These figures are a clear indicator that the parties responsible for the overdraft were pumpers other than BWD: 70% due to farming, 20% due to recreation/golf courses. *Thus, choosing 2010-2014 as the baseline years to determine BPAs is to the detriment of the town's ratepayers. This timeframe is clearly unfair as it unquestionably favors farmers first and golf courses second, the same pumpers who have created Borrego's critical overdraft situation.*

I29-2 Cont.

- ***Sustainability should be achieved sooner than the mandated 20-year period.*** The sooner Borrego can become sustainable, the better chance we have to maintain the water quality of our aquifer. This will also have a beneficial impact on some of the endangered ecosystems in the basin.

I29-3

I hope you will consider these concerns and modify the GSP implementation to create a fairer and more sustainable solution to Borrego's serious water crisis.

Best regards,

Judith R. Davis

Letter I29

Commenter: Judith Davis
Date: May 14, 2019

I29-1 The comment provides introductory statements and does not address the adequacy of the Draft Groundwater Sustainability Plan (GSP), and therefore, no further response is required or necessary.

I29-2 The Groundwater Sustainability Agency (GSA) acknowledges the commenter's request that Borrego Water District not be subject to reductions below 1,700 acre-feet per year, as well as the commenters concern about using the period from 2010 to 2014 to establish baseline pumping allocations.

While the GSP does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed. In response to establishing 2010 through 2014 as the baseline pumping period, the GSA sought extensive public input prior to determining the time period for the baseline pumping allocation. Please see meeting minutes from September 28, 2017, November 17, 2017, and January 25, 2018. They can be found on the County of San Diego's (County's) Sustainable Groundwater Management Act (SGMA) website at: https://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I29-3 The GSA acknowledges the commenter's request to front load groundwater reductions to a time period less than 20 years.

While the GSP does not set specific groundwater use reductions or rampdown schedule, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of a specific ramp down schedule. The GSP also indicates an

agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment Letter I30

From: carylowe@cox.net
Sent: Friday, May 17, 2019 4:02 PM
To: LUEG, GroundWater, PDS
Subject: Comments on Borrego Valley Draft GSP

Dear Mr. Bennett,
I wish to comment on the draft Borrego Valley Groundwater Basin Sustainability Plan. I speak both as a land use professional with a long history in dealing with water issues and as a 40-year property owner in Borrego Springs. In an effort to avoid repetition of comments you have received from others, I will limit my comments to just a few key points:

I wish to comment on the draft Borrego Valley Groundwater Basin Sustainability Plan. I speak both as a land use professional with a long history in dealing with water issues and as a 40-year property owner in Borrego Springs. In an effort to avoid repetition of input you have received from others, I will limit my comments to just a few key points:

- Agriculture should bear a significantly greater share of mandated water use reductions than is currently proposed. Over 70% of historical water consumption in the Borrego Valley is attributable to agriculture. With no restrictions on pumping and little incentive to conserve, these interests have taken advantage of their rights under California water law to effectively drain the groundwater basin, thereby assuming primary responsibility for the current critical overdraft condition. In return, they have provided only a small contribution to the valley's economy in terms of jobs or revenue. Now, it is proposed that they reduce their consumption in the same proportion as the rest of the community. While that may seem fair at first impression, it ignores the fact that the agricultural landowners can reduce consumption by selling their property to parties who will maintain it as open space or convert it to non-ag uses. In other words, reducing consumption imposes little burden on the agricultural users; it actually provides them with a profit opportunity which would be unlikely to exist if there were not a legislative mandate to drastically reduce water consumption. Consequently, agriculture should bear a disproportionately higher percentage burden for reduction in water consumption.

- Recreational users can be distinguished from ag users. Recreational water users, primarily golf courses, are responsible for about 18% of total water consumption. Like ag users, they have been free to pump without limit for many years, and similarly bear a disproportionate responsibility for the current overdraft condition. However, they may be distinguished from the ag users. While the golf course and hotel interests also have the option, in theory, of "fallowing" their land, they have enormous investments in their operations and they make a substantially greater contribution to the local economy, so a stronger argument can be made for not burdening them to the point of undermining their economic viability.

- Residential and other users should be exempted from mandatory water use reductions. Residential users are responsible for a mere 10% or so of water consumption. Given the very small amount of exterior landscaping at virtually all homes in the valley, any significant cutbacks in water usage will affect primarily indoor use and will therefore severely impact the health and safety of residents. That alone should invalidate the proposed reductions as applied to residential users. Moreover, this impact will be sufficiently great as to render most homes incapable of supporting human habitation. Since that is the only permitted use of those properties, the proposed cutbacks will constitute a complete and permanent regulatory taking of those properties. The county would then be liable for the value of all those homes. This is particularly a concern as to specialized residential uses such as the Borrego Air Ranch which fall into the category of "other" users. A regulatory taking of those properties would subject the county to liability for not only the homes, but for all the flight facilities and other improvements as well. Given that water users in this category represent a mere fraction of a percent of total consumption, it seems irrational and punitive to impose on them the same percentage of use reductions to be

I30-1

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applied to the major water users. Inflicting such a burden on users in this category will have virtually no effect on basin conditions, while rendering their properties unusable and creating major liabilities for the county.

I30-1 Cont.

In summary, I suggest reconsideration of the manner in which future mandated water use reductions are to be applied, with more of the burden being shifted to agricultural users and with residential users being burdened far less, if at all. Thank you for your consideration.

Cary D. Lowe, Ph.D., AICP
Land Use Attorney & Mediator
3517 Garrison Street
San Diego, CA 92106
Tel. (619) 255-3078
E-mail carylowe@cox.net

Letter I30

Commenter: Cary Lowe, PhD, AICP
Date: May 17, 2019

I30-1 The Groundwater Sustainability Agency (GSA) acknowledges the commenter's request to exempt the municipal sector from reductions, and the burden or reductions to be placed on the agricultural sector.

While the Groundwater Sustainability Plan (GSP) does not set specific groundwater use reductions or rampdown schedule, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I31

From: Bill Haneline <desertwrx15@gmail.com>
Sent: Monday, May 20, 2019 7:54 AM
To: LUEG, GroundWater, PDS
Subject: GSP Borrego Basin Comments

We've been to many Advisory Committee meetings and have heard a lot over couple years. I'm also a board member of the Borrego Springs Community Sponsor Group and a member of the Rate Payer Group.

My concerns are over...

Building on available lots. It appears that there will not be enough water in the plan for building out all lots. There needs to be a way to keep most of these lots unbuilt for the rest of us Borrego residents to have water for the future.

Keep developments from being built. Do not let developments like Rams Hill and Borrego Springs Resort from building hundreds of new homes, which they have said they would. We cannot support this extra burden on our aquifer. Also do not let developers build their neighborhoods on virgin deserts or anywhere for that matter. Our aquifer cannot support development and the current residents will sacrifice for these new homes. I31-1

Golf courses are very wasteful of water. Using our precious drinking water so golf course owners can make money is just not right. Golf courses boast how their customers keep our community running. They have never shown proof that they do this. Most of our visitors are here for the State Park and the desert. There are 6 golf courses here in the valley and they don't need our water, the residents do! I31-2

Agriculture is basically the biggest enemy of the basin. They overdraft us a tremendous amount. The reason why... they want to make money off our aquifer. This water in our aquifer is what us residents need to keep living in the land we love. Agriculture hires a small amount of Borrego residents and the owners don't even live here.
Agriculture has been in the valley for many years and with the GSP it does not look good for them. The history of agriculture in our valley consists of thousands of acres of former farmlands. For decades they have been growing and leaving. Evidence is everywhere you look when you travel our roads. If most of these farms leave and fallow the land, then they will be just like the farms that came before them. Nothing new there. If it wasn't this water issue, then the same thing could happen to them from an insect invasion. I31-3

Water transfers and water credits. Water credits seem to be off the table, but water transfer isn't. There are concerns that wealthy owners can buy water and keep pumping as much as they want. Could there be a future issue with "Wall St." coming in here to make money off our water in a larger scale? Water will turn into a money game between agriculture and golf. I31-4

Anza-Borrego Desert State Park. The valley's economy relies on the State Park. A large majority of the valley's visitors come for the park and the beauty of the desert. Large areas of the Park are affected by the large scale pumpers. Again, these agriculture and golf pumpers are using our water to make a profit off it at the expense of the ecology of the Park. I31-5

What it comes down to is most of our overdraft has been created from businesses using our water for their profit. The residents really need to be protected and still be able to have our present quality of life in the valley. I31-6

Thank you,
Bill Haneline

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Letter I31

Commenter: Bill Haneline
Date: May 20, 2019

I31-1 The commenter suggests no new development be allowed in Borrego Springs. In response, the Groundwater Sustainability Plan (GSP) addresses water use for Borrego Springs subbasin and future land use decisions will need to be carefully coordinated with the County of San Diego, as the land use authority for the unincorporated land within Borrego Springs.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I31-2 The commenter suggests that golf courses are wasteful of water.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I31-3 The commenter suggests that agricultural use in Borrego Valley overdrafts the basin the most with little benefit to the community.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I31-4 The Groundwater Sustainability Agency (GSA) acknowledges the comment that rules to limit hoarding should be included to protect against interests with purchasing excessive amounts of water. Section 4.2.1 of the GSP includes a summary of the process to develop a water trading program which includes identifying unintended consequences of the Water Trading Program to be addressed in development of governing documents (e.g., hoarding, speculation, price fixing, collusion).

I31-5 The GSA acknowledges the commenter's concern for the Anza Borrego State Park.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I31-6 The GSA acknowledges the commenter's concern that the residents water supply needs to be protected.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I32

May 18, 2019

County of San Diego
Planning & Development
% Jim Bennett, Groundwater Geologist
5510 Overland Avenue, Suite 310
San Diego CA 92123

PDS.groundwater@sdcounty.ca.gov

Dear Mr. Bennett,

Concerning the Borrego groundwater plan, it is apparent to me the State and County will basically arrogate unto themselves all the groundwater. This will be a violation of basic property rights extending deep into the history of the the USA. The reason for this action will be the popular will. People want what is not theirs. They want to have what others bought, inherited or earned through legitimate use.

Current water usage is measurable, and maybe we know how much is used. We can learn more and then decide what is a reasonable maximum allowable per year. The State and County can determine this usage and offer it for sale. Some kind of equitable limit, aimed at long-term stability, can be set and reset as the more information becomes available.

Since the State and the County will be deciding who gets the water, there must be a plan to allocate the amounts of water used. Based on the law of supply and demand, there will inevitably emerge an equilibrium price, a market price, if the users are required to bid dollar prices in a Dutch auction for water use units per year. Units would be fungible.

To my mind, imagining a market for water, there will be one primary beneficiary: the current owners of large water rights who will bid for water like everyone else. They will try to optimize their water use, will have money to spend and cash flow from compensation payments to sustain bidding.

I32-1

Secondary beneficiaries will be small users, who will have incentives to pay a lot for small amounts of water. It is possible for households to cut water usage to low levels.

The intention of a market price system is to raise the cost of purchase, thus driving down usage.

Of course, assuming a high price, there will also be auxiliary providers, trucking water in to anyone willing to pay the price.

Borrego is a beautiful peaceful place to live and work. It has a future for agriculture and residential use if water is continuously available. It is in the County's interest to maintain population and business here.

Please adopt my plan for your solution.

Hugh Dietz
PO Box 86
Borrego Springs, CA 92004

hugh.dietz@gmail.com
760 625 6587

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Letter I32

Commenter: Hugh Dietz
Date: May 18, 2019

I32-1 The commenter makes suggestions for a future water trading market. While the Groundwater Sustainability Plan (GSP) does not include details of a water trading program, the GSP includes Project and Management Action No. 1 – Water Trading Program. The GSP indicates preparation of a Water Trading and Policy document is intended to begin upon adoption of the GSP.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I33

From: Cristin McVey <crismcvey@gmail.com>
Sent: Monday, May 20, 2019 2:34 PM
To: LUEG, GroundWater, PDS
Subject: Public Comment BVGSP

Dear Planning & Development Services,

I wanted to submit a few comments about the Borrego Valley GSP that I will hope will be considered in the next phases.

1. As a ratepayer in the municipal area, I expect to continue to find ways to conserve water at my residence. I know of many other homeowners that are deeply committed to water sustainability and look forward to finding ways to conserve our municipality's water resources, now and in the future. As a homeowner, I would gladly pay higher rates (or a fees from a bond) that would solve this problem and ensure the sustainability of the region. It would also help our home values stabilize and increase over time.

2. As far as the structure of any new water rates, I would prefer that those rates be tiered, with water "wasters" paying higher rates (like we do for electricity). Currently we pay the same amount (I believe) per unit no matter how much we use. I know that some in the community feel that the residents should not have to cut back on water (learning that burden to the farms and golf courses), but I feel it should be a community-wide effort and many others feel this way too (maybe not as vocal though). Those who will not do so voluntary might if there was a little economic pressure. I33-1

3. As a librarian for the county, I have the opportunity to meet many people, especially families. I am concerned that lower-income families and seniors on fixed incomes will be adversely affected by higher water rates. I would like to see something built into the plan to help with the cost of higher water fees for low-income residents, whether this be rebates for newer water-saving appliances or low-income rebates, like we currently have for electricity...but I would prefer the former, because the goal is not to only lower the cost but to lower cost by saving water (not lowering the cost and still wasting water). I33-2

4. The environmental health problems from fallowing farmland and the dust that might become airborne is a concern as well. A plan to put wood chips on the fallowed land was passed around, but we do get heavy winds, so how well that will work is unknown. Ideally, we would reseed the area with native plants, so that those fields could become new flower fields (not plant dead zones) and attract more tourism. I also support low-water farming (if that exists?) for crops like cactus and others. I am not against having farms, but it needs to be done wisely. I33-3

Lastly, it is my sincere hope that Borrego Springs will enter into a new period of water sustainability, remembered and admired as a community that when confronted with a daunting assignment, pulled together to create a strategic plan that looked forward into the future, something that could become an example for other communities to emulate in managing their limited water resources. I33-4

I know that lots of people have been tirelessly working on the GSP, and I want to know that your work is very much appreciated.

Cristin McVey
Borrego Springs resident/county worker

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Letter I33

Commenter: Cristin McVey
Date: May 20, 2019

I33-1 The Groundwater Sustainability Agency (GSA) acknowledges your comments of being willing to pay higher rates to ensure sustainability. The GSA will take this comment into consideration when considering imposing fees to fund Groundwater Sustainability Plan (GSP) implementation.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I33-2 The GSA acknowledges your concern about lower income families and developing options that protect this portion of the community from higher water rates including the potential of a tiered rate structure. The Borrego Water District (BWD) is responsible for water rates set for its ratepayers including lower income families and will take this comment into consideration when considering imposing fees to fund GSP implementation.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I33-3 The GSA acknowledges your suggestion to reseed fallowed areas with native plants to attract more tourism. The GSP includes Project and Management Action No. 4 – Voluntary Fallowing of Agricultural Land. As indicated in the GSP, the GSA will prepare policy development and the California Environmental Quality Act (CEQA) documentation after GSP adoption in advance of considering formal adoption and implementation of a voluntary fallowing program.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I34-4 The GSA appreciates your comment regarding hope for Borrego Springs being an example for other communities to emulate in managing limited water resources.

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Comment Letter I34

From: Henry Liu <henryarcadia@yahoo.com>
Sent: Monday, May 20, 2019 3:41 PM
To: LUEG, GroundWater, PDS
Subject: How will the Borrego Valley Groundwater Basin effect the properties

Hi ,
Our client is going to buy the Borrego Springs Resort and golf , they are concerning about if it will effect the property after the GSP have been passed? I34-1

https://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html

Thank you and look forward to your reply

Best Regards

Henry Liu
Coldwell Banker Dynasty
77 W Las Tunas Drive #100
Arcadia, CA 91007
Cell Phone: (626)688-2208
Office Phone: (626)446-8999
Fax : (626)446-9997
eFax : (626)538-1159
CalBRE Lic# 01378289
E-mail: henryarcadia@gmail.com
http://www.AmericaRealestateResources.com

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Comment Letter I34

From: Henry Liu <henryarcadia@yahoo.com>
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To: LUEG, GroundWater, PDS
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I34-1

https://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html

Thank you and look forward to your reply

Best Regards

Henry Liu
Coldwell Banker Dynasty
77 W Las Tunas Drive #100
Arcadia, CA 91007
Cell Phone: (626)688-2208
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Letter I34

Commenter: Henry Liu
Date: May 20, 2019

I34-1 It appears this comment involves a real estate transaction and the Groundwater Sustainability Agency (GSA) has reached out directly to the commenter. This comment does not address the adequacy of the Draft Groundwater Sustainability Plan (GSP), and therefore, no further response is required or necessary.

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Comment Letter I35

From: BorregoSue <lakes138@yahoo.com>
Sent: Monday, May 20, 2019 5:43 PM
To: LUEG, GroundWater, PDS
Subject: Draft Groundwater Sustainability Plan (GSP) Borrego Valley Groundwater Basin

To Jim Bennett,

As a Borrego Springs ratepayer I am concerned about the proposed GSP. Borrego Springs ground water supply has dropped drastically the past 30 years. Resident ratepayers use 10% of the water supply and have reduced their use over the last 10 years from 2400 acre feet/year to 1700 acre feet/year, but their water bills have increased 3 times. Agriculture uses 70% and golf courses 20% and neither have reduced water use appreciably. Therefore, REDUCTIONS SHOULD MOT BE PROPORTIONAL and should take into consideration our Severely Disadvantaged Community status. The municipal user allotment should be no less than 1700 af/yr. I35-1

MANDATORY METERING of all water users, including agriculture and golf courses must be part of the plan and implemented immediately on approval of the GSP. I35-2

Water quality is also of great concern as our water supply dwindles. Mandatory water quality monitoring of wells, including agriculture and golf courses must be included in the GSP. I35-3

Borrego Springs is a desert community that attracts many visitors and retirees. We benefit from the state park and all it offers, as well as a thriving arts community. When Jim Desmond came to town to promote the Borrego Springs Revitalization Committee there were great ideas but none of them will come to fruition unless the GSP enables people to continue to live here and maintain their businesses here. Municipal ratepayers must be treated fairly. Perhaps a solution is for the revitalization committee and the county staff assigned to it to first find a way to come up with the approximately 20 million dollars needed to buy out the farmers. I35-4

Susan Boutwell, Borrego Springs ratepayer

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Letter I35

Commenter: Susan Boutwell
Date: May 20, 2019

I35-1 The Groundwater Sustainability Agency (GSA) acknowledges your opposition to any groundwater use reductions for the municipal sector. While the Groundwater Sustainability Plan (GSP) does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I35-2 The GSA acknowledges your request that mandatory metering be required immediately upon approval of the GSP. In response, the GSP indicates that metering will be required with implementation of the GSP and is anticipated to be required within 90 days of GSP adoption.

I35-3 The GSA acknowledges the commenters request to impose mandatory water quality monitoring, including agricultural and golf course wells in the subbasin. The GSP indicates that the GSA has developed a water quality monitoring network of 30 wells and five additional wells were added to the network in Fall 2018. The GSP further states that the GSA continues to work with private landowners to expand the monitoring network.

I35-4 The GSA acknowledges the request for the possibility of using the County revitalization committee to find a way to come up with money to buy out farmers. This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I36

From: TJH <tjhlaw@eschelon.com>
Sent: Tuesday, May 21, 2019 2:51 PM
To: LUEG, GroundWater, PDS
Cc: carylowe@cox.net; Bill Carpenter; marya88w@gmail.com; eddifordem@gmail.com
Subject: Borrego Water Crisis

Mr. Bennet: I own 6 vacant and unbuilt lots in Borrego Springs.

It distresses me that I may never be able to use or sell my lots. The water shortage is a de facto and permanent moratorium for me an many others.

The real problem, as you know, is the wasteful and excessive agricultural use of our finite and valuable water resource from the very limited and slowly replenishing aquifer.

The use by the citrus and agricultural users has depleted the water resource and prevented its use to and by higher priority uses, such as municipal, quasi-municipal and domestic uses.

I36-1

The time has come to eliminate all citrus and agricultural uses from within the Borrego Groundwater Basin.

The 75% reduction on ag diversions will go part of the way, but a 100% reduction would free up the limited water supply to be devoted to higher priority uses, as mentioned.

I36-2

Furthermore, the citrus and agricultural water users and landowners should be required to pay for the permanent fallowing of all disturbed lands.

To let the citrus and palm trees die off without water and then to strip the land of all vegetation actually will be a disaster as well.

These owners should be held to the same standard as other users who extract a resource, cause damage and leave the mess for others to clean up.

If a miner dug a pit or mine, extracted minerals, he would be required to environmentally restore the site.

If a polluter spilled toxins on the ground, they would be held to clean it up.

If a farmer spilled chemicals on the ground, they would be compelled to clean it up.

If a farmer sells his farm with dead or dying trees on it, as "pollution", he should be held to clean up the "pollution" at his cost, not at that the community's public cost and expense.

'To pollute is to corrupt or defile, especially to contaminate the soil, air or water with noxious substances." Black's Law Dictionary (2004).

The real search should be for the proper fallowing protocol, and costs, to determine how much the citrus and agricultural land owners and operators owe and should pay, to clean up their lands.

Not a search for $20,000,000 to buy their lands, as someone has mentioned.

I36-3

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Another thought is to prohibit the export of water or the products of water out of the Borrego Water Basin.

Exporting all fruit, plants and trees, which have consumed our limited water, should be prohibited. I36-4

Are these radical thoughts? I do not think so.

Thomas J. Hall, Esq.

Box 3948,

Reno, Nevada

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Letter I36

Commenter: Thomas Hall
Date: May 21, 2019

I36-1 The comment provides introductory statements that do not address the adequacy of the Draft Groundwater Sustainability Plan (GSP), and therefore, no further response is required or necessary. However, it should be mentioned that the GSP includes Project and Management Action (PMA) No. 1 – Water Trading Program, which upon implementation, would allow the ability for the permanent trade of baseline pumping allocations. Individuals such as yourself could purchase baseline pumping allocations for future development of your land.

I36-2 The Groundwater Sustainability Agency (GSA) acknowledges the request to require complete elimination of agricultural uses. While the GSP does not set specific groundwater use reductions, the GSP includes Project and Management Action No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I36-3 The GSA acknowledges suggestions to require the agricultural users to pay for cleanup of their land once it is fallowed. The GSP includes PMA No. 4 – Voluntary Fallowing of Agricultural Land. As indicated in the GSP, the GSA will prepare policy development and CEQA documentation after GSP adoption in advance of considering formal adoption and implementation of a voluntary fallowing program.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I36-4 The comment suggests prohibiting the export of water and fruit, plants, and trees which have consumed the water. In response, the GSA is not aware of any exportation of water out of the basin. In regard to the suggestion to prohibit actual products from being exported out of the basin, the GSA remains committed to utilizing the tools provided in Sustainable Groundwater Management Act (SGMA) to bring the groundwater basin into sustainability.

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Comment Letter I37

May 21, 2019

Borrego Valley Groundwater Sustainability Agency
C/O County of San Diego Planning & Development Services
Jim Bennett
5510 Overland Avenue Suite 310
San Diego, CA 92123

Via E-mail: PDS.LUEGGroundWater@sdcounty.ca.gov

Re: Comments on Draft GSP Regarding Conversion of Water Credits to BPA

As part of the Borrego Water District's water credit program, the Borrego Water District and the County of San Diego have issued water credits to property owners overlying the basin who have voluntarily fallowed their land. The purpose of the water credit program is to encourage voluntary cessation of water use in exchange for "water credits" that may be applied to future development. The draft Groundwater Sustainability Plan released on March 21, 2019 ("GSP") for the Borrego SpringsSubbasin ("Basin") provides that existing water credits associated with the water credit program *may* be converted*at some time in the future* to a program using Baseline Pumping Allocation ("BPA") applyingthe groundwater consumptive use factors developed by the groundwater sustainability agency ("GSA"). As a holder of water credits in the Basin, we urge the GSA to modify the GSP to explicitly provide for (a) the conversion of water credits to BPA using the same consumptive use factors applied to calculate BPAfor agricultural acreage during the baseline period, and (b) the issuance of BPA to water credit holders at the same time that BPAs are issued for all pumpers in the Basin. Without such modifications, the undersigned object to the GSP as inequitable and unlawful. I37-1

Although the Sustainable Groundwater Management Act provides that it is not intended to alter groundwater rights, nor is an allocation issued pursuant to a GSP to be deemed a determination of water rights,[1] the proposed management actions concerning BPA (i.e., Pumping Reduction Program)(PMA No. 3 in the GSP) and the Water Trading Program (PMA No. 1 in the GSP) will effectively determine and control all opportunities afforded by a water right. This includes the amount of groundwater that may be pumped, the cost of pumping, how and when groundwater rights may be transferred, etc. Thus, to remain equitable, lawful, and immune from successful legal challenge,BPA *must* be granted to water credit holders on the same terms (consumptive use factors) established to set BPA for existing irrigators and issued at the same time as all BPAs. Doing so will treat all similar pumpers equally and will avoid disadvantaging land owners who voluntarily reduced water usage early in an effort to help the Basin.

[1] See Water Code sections10720.5(b)), 10726.4(a)(2), and 10726.8(b).

Conversion of water credits to BPA will also streamline management of the Basin by applying a single "currency" of water rights. For example, the BWD could develop a policy that requires a dedication to the BWD of BPA in exchange for extension of service for new developments (or an equivalent payment in lieu of BPA dedication). This would thereby avoid applying two BWD programs--one for water credit holders and one for BPA holders--that may result in disparate and unfair treatment of those pumpers that voluntarily worked with the BWD to advance water management in comparison to those that have not.[2] Without such conversion, other pumpers who aregranted BPA would be afforded greater water use opportunities and advantages, including opportunities to accrue carryover, lease of allocation, and transfer and use of allocation to support groundwaterproduction on different parcels, as compared to similarly-situated pumpers that were granted water credits. Such disparate treatment would render the Pumping Reduction Program ripe for legal challenge pursuant to a groundwater basin adjudication[3] or other litigation.

I37-1
Cont.

This concern can be readily remedied by modifying the GSP to provide for the conversion of water credits to BPA for all water credit holders pursuant to the same consumptive use factors set forth in Appendix F, the elimination of the existing water credits program, and the issuance of such BPA when all BPAs are issued. The GSP could explain that the BWD would soon develop a new dedication program for extension of new water service based exclusively on BPA.

Pursuant to such changes to the GSP and a new BWD dedication program, we agree that the water credits-to-BPA conversion satisfies all obligations of the BWD pursuant to the water credits program such that the BWD would not bear any potential liability for breach of contract, or otherwise, relating to the water credits program.

Thank you for the opportunity to comment on the draft GSP.

Sincerely,

RUBY MORICA 5/21/19

[2] The BPA calculation methodology set forth in Appendix F would result in a grant of more BPA per acre than has been granted in water credits for the same crop grown with the same method of irrigation and during the same time period. Thus, to deny a conversion of water credits to BPA at the same consumptive use factors would result in disparate treatment unless the BWD were to maintain two dedication programs with different dedication ratios respective of BPA and water credits, which would be unnecessarily complex.
[3] See Code of Civil Procedure sections 830 et seq.

Letter I37

Commenter: Rudy Monica
Date: May 21, 2019

I37-1 The Groundwater Sustainability Agency (GSA) acknowledges the comment and the benefits of converting water credits to baseline pumping allocations within the Groundwater Sustainability Plan (GSP). In response, the GSP is clear that water credits may be converted in a future program using Baseline Pumping Allocation (BPA) using the groundwater consumptive use factors developed by the GSA. In regard to your comments pertaining to groundwater rights, the comment calls for a legal conclusion to which the GSA is not required to respond.

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Comment Letter I38

May 21, 2019

Borrego Valley Groundwater Sustainability Agency
C/O County of San Diego Planning & Development Services
Jim Bennett
5510 Overland Avenue Suite 310
San Diego, CA 92123

Via E-mail: **PDS.LUEGGroundWater@sdcounty.ca.gov**

Re: Comments on Draft GSP Regarding Conversion of Water Credits to BPA

As part of the Borrego Water District's water credit program, the Borrego Water District and the County of San Diego have issued water credits to property owners overlying the basin who have voluntarily fallowed their land. The purpose of the water credit program is to encourage voluntary cessation of water use in exchange for "water credits" that may be applied to future development. The draft Groundwater Sustainability Plan released on March 21, 2019 ("GSP") for the Borrego Springs Subbasin ("Basin") provides that existing water credits associated with the water credit program *may* be converted *at some time in the future* to a program using Baseline Pumping Allocation ("BPA") applying the groundwater consumptive use factors developed by the groundwater sustainability agency ("GSA"). As a holder of water credits in the Basin, we urge the GSA to modify the GSP to explicitly provide for (a) the conversion of water credits to BPA using the same consumptive use factors applied to calculate BPA for agricultural acreage during the baseline period, and (b) the issuance of BPA to water credit holders at the same time that BPAs are issued for all pumpers in the Basin. Without such modifications, the undersigned object to the GSP as inequitable and unlawful. I38-1

Although the Sustainable Groundwater Management Act provides that it is not intended to alter groundwater rights, nor is an allocation issued pursuant to a GSP to be deemed a determination of water rights,[1] the proposed management actions concerning BPA (i.e., Pumping Reduction Program) (PMA No. 3 in the GSP) and the Water Trading Program (PMA No. 1 in the GSP) will effectively determine and control all opportunities afforded by a water right. This includes the amount of groundwater that may be pumped, the cost of pumping, how and when groundwater rights may be transferred, etc. Thus, to remain equitable, lawful, and immune from successful legal challenge, BPA *must* be granted to water credit holders on the same terms (consumptive use factors) established to set BPA for existing irrigators and issued at the same time as all BPAs. Doing so will treat all similar pumpers equally and will avoid disadvantaging land owners who voluntarily reduced water usage early in an effort to help the Basin.

[1] See Water Code sections 10720.5(b)), 10726.4(a)(2), and 10726.8(b).

Borrego Valley Groundwater Sustainability Agency
May 21, 2019
Page 2

Conversion of water credits to BPA will also streamline management of the Basin by applying a single "currency" of water rights. For example, the BWD could develop a policy that requires a dedication to the BWD of BPA in exchange for extension of service for new developments (or an equivalent payment in lieu of BPA dedication). This would thereby avoid applying two BWD programs--one for water credit holders and one for BPA holders--that may result in disparate and unfair treatment of those pumpers that voluntarily worked with the BWD to advance water management in comparison to those that have not.[2] Without such conversion, other pumpers who are granted BPA would be afforded greater water use opportunities and advantages, including opportunities to accrue carryover, lease of allocation, and transfer and use of allocation to support groundwater production on different parcels, as compared to similarly-situated pumpers that were granted water credits. Such disparate treatment would render the Pumping Reduction Program ripe for legal challenge pursuant to a groundwater basin adjudication[3] or other litigation.

This concern can be readily remedied by modifying the GSP to provide for the conversion of water credits to BPA for all water credit holders pursuant to the same consumptive use factors set forth in Appendix F, the elimination of the existing water credits program, and the issuance of such BPA when all BPAs are issued. The GSP could explain that the BWD would soon develop a new dedication program for extension of new water service based exclusively on BPA.

Pursuant to such changes to the GSP and a new BWD dedication program, we agree that the water credits-to-BPA conversion satisfies all obligations of the BWD pursuant to the water credits program such that the BWD would not bear any potential liability for breach of contract, or otherwise, relating to the water credits program.

Thank you for the opportunity to comment on the draft GSP.

I38-1 Cont.

Sincerely,

Loren Lundberg
Lundavid LLC
Lundberg Family Trust

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[2] The BPA calculation methodology set forth in Appendix F would result in a grant of more BPA per acre than has been granted in water credits for the same crop grown with the same method of irrigation and during the same time period. Thus, to deny a conversion of water credits to BPA at the same consumptive use factors would result in disparate treatment unless the BWD were to maintain two dedication programs with different dedication ratios respective of BPA and water credits, which would be unnecessarily complex.

[3] See Code of Civil Procedure sections 830 et seq.

Letter I38

Commenter: Lance Lundberg
Date: May 21, 2019

I38-1 The Groundwater Sustainability Agency (GSA) acknowledges the comment and the benefits of converting water credits to baseline pumping allocations within the Groundwater Sustainability Plan (GSP). In response, the GSP is clear that water credits may be converted in a future program using Baseline Pumping Allocation (BPA) using the groundwater consumptive use factors developed by the GSA. In regard to your comments pertaining to groundwater rights, the comment calls for a legal conclusion to which the GSA is not required to respond.

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Comment Letter I39

From: barry <barry.berndes@gmail.com>
Sent: Thursday, April 11, 2019 5:02 PM
To: LUEG, GroundWater, PDS; Barry Berndes | SAN DIEGAN
Subject: Borrego Springs vacant land owner's solution

Sirs:
The stewardship of this magnificent San Diego resources has a simplistic resolution: less is more.

Its inhabitants as a group
must be restricted by a percentage of the water they use by category:
Agro users
Golf course users
Residential users
Resort hotel users
Service Industry users

Each User Group Gets An Equal amount of the Aquifer Pie.

Then, just like with Solar, what the user don't use can be sold to the highest bidder or kept in the aquifer.

Ultimately, Borrego Springs will (die it's water shortage) be the desert retreat with fewer golf courses, fewer resorts, fewer agricultural orchards and fewer service industries as water allotments will allow.

So "Pull The Trigger" and do what you were appointed or elected to do.

I39-1

Sincerely,
Barry Berndes
Buckskin Road
Property parcel #
141-010-41-00

Sent from my iPhone

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Letter I39

Commenter: Barry Berndes
Date: April 11, 2019

I39-1 The Groundwater Sustainability Agency (GSA) acknowledges the suggestion of reducing groundwater use by category and that each user group gets an equal amount of the water supply available. The Groundwater Sustainability Plan (GSP) includes Project and Management Action No. 3 – Pumping Reduction Program. The GSP does not set specific groundwater use reductions. Rather, as indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I40

From: David Leibert <david@thepalmsatindianhead.com>
Sent: Sunday, May 05, 2019 1:47 PM
To: LUEG, GroundWater, PDS
Subject: Borrego Springs Groundwater Sustainablility Plan comment

May 5, 2019

County of San Diego Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue Suite 310
San Diego, CA 92123

PDS.LUEGGroundWater@sdcounty.ca.gov

RE: Borrego Springs Sub Basin

Dear Sir or Madam:

I am writing in regards to water rights we own on our property located at 2220 Hoberg Road in Borrego Springs, CA. (Parcel # 141-080-04). I have owned the approximately 20 acre hotel and restaurant property since 1993. There is a well on the property and I have spent a substantial amount of money maintaining and improving the well over time. I have been helpless in watching the water level in the well drop from 271 feet in December of 1993 to 324.02 feet on 4/30/19. The water level has dropped 53.02 feet over the last 25.5 years as a result of overdraft.

If the Groundwater Sustainability Plan is to be implemented, I feel it important to recognize and fairly compensate property owners with existing water rights whether or not they were pumping from their well at the time of the baseline pumping allocations approximation. At that time I was purchasing water for our property from the Borrego Water District and our amount of water usage could be easily ascertained.

I would expect either a cash buyout for our water rights or marketable water shares in exchange for any adjudicated action.

I40-1

Sincerely,

David G. Leibert

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Letter I40

Commenter: David Liebert
Date: May 5, 2019

I40-1 The commenter indicates ownership of a well on a property located at Assessor's Parcel Number (APN) 141-080-04 which is not being used. As stated in Appendix F of the Groundwater Sustainability Plan (GSP), baseline pumping allocations were included for each identified non-de minimis groundwater user for all existing pumpers in the basin. The "baseline pumping allocation" is defined as the amount of groundwater each pumper in the Subbasin is allocated prior to Sustainable Groundwater Management Act (SGMA)-mandated reductions. It is further defined as the verified maximum annual production, in acre-feet per year, for each well owner over the baseline pumping period. The baseline pumping period is the 5-year period from January 1, 2010, through December 31, 2014. This was to consider water use that was being used prior to SGMA taking effect on January 1, 2015 (California Water Code 10720.5[a]).

The commenter indicates they obtained their water from the Borrego Water District during the 5-year time period in which baseline pumping allocations (BPAs) were determined. As such, the GSP does not include a baseline pumping allocation for the commenter's property. Borrego Water District, as the pumper of the groundwater, received a BPA that included water that they sold to each of their customers.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I41

From: Elena Thompson <elenathompson@cox.net>
Sent: Saturday, April 27, 2019 9:13 PM
To: LUEG, GroundWater, PDS
Subject: 4-29-19 Borrego Springs, CA., Groundwater Sustainability Plan (GSP) - Public Comment

Importance: High

https://www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html

By mail: County of San Diego Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue Suite 310
San Diego, CA 92123

To Whom It May Concern,

Our public comment is as follows:

1. Thank you for the opportunity to review and comment as a Borrego Springs resident, property owner and stakeholder, keen on seeing a stable and steady supply of potable residential water supply continue in our town.
2. In our view, the groundwater sustainability in Borrego Springs must be achieved before the mandated 2040 deadline seeing as Borrego Springs is in a "critical overdraft" situation TODAY (2019) and water is being used in a way by growers that fully risk depleting the entire water supply long before 2040.
3. Sustainability should be advanced to the earlier year of 2021, if not sooner.
4. Agricultural pumping of all water must begin to be measured starting in 2020 without exception. The agricultural sector is using 70% of all water in addition to polluting the water table with chemicals used in its operations. The growers/agricultural use in the valley poses the biggest risk to sustainability, both short and long term, and must totally stop in order to save the town of Borrego Springs and the ABD State Park.
5. The visuals and graphics in your presentation are shocking, to say the least. With plummeting water tables and water supply, deteriorating water quality, a radical approach must be taken immediately, now. No more waiting.
6. All water and wells must be protected and serviced to ensure potable drinking water and suitable water for residential use, without exception.
7. Municipal water supply must be the priority followed by golf courses (economic development). Agriculture is no longer sustainable in the Borrego Valley. Growers must go. Crops must be fallowed. There are few permanent jobs in this business. Those that are lost will find other opportunities in the valley.
8. Time is of the essence here. This matter has been studied over the decades without proper resolution as the aquifer continues to drop annually.
9. Residential real estate prices will all plummet without a reliable source of water. They have already been suppressed due to this ongoing and urgent crisis.
10. Stepped-up water conservation cannot increase amongst municipal users. These users cut back water usage years ago. There is no further opportunity for water reduction other than NOT to consume water or bathe. This is unacceptable.
11. Water increases cannot continue on municipal, residential users. Continual rate hikes are extremely harmful to municipal users, especially when growers get water for free and use 70% of it. It's unreasonable to expect municipal users to subsidize the growers and be punished with higher rates for unlimited grower usage, depleting the aquifer of its precious water supply.

I41-1
I41-2
I41-3
I41-4
I41-5
I41-6
I41-7
I41-8
I41-9

Respectfully,

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Elena & John Thompson
Residents and property owners, Borrego Springs
4-29-19

Letter I41

Commenter: Elena and John Thompson
Date: April 27, 2019

I41-1 The Groundwater Sustainability Agency (GSA) acknowledges the comment to accelerate groundwater reductions. While the Groundwater Sustainability Plan (GSP) does not set the specific groundwater reduction schedule, the GSP includes Project and Management Action (PMA) No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I41-2 In response to the request that agricultural pumping be measured starting in 2020, the GSP states that at Plan adoption all non-de minimis groundwater extractors will be required to record monthly groundwater production and report to the GSA on an annual basis.

In response to the request that agricultural use in the valley totally stop, the GSP includes PMA No. 3, Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of groundwater use reductions and specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I41-3 The GSP includes the framework to bring the basin into sustainability.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I41-4 Chapter 3 of the GSP includes sustainability goals to protect current and future beneficial users and uses of water. The GSP includes a sustainability goal for groundwater levels to stabilize to ensure groundwater is maintained at adequate

levels for key municipal wells to protect residential users. The GSP also includes a sustainability goal for Title 22 drinking water standards to be met for potable water sources and water quality monitoring will occur throughout GSP implementation.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I41-5 The GSA acknowledges the comment to prioritize municipal water supply, the golf course use, and for agricultural use to be removed. While the GSP does not set the specific groundwater reductions by sector, the GSP includes PMA No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of a specific groundwater use reductions and a ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I41-6 This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I41-7 This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I41-8 The GSA acknowledges the commenter's request to not have any additional water conservation for municipal users. The GSP includes PMA No. 2 – Water Conservation Program. The program would consist of separate components for the three primary water use sectors: agricultural, municipal, and recreation. As stated in the GSP, the specific components of the water conservation program would be developed (after GSP adoption) through a process of public outreach, data compilation, and program design for each sector.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I41-9 The GSA acknowledges your concern regarding water rates for municipal, residential users. The GSA will take this comment into consideration when considering imposing fees to fund GSP implementation.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment Letter I42

From: Joseph Tatusko <jatmpk@gmail.com>
Sent: Monday, April 01, 2019 5:39 PM
To: Bennett, Jim
Subject: GSP comment review process - Joe Tatusko #1

Hello Jim

I recommended as a retired 2014-2018 BWD Board member we add a second page in Spanish and English i.e. 2 sides important BWD information in the BWD bill envelope. I recommend a 2nd page in the BWD April bill a notice of this important GSP comment period of March 22 to May 21, 2019. Also, maybe an additional 2 day check out GSP physical document at the BWD office and SD County local BS library.
I will of course provide more technical comments in the near future. I42-1

Thanks,
Joe Tatusko
Retired BWD Board 2014-2018

P.S. I got a invalid email address for the PDS (pg. 2) email, please reply

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Letter I42

Commenter: Joe Tatusko
Date: April 1, 2019

I42-1 The Groundwater Sustainability Agency (GSA) acknowledges your request of the Borrego Water District (BWD) to include noticing via April water bills in English and Spanish that mention the Groundwater Sustainability Plan (GSP) comment period. Additionally, the GSA acknowledges the request to have a check-out approach for the physical GSP document at the BWD office and County library. To aid Spanish speakers, the BWD translated the Executive Summary into Spanish and posted it on their website. Additionally, a hard copy of the Draft GSP was made available at three locations: the County of San Diego, BWD office, and the Borrego Springs County library.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I43

Paul Ocheltree
200 Marine View Avenue
Del Mar, California 92014

April 15, 2019 SENT BY CERTIFIED MAIL

Kathy Dice President of the Borrego District Board of Directors
Geoffrey Poole General Manager of the Borrego Water District
P.O. Box 1870
806 Palm Canyon Drive
Borrego Springs, California 92004

RE: Borrego Valley GSP and SGMA reports.
Property description: 1193 Rango Way, Borrego Springs CA 92004, 40 acres, APN 199-140-21

Hello Kathy and Geoffrey,

We, Marilyn A. and Paul C. Ocheltree, are the property owners for the above reference property. We hereby hold and reserve the right to file a complaint (sue) to overturn and nullify any or all of the sections, restrictions, plans, actions and aspects of the GSP (Ground Water Sustainability Plan) which is being proposed for the Borrego Basin. We have and continue to reject similarly the SGMA (Sustainable Groundwater Management Act). We own the above land which inherently includes all of the titled land, soil, rocks, and water (a mineral) which are all a basic part of the titled land. Our land rights are established by old English law, common law, Federal and State law. We own all of the water, just the same as we would own the oil, gold or silver which could exist below the surface of our land. An ordinance passed by the County of San Diego and supported by the Borrego Water District does not supersede but is subject to the above laws. The SGMA and GSP serve to undermine, restrict and negate our ownership of the mineral rights attached to our land. The above acts propose to take our mineral rights without due compensation which is a violation of our constitutional rights. Thank you for our right to stand in objection to the SGMA, the GSP and all of the previous and future generations of these acts. Have a good day.

I43-1

Paul C. Ocheltree
4/15/19
Property Owner

Marilyn A. Ocheltree
4/15/19
Property Owner

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Letter I43

Commenter: Paul and Marilyn Ocheltree
Date: April 15, 2019

I43-1 The Groundwater Sustainability Agency (GSA) acknowledges the comment indicating the commenter reserves the right to file a complaint on any of information within the Groundwater Sustainability Plan (GSP) and that the commenter stands in objection to Sustainable Groundwater Management Act (SGMA) and any of its implementing requirements. Based on a review of historical aerial photography of the commenter's property located at 1193 Rango Way, Borrego Springs, California 92004, the on-site groundwater usage on said property appears to be 2 acre-feet or less per year. As such, the commenter is considered a de minimis extractor as defined by SGMA. A de minimis extractor is not subject to groundwater reduction requirements. The GSA will be regularly monitoring groundwater usage after the GSP is implemented. If available aerial photography or other information indicates that groundwater usage on the commenter's property is potentially increasing above 2 acre-feet per year, the commenter may be subject to reductions and additional requirements in accordance with the adopted GSP and implementing requirements.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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Comment Letter I44

Lagerlof Senecal Gosney & Kruse LLP

301 North Lake Avenue
10th Floor
Pasadena, CA 91101-5123
Phone: 626.793.9400
Fax: 626.793.5900
www.lagerlof.com

Established 1908

To: Ray Shindler

From: Thomas S. Bunn III

Date: September 11, 2017

Re: Groundwater allocations in the Borrego Springs basin

Question Presented

The Borrego Valley Groundwater Sustainability Agency must come up with a plan to make the Borrego Springs groundwater basin sustainable. The only practical way to do this is to limit groundwater extractions. Must the extractions be limited in proportion to current use?

Brief Answer

No. The agency may allocate groundwater extractions by any reasonable method. One reasonable method is to allocate the Borrego Water District its current pumping, and reduce agricultural and golf course pumping over time to a sustainable level. However, if there is an adjudication of groundwater rights, it is likely that the allocation would have to be made consistent with the adjudicated rights.

Statement of Facts

The Borrego Springs basin has been overdrafted for many years. The Department of Water Resources has designated the basin as a medium-priority basin subject to critical conditions of overdraft.

The principal groundwater users in the basin are the Borrego Water District, agricultural users, golf courses, domestic wells, and Anza-Borrego State Park.

The Borrego Valley Groundwater Sustainability Agency, comprising the Water District and San Diego County, has been designated as the groundwater sustainability agency (GSA) for the basin. Under the Sustainable Groundwater Management Act (SGMA), the GSA must develop and implement a groundwater sustainability plan by January 31, 2020. The plan must achieve sustainability for the basin within 20 years.

There is no practical source of supplemental water to the basin. As a result, to achieve sustainability, groundwater extractions must be substantially reduced.

I44-1

Extraction Allocations Under SGMA

If overdraft conditions are identified in a basin, SGMA requires the groundwater sustainability plan to contain projects or management actions to mitigate the overdraft. [1] SGMA provides groundwater sustainability agencies with an array of powers to implement and enforce the groundwater sustainability plan, including the power to establish groundwater extraction allocations.[2] Neither SGMA nor the implementing regulations provide any detail or standards about how allocations are to be made. It appears that GSAs have broad discretion to allocate extractions, as long as the sustainability goals of the plan are met.

That discretion is not unlimited, however. Groundwater management under SGMA must be consistent with Article X, Section 2 of the California Constitution, which provides that water must be used reasonably and beneficially.[3] Groundwater sustainability agencies must consider the interests of all beneficial uses and users of groundwater, including both holders of overlying groundwater rights and public water systems.[4] Most significantly, groundwater sustainability plans may not alter groundwater rights.[5] Specifically, a limitation on extractions by a groundwater sustainability agency is not a final determination of rights to extract groundwater.[6]

An argument can be made that the foregoing provisions mean that groundwater extraction allocations must be according to water rights. That would be consistent with the legislature's statement that its intent is to "respect overlying and other proprietary rights to groundwater."[7] But there is no express directive in the statute to this effect. Contrast that with the express statement in the statute that federally reserved water rights to groundwater "shall be respected in full."[8] Statements of legislative intent are generally not binding in and of themselves, but are used by courts to interpret other provisions of a statute.

Another consideration is that groundwater law is complex, and it is impossible to state with certainty how a court would adjudicate rights in any particular basin. GSAs themselves do not have the power to determine water rights.[9]

In my opinion, the most reasonable interpretation of the statute, and the one a court is most likely to adopt, is that GSAs may allocate extractions by any reasonable method. But if there is an adjudication of

I44-1 Cont.

[1] Wat. Code §10727.2(d)(3); Regs. §354.44.
[2] Wat. Code §10726.4(a)(2).
[3] Wat. Code §10720.5(a).
[4] Wat. Code §10723.2.
[5] Wat. Code §10720.5(b).
[6] Wat. Code §10726.4(a)(2).
[7] SGMA uncodified findings (b)(4).
[8] Wat. Code §10720.3(d).
[9] Wat. Code §10726.8(b).

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the basin, the allocations must be made consistent with the adjudicated water rights. Otherwise, the GSA's allocation would effectively alter groundwater rights, in contravention of the statute.[10]

If the interested parties in a basin are unable to agree on a method of allocating extractions, it is very possible that an adjudication will be filed to determine water rights. Therefore, in their negotiations, parties will be comparing proposals with the likely results of an adjudication. The following overview is intended to help determine what those results might be.

California Groundwater Rights Law

Groundwater rights in an unadjudicated basin are traditionally classified as *overlying, appropriative*, or *prescriptive*. There is also a *self-help right,* as will be described below. And there are other types of rights I don't discuss here, including imported water return flow rights and federal reserved rights.

Overlying rights are the right of a property owner overlying the basin to pump water for reasonable beneficial use on the overlying land. Overlying rights are not quantified, but are *correlative*—that is, in times of shortage, all have equal priority and all must reduce pumping.

Appropriative rights are rights not used on overlying land, and include rights of water suppliers such as the District. They are lower in priority than overlying rights. If the basin is overdrafted, then appropriative rights must be curtailed first.

If an appropriator nevertheless pumps a quantity of water in an overdrafted basin continuously for over five years, and if certain other conditions—such as notice of the overdraft—are met, the appropriator gets a *prescriptive right* to continue to pump that quantity of water. For purposes of this analysis, I am assuming that the District has a prescriptive right in some amount.

The five-year period is referred to as the *prescriptive period*. There can be multiple prescriptive periods in a single basin, as long as each one is a five-year period of continuous overdraft. However, SGMA provides that prescriptive periods may not include the period between January 1, 2015, and the adoption of a groundwater sustainability plan.[11]

A prescriptive right is higher priority than an overlying right. However, if an overlying landowner has pumped during the prescriptive period, it acquires a *self-help right* to the amount pumped during that period. The self-help right is a quantification of the overlying right, and is equal in priority to a prescriptive right.

It is apparent that in many cases, the total self-help rights plus the prescriptive rights will exceed the safe yield of the basin. The California Supreme Court has stated that when this happens, the prescriptive right is reduced, so that "the ratio of the prescriptive right to the remaining rights of the private defendant [is] as favorable to the former in time of subsequent shortage as it was throughout

I44-1 Cont.

[10] Wat. Code §10720.5(b).
[11] Wat. Code §10720.5.

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the prescriptive period."[12] It is not completely clear what this means, but I believe it means that the prescriptive right is the same percentage of the safe yield as the prescriptive pumping is of total pumping during the prescriptive period. For example, if the prescriptive pumping was 10% of the total pumping during the prescriptive period, then the prescriptive right would be 10% of the safe yield during that period.

Groundwater Rights in Borrego Springs

I assume that the Water District is the only appropriator that can claim prescriptive rights. Applying these principles in a manner that favors the Water District, we would choose a prescriptive period in which the Water District's continuous pumping was the greatest percentage of the total pumping. As mentioned above, that period must end before January 1, 2015. The Water District would be entitled to a prescriptive right equal to this percentage of the safe yield during that period. This will probably be a different amount than reducing all pumping proportionately from current amounts, because it depends on historical pumping, not current pumping.

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. Some have argued that these statutes mean that domestic and municipal uses should get priority in times of shortage. To my knowledge, no case has ever held that these statutes create a new category or priority of groundwater rights. 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.[13]

For purposes of groundwater allocations under SGMA, I believe that 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.

Conclusion

The groundwater sustainability agency has broad discretion about how to allocate groundwater extraction among the competing uses, and is not required to reduce all users equally. There are several arguments for reducing domestic and municipal users less. It is a reasonable position that they should get what they are currently using, perhaps with a modest reduction for water conservation/water

[12] *City of Los Angeles v. City of San Fernando* (1975) 14 Cal.3d 199, 293.
[13] *City of Santa Maria v. Adam* (2012) 211 Cal.App.4th 266, 297.

I44-1
Cont.

efficiency, and that the remainder of the reduction should fall on irrigation users. Borrego Water District should be taking this position. Ultimately, the results of the negotiation may depend on the parties' perception of the likelihood of an adjudication, and the likely results in any adjudication.

I44-1 Cont.

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Letter I44

Commenter: Ray Shindler
Date: September 11, 2017

I44-1 The Groundwater Sustainability Agency (GSA) received an email from Ray Shindler with an attached September 11, 2017, memorandum regarding "Groundwater allocations in the Borrego Springs basin."

This comment does not address the adequacy of the Draft Groundwater Sustainability Plan (GSP), and therefore, no further response is required or necessary.

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Comment Letter I45

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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.)

I45-1

"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*.

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I45-1 Cont.

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.

I45-1 Cont.

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.

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Letter I45

Commenter: Thomas Bunn
Date: October 24, 2017

I45-1 The Groundwater Sustainability Agency (GSA) received an email from Ray Shindler with an attached October 24, 2017, memorandum regarding "Response to Agricultural Representative Agenda Paper #1."

This comment does not address the adequacy of the Draft Groundwater Sustainability Plan (GSP), and therefore, no further response is required or necessary.

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Comment Letter I46

From: Dr.Saul L.Miller <drmiller@saulmiller.com>
Sent: Monday, April 29, 2019 9:04 AM
To: LUEG, GroundWater, PDS
Subject: Borrego Springs significant overdraft (SGMA)
Attachments: A Comment to the Board of the Borrego Water District.docx

Dr. Saul L. Miller
Performance Psychologist
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1

A Comment to the Borrego Water District Board and San Diego County

As a ratepayer very interested in the water situation, I would like to state the following: First, I appreciate the Borrego Water District Board has an important and challenging task to ensure that the ratepayers in the community are well served. I also appreciate they are efforting to do what they think is best.

With SGMA, there is the need to come up with an acceptable plan in the relatively near future to resolve the aquifer's critical overdraft. This is, of course, challenging.

The data are clear: Ratepayers, who use only about 10% of the water, have made significant reductions in their water use in the recent past.

It is also clear that Agriculture has overwhelmingly been the major pumper consuming approximately 70% of the water, thus principally causing the overdraft. Furthermore, agriculture's water use in recent decades has increased.

I am not privy to meetings between the BWD Board, Ag representatives and the recreational water use representatives. There has been very little disclosure as to what has been and is transpiring. However, from what I have learned to date, I do not believe that ratepayers' wishes are being well represented at these meetings.

I46-1

Whereas it is understood we all have to reduce our water use to deal with the problem and the demands of SGMA, I and many of the ratepayers I have spoken with, feel that the ratepayers should not be asked to reduce the same proportional amount as the Ag people who through their 70% use of the water have been a principal cause of the problem.

If ratepayers were to reduce 45-50% instead of 75% as has been rumored, we would appreciably increase the water available to us… and would need to purchase less in the future. Further, that increase of 25- 30% would have relatively little impact on the available water for the 20-30 Ag pumpers.

I46-2

Three additional comments: 1. Clearly, the aquifer is severely stressed. The sooner Ag is made to reduce their intense pumping the better it is for preserving water quality and quantity.

I46-3

2. In addition, every effort must be made to create some rules to limit hoarding. Without rules, it is conceivable certain interests with deep pockets could purchase excessive amounts of water.

I46-4

3. It has been suggested it will be very expensive to refurbish and maintain the existing water infrastructure in the future. The BWD Board suggests that money will be available to buy whatever water we need in the future AND to maintain the aging infrastructure. Yet no clear plan has been articulated as to where this money will come from.

I46-5

Thank you for your consideration of these matters.
Respectfully,
Saul L. Miller Ph.D.

Letter I46

Commenter: Saul Miller
Date: April 29, 2019

I46-1 The comment provides introductory statements regarding the need to resolve the overdraft and recent water use patterns of the Borrego Water District and agricultural pumpers.

This comment does not address the adequacy of the Draft Groundwater Sustainability Plan (GSP), and therefore, no further response is required or necessary.

I46-2 The Groundwater Sustainability Agency (GSA) acknowledges the commenter's request that Borrego Water District not be subject to the same proportional reductions as agricultural pumpers. The commenter further suggests reductions of 45 to 50% instead of 75% would appreciably increase water available to the Borrego Water District.

While the GSP does not set specific groundwater use reductions, the GSP includes Project and Management Action (PMA) No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

The comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I46-3 The GSA acknowledges the commenter's request to front load groundwater reductions for agricultural pumpers.

While the GSP does not set specific groundwater use reductions, the GSP includes PMA No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

I46-4 The GSA acknowledges the comment that rules to limit hoarding should be included to protect against interests with purchasing excessive amounts of water. Section 4.2.1 of the GSP includes a summary of the process to develop a water trading program which includes identifying unintended consequences of the Water Trading Program to be addressed in development of governing documents (e.g., hoarding, speculation, price fixing, collusion).

I46-5 The comment requests consideration regarding BWD expenses of future water and infrastructure needs.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

May 14, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

As the Ratepayer Representative for the Groundwater Sustainability Plan we've drafted under SGMA, a plan currently under public review, I'd like to briefly outline what we, the ratepayers of Borrego Springs, wish to see implemented in our process towards water sustainability:

- We, the ratepayers, who use 10% of the water available in the basin and are the only pumpers who have reduced our water usage significantly over these last few years. We therefore believe that the burden of all mandatory reductions should fall proportionately on the other pumpers in the valley. BWD should be allocated a minimum of 1700 AFY as soon as implementation is to begin.
- We strongly believe that a 20-year implementation period is much too long. Our aquifer has already dropped dramatically over the last 30 years. Prolonging this implementation can only affect the quality of our water and the cost of its extraction.
- The valley's native flora and fauna communities have been severely affected as a result of the long-term overdraft of the basin. In order to preserve the remaining ecosystems, two things must happen: first, there must be a set-aside for them; and second, the implementation period must be drastically shortened so as to ensure the survival of the remaining communities.

Although I do know that the position taken by the GSA is that proportional reductions and a 20-year implementation period, along with a hands-off position regarding GDEs, are currently the intended approaches to the GSP, what I would like to hear from you is, if you were in our shoes, what Projects and Management Actions would you utilize, and how would you go about implementing the above four objectives we, the ratepayers, wish to see implemented.

Thank you so much for your unrelenting efforts over these last few years. The GSP for the Borrego Basin is truly a benchmark piece of work that has laid the groundwork for all future efforts towards implementing the sustainable use the groundwater in our valley.

Best regards,

Gary Haldeman
Ratepayer Representative,
Advisory Committee, GSP
P.O. Box 2708
Borrego Springs CA 92004
gary@garybaldy.com

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 15, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

I'd like to add a second letter to the mix, as the Ratepayer Representative for the GSP in order to address a single item of great interest to me and to the ratepayers I represent.

As you know, my involvement on the AC, as the Ratepayer Representative, only began late in October, early November. In some senses, I have been at a disadvantage when I look at my fellow representatives. On the other hand, I have had the benefit of a fresh, unimpeded perspective of the process.

Early on during the process, the baseline period selected to determine the BPAs for the basin pumpers is the 5-year period from January 1, 2010 to January 1, 2015. "This rate is determined by adding up the maximum amount of water used by each pumper of groundwater in the Subbasin" over this 5-year period.

At least in the initial years of plan implementation, this figure is one of the most important elements because it will determine, in BWD's case, when the ratepayer first begins to feel the effect of the reductions: the greater the BPA, the longer it will take to affect our water usage.

The 5-year time frame, in conjunction with the period being limited to only these five years, is certainly the worst possible situation for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.

During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 AF. These figures are a clear indicator that the parties responsible for this timeframe of overdraft were pumpers other than BWD: 70% due to farming, 20% due to recreation/golf courses.

Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer singularly, and unquestionably favors farmers first, and golf courses next.

This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit. How did this happen? How was the decision made?

I believe, in the spirit of fairness, that the period should be at least 10 years, perhaps the 10 years prior to 2010: 2000-2010. It should certainly not be based on the period of time when BWD began its reductions and, as the figures above show, other pumpers increased their water use.

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GREGORY HINES
USA Forever

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

The aquifer that serves Borrego Springs has been in overdraft for decades and classifies as critical overdraft today. While residents have responded to this crisis by cutting back water use by over 50% in the past 40 years, agriculture has responded by drilling deeper wells and expanding. The net result is a water table that has already dropped over 100 feet and drops an additional 1-2 feet per year.

Borrego Springs is also in an uncomfortably unique situation in California: due to our geographic isolation we are not able to import water from elsewhere in the state. The aquifer that serves our community is our only source of water and it is in a 70% overdraft situation. Of the water removed from our aquifer annually, agriculture pumps 70%, golf courses pump 20% and residential and business rate-payers in Borrego use the remaining 10% of the total

As a Borrego Springs homeowner, I ask you to support the four objectives toward water sustainability stated by the Borrego Springs Water District Ratepayers for the Groundwater Sustainability Plan (GSP) under SGMA (Sustainable Water Management Act). This plan is currently under public review:

1. BWD Ratepayers should be allocated an initial minimum of 1700 AFY. This total represents an over 50% decrease in our historical average, a result of significant conservation efforts that are already in place. This allocation (1700 AFY) should be excluded from any reductions.
2. The 20-year implementation period set out in our GSP should be shortened significantly or planned reductions should be front-loaded. Straight-line reductions over a 20 year period will result in a greatly lowered aquifer, costlier water pumping and water of poorer quality.
3. Water quality is an essential concern, it should be addressed immediately, and if/when water quality issues are determined the parties responsible must be held to account for any remediation that might be necessary.
4. Groundwater Dependent Ecosystems must be considered in the overall water allocation calculus and timing of reductions. Water set-asides for GDEs are meaningless if the "set-aside water" sits in a drastically reduced water table, unavailable to the ecosystems it is intended to support.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.

During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 AF. These figures are a clear indicator that the parties responsible for the overdraft were pumpers other than BWD: 70% due to farming, 20% due to recreation/golf courses.

Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer, and unquestionably favors farmers first, and golf courses next.

This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit.

Sincerely,
Diane Martin (Roadrunner #225)

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May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

At one time, many decades ago, it was believed that Borrego Springs had an unlimited water supply. With that false belief and extensive advertising came numerous agricultural farms, golf courses and, of course, residents to Borrego Springs.

Through modern day monitoring and measuring, unfortunately, we have determined the Borrego Springs ground water supply has dropped drastically and alarmingly the past 30 years. Although the residents use 10% of the water supply, agriculture uses 70% and golf courses use 20%.

The resident/ratepayers have buckled down and reduced their use over the last 10 years from some 2700 acre feet/year to 1700 acre feet/year and in the process have seen their water bills increase three times! Distressingly, agriculture has not significantly reduced their water usage nor have the golf courses.

Change is hard but we must all work together as a community to save the town of Borrego Springs. Following are our four main concerns, beliefs and objectives:

- We believe that BWD/Ratepayers should be allocated an initial minimum of 1700 AFY; this allocation should be excluded from any **further** reductions.
- We believe that the 20-year implementation period set out under SGMA should be shortened.
- We believe that water quality is an essential concern, it should be addressed immediately, and if/when water quality issues are determined, the parties responsible are held to account for any remediation that might be necessary.
- We believe that the GDEs (Groundwater Dependent Ecosystems) must be considered in the overall water allocation calculus.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.

During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 AF. These figures are a clear indicator that the parties responsible for the overdraft were pumpers other than BWD: 70% due to farming, 20% due to recreation/golf courses.

Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer, and unquestionably favors farmers first, and golf courses next.

This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit.

A. Donald
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Borrego Springs, CA 92004

SAN DIEGO CA 920
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County of San Diego
Planing & Development Services
c/o Mr. Jim Bennet
5510 Overland Ave, Suite 310
San Diego, CA 92123

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Development Services

92123-123985

County of San Diego

Planning & Development Services

C/O: Jim Bennet

5510 Overland Avenue, Suite 310

San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan

Borrego Valley Groundwater Basin

Borrego Springs Sub-basin

Dear Mr. Bennett;

As the Ratepayer Representative for the Groundwater Sustainability Plan we've drafted under SGMA, a plan currently under public review, I'd like to briefly outline what we, the ratepayers of Borrego Springs, wish to see implemented in our process towards water sustainability:

- We, the ratepayers, who use 10% of the water available in the basin and are the only pumpers who have reduced our water usage significantly over these last few years. We therefore believe that the burden of all mandatory reductions should fall proportionately on the other pumpers in the valley. BWD should be allocated a minimum of 1700 AFY as soon as implementation is to begin.
- We strongly believe that a 20-year implementation period is much too long. Our aquifer has already dropped dramatically over the last 30 years. Prolonging this implementation can only affect the quality of our water and the cost of its extraction.
- The valley's native flora and fauna communities have been severely affected as a result of the long-term overdraft of the basin. In order to preserve the remaining ecosystems, two things must happen: first, there must be a set-aside for them; and second, the implementation period must be drastically shortened so as to ensure the survival of the remaining communities.

Although I do know that the position taken by the GSA is that proportional reductions and a 20-year implementation period, along with a hands-off position regarding GDEs, are currently the intended approaches to the GSP, what I would like to hear from you is, if you were in our shoes, what Projects and Management Actions would you utilize, and how would you go about implementing the above four objectives we, the ratepayers, wish to see implemented.

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This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit.

Thank you so much for your unrelenting efforts over these last few years. The GSP for the Borrego Basin is truly a benchmark piece of work that has laid the groundwork for all future efforts towards implementing the sustainable use the groundwater in our valley.

Best regards,

Herbert Stone

PO Box !929

3275 West Star Rd.

Borrego Springs, CA 92004

Herbert Stone
PO Box 1929
Borrego Springs, CA
92004

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15 MAY 2019 PM 5 L

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May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

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The resident/ratepayers have buckled down and reduced their use over the last 10 years from some 2700 acre feet/year to 1700 acre feet/year and in the process have seen their water bills increase three times! Distressingly, agriculture has not significantly reduced their water usage nor have the golf courses.

Change is hard but we must all work together as a community to save the town of Borrego Springs. Following are our four main concerns, beliefs and objectives:

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Very Truly Yours, Frederic J. Wise

Karen & Fred Wise
315 S. Coast Hwy 101, Ste U, PMB 184
Encinitas, CA 92024

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5510 Overland Ave, #310
San Diego, CA 92123-1239

Attn: Jim Bennet

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C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

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Borrego Valley Groundwater Basin
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As a Borrego Springs homeowner, I ask you to support the four objectives toward water sustainability stated by the Borrego Springs Water District Ratepayers for the Groundwater Sustainability Plan (GSP) under SGMA (Sustainable Water Management Act). This plan is currently under public review:

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THANK YOU,
Jack Sims

Sims
P.O. Box 801
Borrego Springs, CA
92004

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County of San Diego
Planning & Development Services
c/o Jim Bennet
5510 Overland Ave. Suite 310
San Diego, CA 92123

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Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

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We, the ratepaying residents and businesses consume only 10%. Both residents and businesses have reduced consumption, in good faith, while the farmers have continued to install larger irrigation pipes and drill deeper down, thereby increasing their consumption. They are taking the amount that we have earnestly tried to preserve.

Agriculture was established in Borrego Springs before the town. They own the rights to the water. The town has grown as the agriculture has grown. There are now more people than orchards. People are more important than grapefruits.

Borrego Springs is a dazzling gem in this desert. We are a community of artists, anthropologists, archeologists, astronomers, paleontologists, naturalists, botanists, hikers, bikers, outdoor enthusiasts, all inspired by the endless wonder this desert provides.

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Regards,
Joanne Sims

P.O. Box 801
BS, CA 92004

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Jim Bennet
5510 Overland Ave. #310
San Diego, CA 92123

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Thank you,

James Roller
561 Catarina Dr.
Borrego Springs, CA
92004

James P. Roller
PO Box 2368
Borrego Springs, CA 92004
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Best regards,

Jeff Meagher

J. Meagher
PO Box 1290
Borrego Springs CA 92004

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County of S.D. Planning & Development Services
% Jim Bennet
5510 Overland Ave, Suite 310
San Diego, CA 92123

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County of San Diego May 14, 2019

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C/O: Jim Bennet
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San Diego, CA 92123

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Warmest Regards,
Heather Harrison
P.O. Box 1639
Borrego Springs, CA 92004

760.767.0145
LJHIBISCUS2@AOL.COM

Heather Davidson
PO Box 1639
Borrego Spgs., CA 92004

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Sincerely,

Linda A. Roller

Linda A. Roller
PO Box 2368
Borrego Springs, CA 92004

Linda Roller
PO Box 2368
Borrego Spgs., CA 92004

SAN DIEGO CA 920
15 MAY 2019 PM 2 L

Co. of S.D. Planning + Development Services
c/o Tim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

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92123-123585

John and Mary Delaney
P. O. Box 2537
Borrego Springs, CA 92004

Mr. Bennett,
Thank you for listening to our concerns. We're counting on you to save our town and the Park.

May 16, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

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John Delaney

Mary Delaney

John and Mary Delaney
P. O. Box 2537
Borrego Springs, CA 92004

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Jim Bennett

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Ellen Fitzpatrick
3457 Broken Arrow Rd, BS, CA 92004-2524

9204-2524

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5510 Overland Avenue, Suite 310
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Borrego Springs is also in an uncomfortably unique situation in California: due to our geographic isolation we are not able to import water from elsewhere in the state. The aquifer that serves our community is our only source of water and it is in a 70% overdraft situation. Of the water removed from our aquifer annually, agriculture pumps 70%, golf courses pump 20% and residential and business rate-payers in Borrego use the remaining 10% of the total

As a Borrego Springs homeowner, I ask you to support the four objectives toward water sustainability stated by the Borrego Springs Water District Ratepayers for the Groundwater Sustainability Plan (GSP) under SGMA (Sustainable Water Management Act). This plan is currently under public review:

1. BWD Ratepayers should be allocated an initial minimum of 1700 AFY. This total represents an over 50% decrease in our historical average, a result of significant conservation efforts that are already in place. This allocation (1700 AFY) should be excluded from any reductions.
2. The 20-year implementation period set out in our GSP should be shortened significantly or planned reductions should be front-loaded. Straight-line reductions over a 20 year period will result in a greatly lowered aquifer, costlier water pumping and water of poorer quality.
3. Water quality is an essential concern, it should be addressed immediately, and if/when water quality issues are determined the parties responsible must be held to account for any remediation that might be necessary.
4. Groundwater Dependent Ecosystems must be considered in the overall water allocation calculus and timing of reductions. Water set-asides for GDEs are meaningless if the "set-aside water" sits in a drastically reduced water table, unavailable to the ecosystems it is intended to support.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.

During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 AF. These figures are a clear indicator that the parties responsible for the overdraft were pumpers other than BWD: 70% due to farming, 20% due to recreation/golf courses.

Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer, and unquestionably favors farmers first, and golf courses next.

This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit.

Thank you for your consideration.

Sincerely,

Michael L. Wells

Borrego Springs, CA

Michael Wells
PO Box 298
Borrego Springs, CA 92004

SAN DIEGO CA 920
17 MAY 2019 PM 5 L

County of San Diego
Planning & Development Services
c/o Jim Bennet
5510 Overland Ave, Suite 310
San Diego, CA 92123

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County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

The aquifer that serves Borrego Springs has been in overdraft for decades and classifies as critical overdraft today. While residents have responded to this crisis by cutting back water use by over 50% in the past 40 years, agriculture has responded by drilling deeper wells and expanding. The net result is a water table that has already dropped over 100 feet and drops an additional 1-2 feet per year.

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As a Borrego Springs homeowner, I ask you to support the four objectives toward water sustainability stated by the Borrego Springs Water District Ratepayers for the Groundwater Sustainability Plan (GSP) under SGMA (Sustainable Water Management Act). This plan is currently under public review:

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During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 AF. These figures are a clear indicator that the parties responsible for the overdraft were pumpers other than BWD: 70% due to farming, 20% due to recreation/golf courses.

Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer, and unquestionably favors farmers first, and golf courses next.

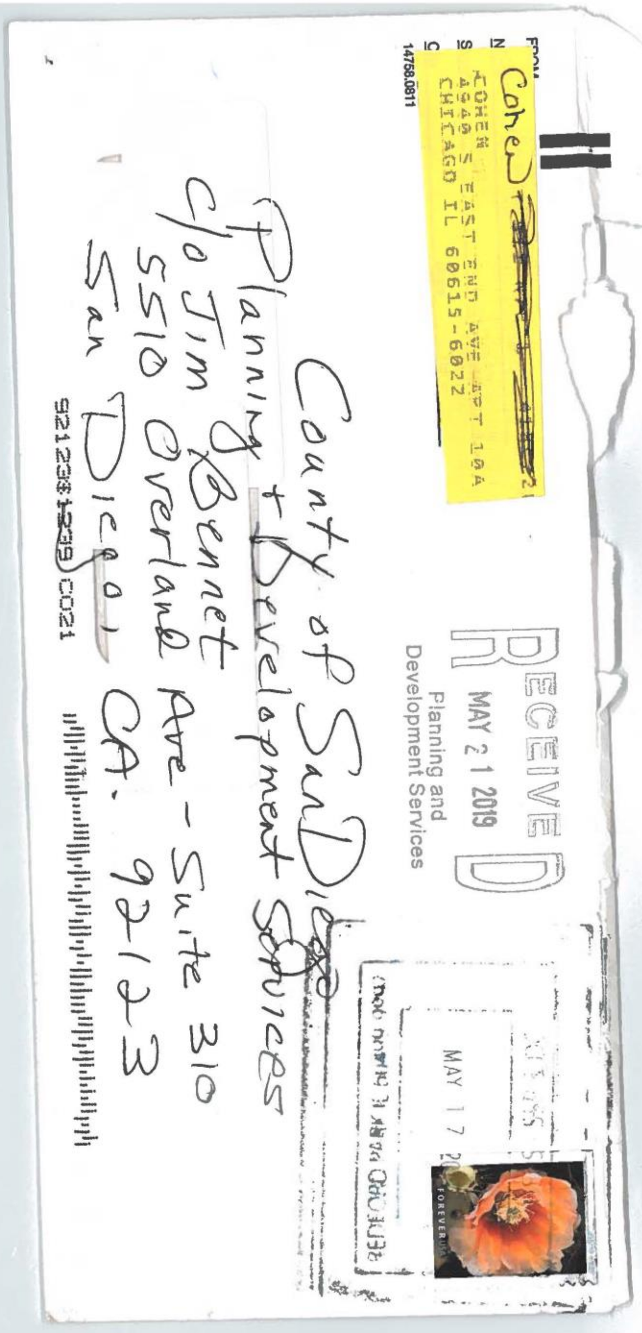
This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit.

Sincerely,

Harold and Joanne Cohen

618 Tilting T Drive

Borrego Springs, California 92004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Planning & Development Services
C/O Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

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As a Borrego Springs homeowner who is committed to the rehabilitation of our aquifer, I ask you to support the four objectives toward water sustainability stated by the Borrego Springs Water District Ratepayers for the Groundwater Sustainability Plan (GSP) under SGMA (Sustainable Water Management Act). This plan is currently under public review:

1. BWD Ratepayers should be allocated an initial minimum of 1700 AFY. This total represents an over 50% decrease in our historical average, a result of significant conservation efforts that are already in place. This allocation (1700 AFY) should be excluded from any reductions.
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Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer, and unquestionably favors farmers first, and golf courses next.

Sincerely,

Jennifer Edwards

Jennifer Edwards
P.O. Box 1858
312 Ocotillo Circle
Borrego Springs, CA 92004
superflute@gmail.com

J. Edwards
PO Box 1858
Borrego Springs, CA
92004

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County of San Diego
Planning & Development Services Attn: Jim Bennett
5510 Overland Avenue, Ste 310
San Diego, CA
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C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

As the Ratepayer Representative for the Groundwater Sustainability Plan we've drafted under SGMA, a plan currently under public review, I'd like to briefly outline what we, the ratepayers of Borrego Springs, wish to see implemented in our process towards water sustainability:

- We, the ratepayers, who use 10% of the water available in the basin and are the only pumpers who have reduced our water usage significantly over these last few years. We therefore believe that the burden of all mandatory reductions should fall proportionately on the other pumpers in the valley. BWD should be allocated a minimum of 1700 AFY as soon as implementation is to begin.
- We strongly believe that a 20-year implementation period is much too long. Our aquifer has already dropped dramatically over the last 30 years. Prolonging this implementation can only affect the quality of our water and the cost of its extraction.
- The valley's native flora and fauna communities have been severely affected as a result of the long-term overdraft of the basin. In order to preserve the remaining ecosystems, two things must happen: first, there must be a set-aside for them; and second, the implementation period must be drastically shortened so as to ensure the survival of the remaining communities.

Although I do know that the position taken by the GSA is that proportional reductions and a 20-year implementation period, along with a hands-off position regarding GDEs, are currently the intended approaches to the GSP, what I would like to hear from you is, if you were in our shoes, what Projects and Management Actions would you utilize, and how would you go about implementing the above four objectives we, the ratepayers, wish to see implemented.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.

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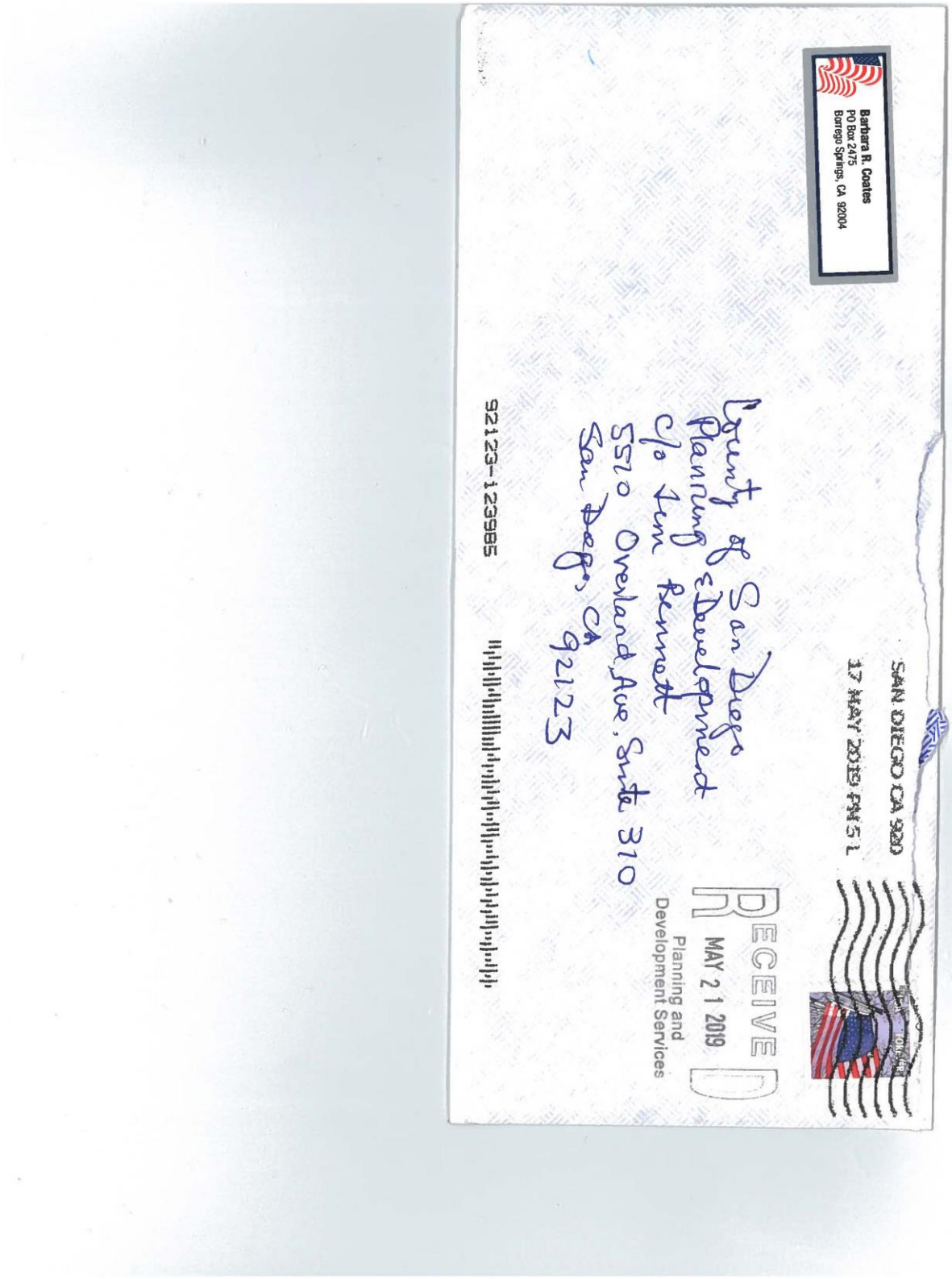
This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit.

Thank you so much for your unrelenting efforts over these last few years. The GSP for the Borrego Basin is truly a benchmark piece of work that has laid the groundwork for all future efforts towards implementing the sustainable use the groundwater in our valley.

Best regards,

Barbara Coates
PO Box 2475
Borrego Springs, CA
92004


Barbara R. Coates
PO Box 2475
Borrego Springs, CA 92004
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Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

I am a year-round resident of Borrego Springs, and I really appreciate your hard and long work in crafting the GSP. I would like to share with you some of my main concerns for our town. Water, water, and water!

The Borrego Valley aquifer has been drastically over-drafted for many years. We must comply with state law, the California Groundwater Sustainability Act, and come into compliance by 2040. Current and historic water use in the basin has been as follows:

- Municipal pumpers (Borrego Water District) - 10%
- Recreational pumpers (Golf courses) - 20%
- Agricultural pumpers (Citrus, palm trees, herb and vegetable farms) - 70%

The current Groundwater Sustainability Plan (GSP) seems to recommend an across the board reduction of 74%, which would maintain the current distribution percentages. The residential water use has already been cut from a reported historic high of 3500 acre feet/year to the current level of 1700 acre feet/year, a cut of 50%. Our community has done this through the conscious effort of removing fountains and swimming pools, grass and water intensive landscaping, and converting to low-flow toilets.

The recreational and agricultural users have been slow or completely unwilling to make similar reductions, continuing to deplete our aquifer. Clearly the major contributor to the aquifer overdraft has been and continues to be agriculture. Although agriculture has been an important part of our community, it is unreasonable to assume that farming should continue to use 70% of the allocated water.

Therefore, we have identified some objectives that must be included in the implementation of the Groundwater Sustainability Plan.

- The municipal allotment should be no less than the 1700 acre feet/year which is currently being used by the BWD. This is our only source of drinking water, which should be a priority for our community. This would allow for some limited growth of homes and businesses.
- We believe that sustainability should be achieved sooner than the mandated 20 year period. The sooner we can become sustainable, the better chance we have to maintain the water quality of our aquifer. This will also have a beneficial impact on some of the endangered ecosystems in the basin.

I look forward to hearing from you.

Tim [illegible]
3446 Carrizo Rd X 625
Borrego Springs, Ca 92004

Timothy M. Kight
PO Box 625
Borrego Springs, CA 92004-0625

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County of San Diego
Planning & Development Services
C/O Ding Bennet
5510 Overland Ave #310
San Diego CA 92123

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County of San Diego
Planning & Development Services
c/o Mr. Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 17, 2019

EXPRESS U. S. MAIL

Re: Borrego Springs Groundwater Sustainability Plan

Dear Mr. Bennett:

I have been a Borrego Springs snowbird and BWD ratepayer for 30 years. I have a small home at Rams Hill. Though I appreciate and use the golf courses in Borrego, including the ones Rams Hill and Borrego Springs Resort, I am concerned about the water overdraft caused primarily by extensive citrus farming and golfing in Borrego.

We ratepayers have reduced our use over the last 10 years from some 2700 acre feet/year to 1700 acre feet/year and in the process have seen their water bills increase three times! I have served on the board of my neighborhood association during the same period of time, and our neighborhood association has gone to great effort to significantly reduce landscaping water use. **Neither agriculture nor golf courses have significantly reduced their water usage.**

Change is hard but we must all work together as a community to save Borrego Springs. I attended as many of the ratepayer meetings as I could when I was in Borrego this year. I agree completely with the four well stated and well documented concerns, beliefs and objectives of the group led by Gary Haldeman:

- BWD/Ratepayers should be allocated an initial minimum of 1700 AFY; this allocation should be excluded from any further reductions.
- The 20-year implementation period set out under SGMA should be shortened.
- Water quality should be addressed immediately, and if/when water quality issues are determined, the parties responsible are held to account for any remediation that might be necessary.
- GDEs must be considered in the overall water allocation calculus.

BPAs are one of the most important elements in the implementation process. The timeframe in the GSP – 2010 to the end of 2014 – is the worst possible interval for BWD ratepayers. BWD began reducing its usage in 2003, when it pumped 3926 AF and has responsibly reduced its water usage to 1700 now. During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 AF. The only conclusion possible is that farms and golf courses are responsible for the overdraft. **Thus, choosing 2010-2015 as the baseline years to determine unquestionably favors farmers and golf courses over the ratepayers and is patently unfair, arbitrary and manipulative**.

I respectfully request that:

- **BWD/Ratepayers be allocated an initial minimum of 1700 AFY and that this allocation not be further reduced**
- **The 20-year implementation period be shortened**
- **Water quality be addressed immediately**
- **Consideration be given to GDEs in the overall water allocation.**

Sincerely,

Mary Susan Leahy

Mary Susan Leahy
9 McKinley Street
Concord, New Hampshire 03301-2700


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Planning & Development Services
C/O: Jim Bennett
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 15, 2019

Ref: Groundwater Sustainability Plan, Borrego Valley Groundwater Basin, Borrego Springs Sub-basin

Dear Mr. Bennett;

I am a 40-year, year-round resident, homeowner, and manager of a business and employer in Borrego Springs. I thank you for your excellent, hard work in crafting the GSP. I would like to share with you some of my main concerns for our town related to water.

The Borrego Valley aquifer has been drastically over-drafted for many years. We must comply with state law, the California Groundwater Sustainability Act, and come into compliance by 2040. Current and historic water use in the basin has been as follows:

- Municipal pumpers (Borrego Water District) - 10%
- Recreational pumpers (Golf courses) - 20%
- Agricultural pumpers (Citrus, palm trees, herb and vegetable farms) - 70%

The current Groundwater Sustainability Plan (GSP) seems to recommend an across the board reduction of 74%, which would maintain the current distribution percentages. The residential water use has already been cut from a reported historic high of 3,500 acre feet/year to the current level of 1,700 acre feet/year, a cut of 50%. Our community has done this through the conscious effort of removing fountains and swimming pools, grass and water intensive landscaping, and converting to low-flow toilets.

The recreational and agricultural users have been slow or completely unwilling to make similar reductions, continuing to deplete our aquifer. Clearly the major contributor to the aquifer overdraft has been and continues to be agriculture. Although agriculture has been an important part of our community, it is unreasonable to assume that farming should continue to use 70% of the allocated water.

Therefore, we have identified some objectives that must be included in the implementation of the GSP:

- The municipal allotment should be *no less than* the 1,700 acre feet/year, which is currently being used by the BWD. This is our only source of drinking water, which should be a priority for our community. This would allow for some limited growth of homes and businesses.

- We believe that sustainability should be achieved sooner than the mandated 20 year period. The sooner we can become sustainable, the better chance we have to maintain the water quality of our aquifer. This will also have a beneficial impact on some of the endangered ecosystems in the basin.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP, 2010 to the end of 2014, is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3,926 AF. In 2010, BWD pumped 2,730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1,700 AF.

During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 AF. These figures are a clear indicator that the parties responsible for the overdraft were pumpers other than BWD: 70% due to farming, 20% due to recreation/golf courses.

Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer, and unquestionably favors farmers first and golf courses next. This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit. Thank you for your attention. I look forward to hearing from you.

Sincerely,
Betsy Knaak

Betsy Knaak, P.O. Box 2021, Borrego Springs, CA 92004-2021 * 760-767-4808 * betsyknaak@gmail.com

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

As the Ratepayer Representative for the Groundwater Sustainability Plan we've drafted under SGMA, a plan currently under public review, I'd like to briefly outline what we, the ratepayers of Borrego Springs, wish to see implemented in our process towards water sustainability:

- We, the ratepayers, who use 10% of the water available in the basin and are the only pumpers who have reduced our water usage significantly over these last few years. We therefore believe that the burden of all mandatory reductions should fall proportionately on the other pumpers in the valley. BWD should be allocated a minimum of 1700 AFY as soon as implementation is to begin.
- We strongly believe that a 20-year implementation period is much too long. Our aquifer has already dropped dramatically over the last 30 years. Prolonging this implementation can only affect the quality of our water and the cost of its extraction.
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Although I do know that the position taken by the GSA is that proportional reductions and a 20-year implementation period, along with a hands-off position regarding GDEs, are currently the intended approaches to the GSP, what I would like to hear from you is, if you were in our shoes, what Projects and Management Actions would you utilize, and how would you go about implementing the above four objectives we, the ratepayers, wish to see implemented.

Thank you so much for your unrelenting efforts over these last few years. The GSP for the Borrego Basin is truly a benchmark piece of work that has laid the groundwork for all future efforts towards implementing the sustainable use the groundwater in our valley.

Best regards,

PO Box 86
Borrego Springs CA
92004

As a 12 year resident of Borrego and director of Borrego Art Institute Pottery Program I see our community as art-rich and a draw for residents and Southern California Tourists. We cannot lose this surprising place.

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

I am a year-round resident of Borrego Springs. I really appreciate your work in crafting the GSP. I would like to share with you some of my main concerns for our town.

As you know, the Borrego Valley aquifer has been drastically over-drafted for many years. We must comply with state law, the California Groundwater Sustainability Act, and come into compliance by 2040. Current and historic water use in the basin has been as follows:

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The recreational and agricultural users have been slow or completely unwilling to make similar reductions, continuing to deplete our aquifer. Clearly the major contributor to the aquifer overdraft has been and continues to be agriculture. Although agriculture has been an important part of our community, it is unreasonable to assume that farming should continue to use 70% of the allocated water. I have recently noticed that agriculture seems to be expanding around town. There are new multi-acre plantings of herbs and flowers that require water where previously there was just open land.

Therefore, it's my belief that the following objectives must be included in the implementation of the Groundwater Sustainability Plan.

- The municipal allotment should be no less than the 1700 acre feet/year which is currently being used by the BWD. This is our only source of drinking water, which should be a priority for our community. The municipal users have already reduced consumption to an almost painful level.

- We believe that sustainability should be achieved sooner than the mandated 20 year period. The sooner we can become sustainable, the better chance we have to maintain the water quality of our aquifer. This will also have a beneficial impact on some of the endangered ecosystems in the basin.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the

interval for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.

During this same period of water reductions by BWD, water storage in the basin was reduced by approximately 160,000 AF. These figures are a clear indicator that the parties responsible for the overdraft were pumpers other than BWD: 70% due to farming, 20% due to recreation/golf courses.
Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer, and unquestionably favors farmers first, and golf courses next. This is patently unfair, arbitrary and manipulative. Please consider using an earlier timeframe for the baseline years to determine BPAs.

Thank you for considering my input.

Sincerely,

Charlene Aron Charlene Aron

437 Pointing Rock Dr., POB 1682

Borrego Springs CA 92004

Charlene Aron
PO Box 1682
Borrego Spgs, CA 92004
SAN DIEGO CA 920
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County of San Diego
Planning & Development Services
c/o Jim Bennett
5510 Overland Av., Suite 310
San Diego CA 92123
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Development Services
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County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 19, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

At one time, many decades ago, it was believed that Borrego Springs had an unlimited water supply. With that false belief and extensive advertising came numerous agricultural farms, golf courses and, of course, residents to Borrego Springs.

Through modern day monitoring and measuring, unfortunately, we have determined the Borrego Springs ground water supply has dropped drastically and alarmingly the past 30 years. Although the residents use 10% of the water supply, agriculture uses 70% and golf courses use 20%.

The resident/ratepayers have buckled down and reduced their use over the last 10 years from some 2700 acre feet/year to 1700 acre feet/year and in the process have seen their water bills increase three times! Distressingly, agriculture has not significantly reduced their water usage nor have the golf courses.

Change is hard but we must all work together as a community to save the town of Borrego Springs. Following are our four main concerns, beliefs and objectives:

- We believe that BWD/Ratepayers should be allocated an initial minimum of 1700 AFY; this allocation should be excluded from any further reductions.
- We believe that the 20-year implementation period set out under SGMA should be shortened.
- We believe that water quality is an essential concern, it should be addressed immediately, and if/when water quality issues are determined, the parties responsible are held to account for any remediation that might be necessary.
- We believe that the GDEs (Groundwater Dependent Ecosystems) must be considered in the overall water allocation calculus.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped

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Thank you for the opportunity to provide input into this extremely important issue. As a resident of Borrego Springs I hope for the implementation of a plan that will be fair to its residents and sensitive to the environmental needs of this unique and spectacular area.

Sincerely,

Sandy Jorgensen-Funk

Sandy Jorgensen-Funk
2826 Back Nine Dr.
Borrego Springs, CA 92004
Sandyjfunk @cox.net

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

The aquifer that serves Borrego Springs has been in overdraft for decades and classifies as critical overdraft today. While residents have responded to this crisis by cutting back water use by over 50% in the past 40 years, agriculture has responded by drilling deeper wells and expanding. The net result is a water table that has already dropped over 100 feet and drops an additional 1-2 feet per year.

Borrego Springs is also in an uncomfortably unique situation in California: due to our geographic isolation we are not able to import water from elsewhere in the state. The aquifer that serves our community is our only source of water and it is in a 70% overdraft situation. Of the water removed from our aquifer annually, agriculture pumps 70%, golf courses pump 20% and residential and business rate-payers in Borrego use the remaining 10% of the total

As a Borrego Springs homeowner, I ask you to support the four objectives toward water sustainability stated by the Borrego Springs Water District Ratepayers for the Groundwater Sustainability Plan (GSP) under SGMA (Sustainable Water Management Act). This plan is currently under public review:

1. BWD Ratepayers should be allocated an initial minimum of 1700 AFY. This total represents an over 50% decrease in our historical average, a result of significant conservation efforts that are already in place. This allocation (1700 AFY) should be excluded from any reductions.
2. The 20-year implementation period set out in our GSP should be shortened significantly or planned reductions should be front-loaded. Straight-line reductions over a 20 year period will result in a greatly lowered aquifer, costlier water pumping and water of poorer quality.
3. Water quality is an essential concern, it should be addressed immediately, and if/when water quality issues are determined the parties responsible must be held to account for any remediation that might be necessary.
4. Groundwater Dependent Ecosystems must be considered in the overall water allocation calculus and timing of reductions. Water set-asides for GDEs are meaningless if the "set-aside water" sits in a drastically reduced water table, unavailable to the ecosystems it is intended to support.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.

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This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit.

Thank you for your consideration,

Sally Theriault

Sally Theriault
PO Box 1434
(3076 Broken Arrow Road)
Borrego Springs, CA 92004-1434

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

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Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

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My family and I have been full-time residents in Borrego Springs for many years, and purchased our home in 1994. As a visitor since the 60's, I have noticed the mesquite forest in the lower Valley fail, while mesquite in surrounding areas have not — my conclusion is the cause is the dropping water table. Farmers were originally striking water at a depth of 30' according to historical accounts.

Reduction in water usage by residents would have little impact on the problem, and it certainly seems that the greater impact should be shouldered by the big water users — primarily agriculture. If they do not significantly reduce water consumption, first the town of Borrego Springs will die, and then agriculture will follow. We must not allow this to happen!

Bob Theriault

ROBERT THERIAULT
PO BOX 1434 / 3076 BROKEN ARROW RD
BORREGO SPRINGS, CA 92004

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

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- We, the ratepayers, who use 10% of the water available in the basin and are the only pumpers who have reduced our water usage significantly over these last few years. We therefore believe that the burden of all mandatory reductions should fall proportionately on the other pumpers in the valley. BWD should be allocated a minimum of 1700 AFY as soon as implementation is to begin.
- We strongly believe that a 20-year implementation period is much too long. Our aquifer has already dropped dramatically over the last 30 years. Prolonging this implementation can only affect the quality of our water and the cost of its extraction.
- The valley's native flora and fauna communities have been severely affected as a result of the long-term overdraft of the basin. In order to preserve the remaining ecosystems, two things must happen: first, there must be a set-aside for them; and second, the implementation period must be drastically shortened so as to ensure the survival of the remaining communities.

Although I do know that the position taken by the GSA is that proportional reductions and a 20-year implementation period, along with a hands-off position regarding GDEs, are currently the intended approaches to the GSP, what I would like to hear from you is, if you were in our shoes, what Projects and Management Actions would you utilize, and how would you go about implementing the above four objectives we, the ratepayers, wish to see implemented.

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Thank you so much for your unrelenting efforts over these last few years. The GSP for the Borrego Basin is truly a benchmark piece of work that has laid the groundwork for all future efforts towards implementing the sustainable use the groundwater in our valley.

Best regards,

Merrily Smith
1010 Palm Canyon #151
BS. CA 92004

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

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Linda Moore
1968 Desert Vista Terrace, Borrego Springs

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County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

I am a year-round resident of Borrego Springs, and I really appreciate your hard and long work in crafting the GSP. I would like to share with you some of my main concerns for our town. Water, water, and water!

The Borrego Valley aquifer has been drastically over-drafted for many years. We must comply with state law, the California Groundwater Sustainability Act, and come into compliance by 2040. Current and historic water use in the basin has been as follows:

- Municipal pumpers (Borrego Water District) - 10%
- Recreational pumpers (Golf courses) - 20%
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The current Groundwater Sustainability Plan (GSP) seems to recommend an across the board reduction of 74%, which would maintain the current distribution percentages. The residential water use has already been cut from a reported historic high of 3500 acre feet/year to the current level of 1700 acre feet/year, a cut of 50%. Our community has done this through the conscious effort of removing fountains and swimming pools, grass and water intensive landscaping, and converting to low-flow toilets.

The recreational and agricultural users have been slow or completely unwilling to make similar reductions, continuing to deplete our aquifer. Clearly the major contributor to the aquifer overdraft has been and continues to be agriculture. Although agriculture has been an important part of our community, it is unreasonable to assume that farming should continue to use 70% of the allocated water.

Therefore, we have identified some objectives that must be included in the implementation of the Groundwater Sustainability Plan.

- The municipal allotment should be no less than the 1700 acre feet/year which is currently being used by the BWD. This is our only source of drinking water, which should be a priority for our community. This would allow for some limited growth of homes and businesses.

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I look forward to hearing from you.

(D.E. Owen)

Robert A. Owen (R.A. Owen) 5-25-2019

D'R. Owen
P.O. Box 1666
Borrego Springs
CA 92004

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MAY 30 2019
Planning & Development Services

SAN DIEGO CA 920
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County of San Diego
Planning & Development Services,
c/o Tim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 19, 2019

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Sincerely,

Gary Funk
2826 Back Nine Dr.
Borrego Springs, CA 92004
Sandyjfunk @cox.net

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

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Best regards,

Linda McBride
1010 Palm Canyon Dr #339
POB 1863
BS, CA 92004
760-767-3547

County of San Diego
Planning & Development Services
C/O: Jim Bennet
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Jeanne Gemmell
1010 Palm Canyon # 149
Borrego Springs 92004

May 14, 2019

County of San Diego
Planning & Development Services
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This is patently unfair, arbitrary and in the big picture, manipulative and probably illicit.

Thank you so much for your unrelenting efforts over these last few years. The GSP for the Borrego Basin is truly a benchmark piece of work that has laid the groundwork for all future efforts towards implementing the sustainable use the groundwater in our valley.

Best regards,

Cyril Weaver

Cyril Weaver
P.O Box 2469
Borrego Springs
Ca 92004

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

I am a year-round resident of Borrego Springs, and I really appreciate your hard and long work in crafting the GSP. I would like to share with you some of my main concerns for our town. Water, water, and water!

The Borrego Valley aquifer has been drastically over-drafted for many years. We must comply with state law, the California Groundwater Sustainability Act, and come into compliance by 2040. Current and historic water use in the basin has been as follows:

- Municipal pumpers (Borrego Water District) - 10%
- Recreational pumpers (Golf courses) - 20%
- Agricultural pumpers (Citrus, palm trees, herb and vegetable farms) - 70%

The current Groundwater Sustainability Plan (GSP) seems to recommend an across the board reduction of 74%, which would maintain the current distribution percentages. The residential water use has already been cut from a reported historic high of 3500 acre feet/year to the current level of 1700 acre feet/year, a cut of 50%. Our community has done this through the conscious effort of removing fountains and swimming pools, grass and water intensive landscaping, and converting to low-flow toilets.

The recreational and agricultural users have been slow or completely unwilling to make similar reductions, continuing to deplete our aquifer. Clearly the major contributor to the aquifer overdraft has been and continues to be agriculture. Although agriculture has been an important part of our community, it is unreasonable to assume that farming should continue to use 70% of the allocated water.

Therefore, we have identified some objectives that must be included in the implementation of the Groundwater Sustainability Plan.

- The municipal allotment should be no less than the 1700 acre feet/year which is currently being used by the BWD. This is our only source of drinking water, which should be a priority for our community. This would allow for some limited growth of homes and businesses.

- We believe that sustainability should be achieved sooner than the mandated 20 year period. The sooner we can become sustainable, the better chance we have to maintain the water quality of our aquifer. This will also have a beneficial impact on some of the endangered ecosystems in the basin.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.
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ratepayer, and unquestionably favors farmers first, and golf courses next.
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I look forward to hearing from you.

Marjorie Schuessler
Paul Schuessler

PO Box 1013
Borrego Springs, CA 92004
760-668-5267
phrog47@gmail.com

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

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As you know, the Borrego Valley aquifer has been drastically over-drafted for many years. We must comply with state law, the California Groundwater Sustainability Act, and come into compliance by 2040. Current and historic water use in the basin has been as follows:

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The recreational and agricultural users have been slow or completely unwilling to make similar reductions, continuing to deplete our aquifer. Clearly the major contributor to the aquifer overdraft has been and continues to be agriculture. Although agriculture has been an important part of our community, it is unreasonable to assume that farming should continue to use 70% of the allocated water. I have recently noticed that agriculture seems to be expanding around town. There are new multi-acre plantings of herbs and flowers that require water where previously there was just open land.

Therefore, it's my belief that the following objectives must be included in the implementation of the Groundwater Sustainability Plan.

- The municipal allotment should be no less than the 1700 acre feet/year which is currently being used by the BWD. This is our only source of drinking water, which should be a priority for our community. The municipal users have already reduced consumption to an almost painful level.

- We believe that sustainability should be achieved sooner than the mandated 20 year period. The sooner we can become sustainable, the better chance we have to maintain the water quality of our aquifer. This will also have a beneficial impact on some of the endangered ecosystems in the basin.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the

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Thus, choosing 2010-2015 as the baseline years to determine BPAs is clearly to the detriment of the ratepayer, and unquestionably favors farmers first, and golf courses next. This is patently unfair, arbitrary and manipulative. Please consider using an earlier timeframe for the baseline years to determine BPAs.

Thank you for considering my input.

Sincerely,

Alfred G. DeVico

437 Pointing Rock Dr., POB 1682

Borrego Springs CA 92004

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
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I look forward to hearing from you.

Liesel Pais
P.O. 2469
Borrego Springs
Ca 92004

May 14, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
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- We, the ratepayers, who use 10% of the water available in the basin and are the only pumpers who have reduced our water usage significantly over these last few years. We therefore believe that the burden of all mandatory reductions should fall proportionately on the other pumpers in the valley. BWD should be allocated a minimum of 1700 AFY as soon as implementation is to begin.
- We strongly believe that a 20-year implementation period is much too long. Our aquifer has already dropped dramatically over the last 30 years. Prolonging this implementation can only affect the quality of our water and the cost of its extraction.
- The valley's native flora and fauna communities have been severely affected as a result of the long-term overdraft of the basin. In order to preserve the remaining ecosystems, two things must happen: first, there must be a set-aside for them; and second, the implementation period must be drastically shortened so as to ensure the survival of the remaining communities.

Although I do know that the position taken by the GSA is that proportional reductions and a 20-year implementation period, along with a hands-off position regarding GDEs, are currently the intended approaches to the GSP, what I would like to hear from you is, if you were in our shoes, what Projects and Management Actions would you utilize, and how would you go about implementing the above four objectives we, the ratepayers, wish to see implemented.

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Sal Mocci
1968 Desert Vista Terrace
Rancho Mirage

County of San Diego

Planning & Development Services

C/O: Jim Bennet

5510 Overland Avenue, Suite 310

San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan

Borrego Valley Groundwater Basin

Borrego Springs Sub-basin

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Through modern day monitoring and measuring, unfortunately, we have determined the Borrego Springs ground water supply has dropped drastically and alarmingly the past 30 years. Although the residents use 10% of the water supply, agriculture uses 70% and golf courses use 20%.

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Change is hard but we must all work together as a community to save the town of Borrego Springs. Following are our four main concerns, beliefs and objectives:

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- We believe that water quality is an essential concern, it should be addressed immediately, and if/when water quality issues are determined, the parties responsible are held to account for any remediation that might be necessary.
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Heidi H. Noyes full time resident since '9,

HEIDI H. Noyes
3252 East Star Rd. (P.O. Box 1080 mailing=)
Borrego Spgs, CA 92004

May 14, 2019

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

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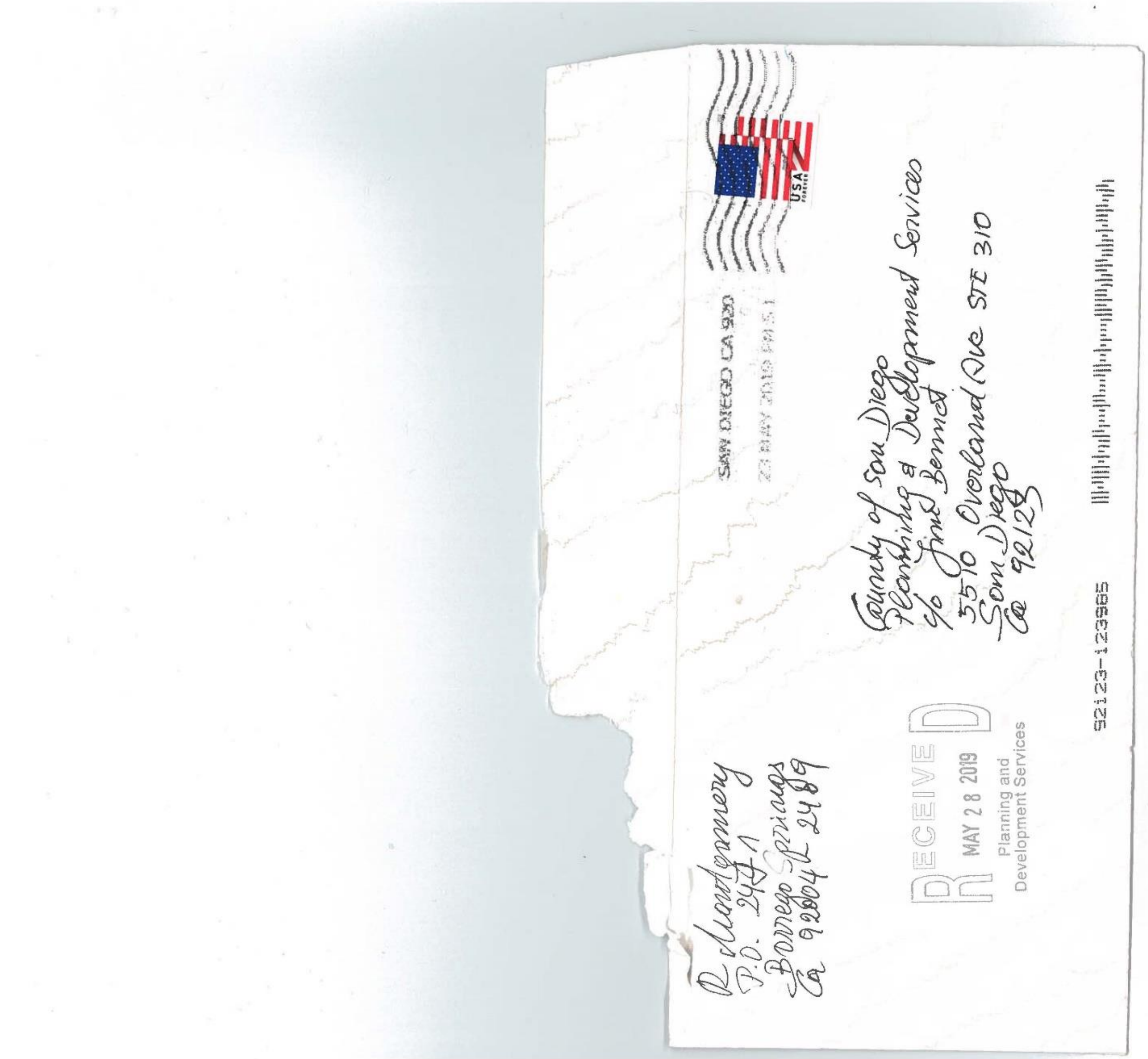
Best regards,

Robyn Montgomery
P.O. 2471
Borrego Springs
Ca 92004-2469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92123-123965

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 14, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

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Best regards,

William E. Bennett

Barn Swallow

SAN DIEGO CA 920

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USA

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MAY 28 2019
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Development Services

92123-123985

James Rickard
PO Box 777, 737 San Pablo Rd
Borrego Springs CA 92004

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 17, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

At one time, many decades ago, it was believed that Borrego Springs had an unlimited water supply. With that false belief and extensive advertising came numerous agricultural farms, golf courses and, of course, residents to Borrego Springs.

Through modern day monitoring and measuring, unfortunately, we have determined the Borrego Springs ground water supply has dropped drastically and alarmingly the past 30 years. Although the residents use 10% of the water supply, agriculture uses 70% and golf courses use 20%.

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- We believe that BWD/Ratepayers should be allocated an initial minimum of 1700 AFY; this allocation should be excluded from any **further** reductions.
- We believe that the 20-year implementation period set out under SGMA should be shortened.
- We believe that water quality is an essential concern, it should be addressed immediately, and if/when water quality issues are determined, the parties responsible are held to account for any remediation that might be necessary.
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Sincerely yours,

James Rickard

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Use Your
EIRCODE
Jim + Grace Rickard
PO Box 777
Borrego Springs
CA 92004
Co. of San Diego
Planning + Development Services
c/o Jim Bennett
5510 Overland Ave, Suite 310
San Diego, CA 92123
USA
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MAY 28 2019
Planning and Development Services

Grace Rickard
PO Box 777, 737 San Pablo Rd
Borrego Springs CA 92004

County of San Diego
Planning & Development Services
C/O: Jim Bennet
5510 Overland Avenue, Suite 310
San Diego, CA 92123

May 17, 2019

Ref: Groundwater Sustainability Plan
Borrego Valley Groundwater Basin
Borrego Springs Sub-basin

Dear Mr. Bennett;

We have a problem that needs your immediate attention. It's the water.

We are in dire need of a solution to our "critical overdraft" situation. You will learn quickly, if you don't already know, that agriculture, specifically, the Farmers, are depleting our aquifer at an unsustainable rate by irrigating their non-native citrus and palm orchards. They consume over 70% of the aquifer.

We, the ratepaying residents and businesses consume only 10%. Both residents and businesses have reduced consumption, in good faith, while the farmers have continued to install larger irrigation pipes and drill deeper down, thereby increasing their consumption. They are taking the amount that we have earnestly tried to preserve.

Agriculture was established in Borrego Springs before the town. They own the rights to the water. The town has grown as the agriculture has grown. There are now more people than orchards. People are more important than grapefruits.

Borrego Springs is a dazzling gem in this desert. We are a community of artists, anthropologists, archeologists, astronomers, paleontologists, naturalists, botanists, hikers, bikers, outdoor enthusiasts, all inspired by the endless wonder this desert provides.

Please consider deeply and act swiftly to find a solution to keep us from becoming a deserted dried up desert ghost town. There is too much to lose.

Finally, BPAs are arguably one of the most important elements in the implementation process: witness the ongoing battle among stakeholders to establish the highest BPA possible. For reasons unclear to us, the ratepayers, the timeframe set out in the GSP – 2010 to the end of 2014 – is certainly the worst possible interval for BWD. BWD began reducing its usage in 2003, when it pumped 3926 AF. In 2010, BWD pumped 2730.50 AF, and since then it has continued to responsibly reduce its water usage such that currently it pumps 1700.

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Sincerely,
Grace Rickard

Grace Rickard

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Use Your
EIRCODE
Jim + Grace Rickard
PO Box 777
Borrego Springs
CA 92004
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Planning + Development Services
c/o Jim Bennett
5510 Overland Ave, Suit 310
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USA
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Planning and Development Services

Letter I47 – I89

Commenter: Borrego Water District Ratepayers
Date: Various

The Groundwater Sustainability Agency (GSA) acknowledges 43 comment letters submitted by the Borrego Water District ratepayers.

The GSA has summarized the comment letters with the following underlined comments followed by GSA responses:

Comment 1: The Borrego Water District should not be subject to reductions below 1,700 acre-feet per year. While the Groundwater Sustainability Plan (GSP) does not set specific groundwater use reductions, the GSP includes Project and Management Action (PMA) No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare the California Environmental Quality Act (CEQA) documentation (after GSP adoption) in advance of considering formal adoption and implementation of any groundwater use reductions and a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions and a specific ramp down schedule could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment 2: The GSP implementation timeline should be shortened significantly or planned reductions should be front loaded. While the GSP does not set specific groundwater use reductions or rampdown schedule, the GSP includes PMA No. 3 – Pumping Reduction Program. As indicated in the GSP, the GSA will prepare CEQA documentation (after GSP adoption) in advance of considering formal adoption and implementation of a specific ramp down schedule. The GSP also indicates an agreement among the pumpers is a possible scenario where groundwater use reductions and a specific ramp down schedule could be developed.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment 3: Water quality should be addressed immediately, and if/when water quality are determined the parties responsibly must be held accountable for any remediation. When and if water quality becomes a concern that may require mitigation within any portion of the Subbasin, the GSA may consider implementing PMA No. 4 – Water Quality Optimization and/or PMA No. 5 – Intra-Subbasin Water Transfers Program. Funding sources for the PMAs will be considered by the GSA prior to implementation.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment 4: Groundwater dependent ecosystems must be considered in overall water allocation calculus and timing of reductions. The GSA acknowledges the commenter's concern regarding groundwater dependent ecosystems. The GSP addresses groundwater dependent ecosystems as part of the analysis which can be found in Chapters 2 and 3, and Appendix D4. The GSP concludes that impacts to groundwater dependent ecosystems are a pre-2015 impact and is not currently an undesirable result applicable to the Subbasin.

Comment 5: What projects and management actions would need to be utilized to go about implementing the four objectives the ratepayers would like to see implemented, and how?
Responses to Comments 1 and 2 indicate PMA No. 3 – Pumping Reduction Program would be utilized to implement specific reductions and the time schedule for those reductions and the potential scenarios and how they could be developed. For water quality, response comment 3 indicates PMA No. 4 – Water Quality Optimization and/or PMA No. 5 – Intra-Subbasin Water Transfers Program would be utilized if necessary. For groundwater dependent ecosystems, there is no project or management action since it is not considered an undesirable result applicable to the basin.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

Comment 6: The 2010 through 2014 period was the worst possible interval for the Borrego Water District for development of the baseline pumping allocations. How was the timeframe of 2010 through 2014 selected as the time period for determining baseline pumping allocations?
In response, the GSA sought extensive public input prior to determining the time period for the baseline pumping allocation. Please see meeting minutes from September 28, 2017, November 17, 2017, and January 25, 2018. They can be found on the County of San Diego's (County's) Sustainable Groundwater Management Act (SGMA) website at:
https//www.sandiegocounty.gov/content/sdc/pds/SGMA/borrego-valley.html.

Comment Letter I90

County of San Diego
Planning and Development
5510 Overland Ave, suite 310
San Diego, CA 92123
C/O: Jim Bennett

May 16, 2019

Ref: Borrego Valley Groundwater Sustainability Plan

Mr. Jim Bennett

During the last four plus years many of us have spent hundreds of hours working the over draft problem I don't recall there being any discussion that the plan for setting the pumping reductions would be established through negotiations with the pumpers to establish a Stipulated Agreement. Some question that could have been asked if shared with the A/C are; I would like to present now.

- Who are representing the Core team?
- Are all of the sectors included in the negotiations?
- Will the results of the negotiations be shared with the A/C before they are incorporated in the GSP?
- If the Stipulated Agreement is established can the reductions start while the two year CEQA review takes place?
- Will a consideration to front load the reductions to bank water to protect the program from possible unknown problems that may come up during the 20 year span of the GSP? (IE; multiyear drought resulting in reduction of recharge)
- Is the reductions that the rate payers have already achieved being considered?

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If there are sufficient representation in the negotiations, it would greatly reduce the possibility of litigation, which is a good thing for he program.

It would be helpful if the Core Team would summarize the comments on the GSP received and share them with the A/C prior to the next meeting.

Jim Wilson, Member at Large, Advisory Committee

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Letter I90

Commenter: Jim Wilson
Date: May 16, 2109

I90-1 The Groundwater Sustainability Agency (GSA) acknowledges the questions regarding the stipulated agreement process that is occurring. In response, on July 9, 2019, the Borrego Water District (BWD) had a public meeting in which proposed stipulated agreement terms were made public. Additionally, per your request, the response to public comments were discussed at the Groundwater Sustainability Plan (GSP) advisory committee meeting held on July 25, 2019.

This comment does not address the adequacy of the Draft GSP, and therefore, no further response is required or necessary.

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