



Vina Groundwater Sustainability Agency  
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CORRESPONDENCE VINA STAKEHOLDER ADVISORY COMMITTEE

**From:** [noreply@getstreamline.com](mailto:noreply@getstreamline.com) <[noreply@getstreamline.com](mailto:noreply@getstreamline.com)>

**Sent:** Monday, April 19, 2021 6:38 AM

**To:** [VinaGSA@gmail.com](mailto:VinaGSA@gmail.com)

**Subject:** New form submission received: Contact Us



## Contact Us

<b>Attachment:</b>	
<b>Message:</b>	Please provide a list of PMAs that have been submitted. The list should be available to the SHAC during the meeting on 4/20 . The <a href="http://Vinagsa.org">Vinagsa.org</a> website could have a link to these submissions.
<b>Subject:</b>	PMA submissions
<b>Your email:</b>	<a href="mailto:jimb@aqualliance.net">jimb@aqualliance.net</a>
<b>Your name:</b>	Jim Brobeck

Begin forwarded message:

**From:** [jimb@aqualliance.net](mailto:jimb@aqualliance.net)

**Subject:** Basin Setting summaries request

**Date:** May 12, 2021 at 11:21:37 AM PDT

**To:** Christina Buck <[cbuck@buttecounty.net](mailto:cbuck@buttecounty.net)>, Paul Gosselin <[pgosselin@buttecounty.net](mailto:pgosselin@buttecounty.net)>, Tania Carlone <[tcarlone@cbi.org](mailto:tcarlone@cbi.org)>

Hi Christina,

What is the status of the Basin Setting/HCM documents in the GSAs in proximity to the Vina and Butte GSAs (including these two GSAs). It is my understanding that to develop the sustainable management criteria and subsequent PMAs DWR suggests starting with the hydrogeologic conceptual model and the water budget.:

<https://s29420.pcdn.co/wp-content/uploads/2019/11/BMP-2-Monitoring-Networks-and-Identification-of-Data-Gaps.pdf>

This figure shows the context of the BMPs as they relate to various steps to sustainability as outlined in the GSP Regulations.

According to the summary of the March 2 2021 Interbasin Coordination meeting

“Given current time and resource constraints, the group acknowledged they had set unrealistic expectations related to the ability to share, compare, and analyze technical information across subbasins to identify significant differences in the next few months. While some comparisons of model results will be possible over the next several months, technical teams will probably not have the ability to address discrepancies during initial GSP development.”

Early drafts of Basin Setting documents revealed critical discrepancies in model outcomes that determine the direction and volume of flow between GSA basins. These opposing model results form the basis of analyzing the efficacy of experimental recharge projects in Butte County and, conversely, the impacts of increased pumping and groundwater substitution water transfers out of Glenn/Colusa/Sutter/Counties.

An assessment of the uncertainty in the Hydrologic Conceptual Model components, along with the identification of data gaps of the physical system and water use practices in the basin, are all necessary elements of the HCM. “Uncertainty” refers to a lack of understanding of the basin setting that significantly affects an Agency’s ability to develop sustainable management criteria and appropriate projects and management actions in a Plan. It is important to adequately evaluate data gaps and uncertainties within a Hydrologic Conceptual Model as these data gaps often drive the types and locations of monitoring that should be conducted to reduce uncertainties in these conceptual model components. I like to think that the seasonal monitoring we have invested in can provide sufficient data to create groundwater elevation contour maps showing the spatial distribution of groundwater elevations and help identify areas of low and high groundwater level areas within a basin allowing us to predict and visualize interbasin flow direction.

Can you provide the SHAC with a summary of model and monitoring results that inform us on interbasin flow direction/volume? What discrepancies have been identified to date?

Thanks,

Jim Brobeck

**From:** Tania Carlone <[tcarlone@cbi.org](mailto:tcarlone@cbi.org)>

**Subject: Fwd: Direction from Vina GSA Board**

**Date:** May 13, 2021 at 2:49:19 PM PDT

**To:** Tania Carlone <[tcarlone@cbi.org](mailto:tcarlone@cbi.org)>

**Cc:** Christina Buck <[cbuck@buttecounty.net](mailto:cbuck@buttecounty.net)>, "Gosselin, Paul" <[PGosselin@buttecounty.net](mailto:PGosselin@buttecounty.net)>, "Peterson, Kelly" <[kpeterson@buttecounty.net](mailto:kpeterson@buttecounty.net)>, Erik Gustafson <[Erik.Gustafson@Chicoca.gov](mailto:Erik.Gustafson@Chicoca.gov)>, Linda Herman <[linda.herman@Chicoca.gov](mailto:linda.herman@Chicoca.gov)>, Kamie Loeser <[kamie@kamieloeser.com](mailto:kamie@kamieloeser.com)>, Jeff Carter <[jeff@jjcarterlaw.com](mailto:jeff@jjcarterlaw.com)>, jonlavy@comcast.net, Darren Rice <[almondfarmer@msn.com](mailto:almondfarmer@msn.com)>, Mariana Rivera-Torres <[mrivertorres@cbi.org](mailto:mrivertorres@cbi.org)>

Hello SHAC Members,

For your information, please find forwarded message from Christina Buck, Assistant Director, Butte County Department of Water and Resource Conservation.

Best,

Tania

Tania Carlone

Consensus Building Institute

510/684.0504 (cell)

[tcarlone@cbi.org](mailto:tcarlone@cbi.org) | [www.cbi.org](http://www.cbi.org)

Watch our new video on CBI's work: <https://youtu.be/RniP-Q5fpPw>

Begin forwarded message:

**From:** "Buck, Christina" <[CBuck@buttecounty.net](mailto:CBuck@buttecounty.net)>

**Subject: Direction from Vina GSA Board**

**Date:** May 13, 2021 at 2:39:02 PM PDT

**To:** 'Tania Carlone' <[tcarlone@cbi.org](mailto:tcarlone@cbi.org)>, Mariana Rivera-Torres <[mrivertorres@cbi.org](mailto:mrivertorres@cbi.org)>

**Cc:** "Gosselin, Paul" <[PGosselin@buttecounty.net](mailto:PGosselin@buttecounty.net)>

Dear SHAC Members,

At last night's Vina GSA Board meeting under item 6.2, staff requested that the Board "provide input and direction to staff regarding the future level of risk to the subbasin and on the magnitude and targeted areas of need to be addressed by Projects and Management Actions." The SHAC packet includes, under item 4, the powerpoint slides that were presented to the Vina GSA Board. The result of the Board's discussion was direction to initially plan for a "middle of the road" imbalance of about 15,000 AF/yr. This becomes the initial target defining the magnitude of needed Projects and Management Actions. This direction provides a framework to guide the evaluation and prioritization of potential projects.

This topic will be further described and discussed at the upcoming SHAC meeting.

Best,

Christina

**Christina R. Buck, Ph.D.**

Assistant Director

Dept. of Water and Resource Conservation

Butte County

308 Nelson Avenue

Oroville, CA 95965-3302  
Off: 530.552.3593  
Cell: 530.864.6057  
[cbuck@buttecounty.net](mailto:cbuck@buttecounty.net)

**From:** "Buck, Christina" <CBuck@buttecounty.net>  
**Subject:** RE: "disconnected stream" discussion.  
**Date:** May 13, 2021 at 2:41:40 PM PDT  
**To:** "jimb@aqualliance.net" <jimb@aqualliance.net>  
**Cc:** 'Tania Carlone' <tcarlone@cbi.org>, Mariana Rivera-Torres <mrivertorres@cbi.org>

Thank you, Jim. Streams certainly need to continue to be part of the conversation and analysis. They will be addressed specifically through Undesirable Result #6- Depletions of Interconnected Surface Waters and as well as filling data gaps.

-----Original Message-----

From: jimb@aqualliance.net <jimb@aqualliance.net>  
Sent: Wednesday, May 12, 2021 7:25 PM  
To: Buck, Christina <CBuck@buttecounty.net>  
Subject: "disconnected stream" discussion.

.ATTENTION: This message originated from outside Butte County. Please exercise judgment before opening attachments, clicking on links, or replying..

Hi Christina,

I did not want to throw too much verbiage into this evening's discussion but I hope the information presented in these two document excerpts are helpful in your effort to create an accurate basin setting report.

The Northern California Water Association ("NCWA") document, Sacramento Valley Groundwater Assessment Active Management – Call to Action, underscores the importance of long-term monitoring to understand the impacts of groundwater pumping on basin recovery and impacts to streams.

"Management of connected surface and groundwater systems is challenging for several reasons. First, the duration of streamflow depletions caused by pumping depends on the spatial scale: in general (depending on soil conditions and strata) the greater the distance or depth between groundwater pumping and an affected stream, the lower the magnitude but the longer the timescale of depletions. As a consequence, the ultimate effects of pumping can occur significantly after pumping starts, or even after pumping has ceased. The timescales involved in aquifer responses to pumping and other stresses can be on the order of decades, making it difficult to associate cause with effect. As such, monitoring must account for this lag in impacts. In general, the longer the timeframe for effects to be observed at a given monitoring point once they become evident, the longer those effects will persist, even if the pumping causing the effects is halted immediately." [1]

[1] Davids Engineering 2014. Prepared for NCWA, Sacramento Valley Groundwater Assessment Active Management – Call to Action, pp. 14-15.

Mr. Toccoy Dudley, a Department hydrogeologist with the Northern District in Red Bluff, wrote in 2000: "At any location in the basin, the gradient between the surface water and groundwater system is directly proportional to the head differences (water surface elevation

difference) between the two hydrologic systems. The larger the head differences the higher the gradient and the higher the recharge rate....The shorter the horizontal distance over which the head change occurs increases the recharge rate dramatically. An example of this would be pumping next to a river would induce a much higher recharge rate from the surface water system than the same pumping many miles away.....increased extraction causes the groundwater levels to decline, which increases the head difference between the groundwater and surface water systems, and consequently increases the gradient and recharge rate. In short, the more you pump, the more you can pump, to a point."

Dudley, Toccoy, 2000. Basin Management Objective (BMO) Method of Groundwater Basin Management, revised September 18, 2000, p. 2. DWR Northern District, Accessed online April 20, 2021

at [https://www.countyofglenn.net/sites/default/files/Water\\_Advisory\\_Committee/BMOConcept.pdf](https://www.countyofglenn.net/sites/default/files/Water_Advisory_Committee/BMOConcept.pdf)

My observation of streams indicates that the lower the groundwater level the further upstream the dewatering spreads.

Jim Brobeck