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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.

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.

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.

### **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

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**

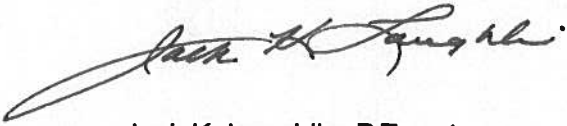
The draft GSP shows a concerted effort to estimate the cost of both the overall compliance program and the potential impacts on the cost of domestic water. Again, the number of variables creates a high degree of uncertainty for the accuracy of the estimates. This is especially true considering the possibility 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.

## **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,

A handwritten signature in cursive script, reading "Jack K. Laughlin". The signature is written in black ink and is positioned below the word "Sincerely,".

Jack K. Laughlin, P.E., ret.

Cc: Kathy Dice, President, BWD Board of Directors