

### Big Valley GSP Comment Matrix

Document	Packet Page	Page & Line Number	Comment	Date	Notes and Responses
Public Draft Ch 6, Current Wtr Budget			The Tables in Chapter 6 should say "ESTIMATED" or "ASSUMED" for Inflow, Outflow.	Dec. 2	Data is used where it's available, rough estimates are made in other areas, and assumptions based on best professional judgement in still other areas. The water budget is balanced by adjusting the estimates and assumptions within generally acceptable ranges until the budget is balanced. As such, the water budget is not necessarily a unique solution, but represents the best professional estimate. Water budget estimates of this type are considered order of magnitude estimates and can be refined as new data becomes available.
Public Draft Ch 6, Current Wtr Budget			Some areas are shown on the map as irrigated, when they are actually dry farmed. These areas have only been irrigated on a select few occasions.	Dec. 2	In order to reflect these farming practices, the GSP development team needs data to substantiate it. Input was requested on water source throughout the Basin in previous BVAC meetings. Similar input will be solicited at upcoming meetings and the new information can be incorporated into the Water Budget in future revisions.
Public Draft Ch 6, Current Wtr Budget			Concern that the 14,000 acres of the wetland don't show irrigation. Ash Creek Refuge is white on the map, rather than blue.	Dec. 2	The focus was on calculating irrigated acreage. Wetlands are a water use in the water budget - the assumption is that 98% of the water supply on the refuge is from surface water, and 2% groundwater. <b>The wetlands in the Ash Creek Wildlife area have been added to Figure 6-5.</b>
Public Draft Ch 6, Current Wtr Budget			How were the percentages of 98% surface water and 2% groundwater derived for the wetlands?	Dec. 2	Starting with the area of the wetlands, the evapotranspiration values (more specific to the conditions in Big Valley) are combined with crop co-efficients. A coefficient was used for crops similar to the vegetation of the wetland. The yields an estimate of evapotranspiration associated with the plants in the wetland. If the refuge did not run any groundwater pumps, then the refuge would be supplied 100% by surface water. Because there are three pumps that are occasionally run, there is some source from groundwater. The 2% was estimated based on professional judgement due to knowledge of the locations of the wells, the areas that they irrigate and conversations from the CDFW about how often they use them (typically for a month or two in the fall to bridge the driest part of the year). Consultant staff has reached out to the CDFW to obtain pumping data, but they have indicated that the data does not exist. As such, 2% is currently the best estimate. <b>Text was added to the chapter to document this estimate.</b>
Public Draft Ch 6, Current Wtr Budget			What are the options for determining runoff? Which way is best?		Modeling or calculations using the "Curve Number Method" (CNM) are the two widely accepted options to determine runoff. In the opinion of the consultants, modeling runoff would not produce significantly improved estimates from CNM, but would take additional time and budget.
Public Draft Ch 6, Current Wtr Budget			Is there a way to get a larger map, or better electronic version, to take a closer look at the basin boundary?	Dec. 2	<b>A KMZ file (viewable in Google Earth) of the Basin Boundary has been posted on the website. An email notification was sent to the interested parties notifying them of the file and how to use it.</b>
Public Draft Ch 6, Current Wtr Budget			Using the numbers on this chart, does this mean that a 7-8% reduction in pumping is needed?	Dec. 2	What this means is that there needs to be about 5,000 AF per year on average in compensation to reduce overdraft. It might involve managed aquifer recharge, reduced pumping or combination of the two. Reducing overdraft can be achieved in various ways.
Public Draft Ch 6, Future Wtr Budget			Is it required to use 50 years of data? Does it specify which years of data need to be used?	Dec. 2	At least 50 years of historical data are required as per the GSP Regulations. Going back further would include data from a time period with higher uncertainty and lower accuracy.

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Public Draft Ch 6, Future Wtr Budget			How does an overdraft of about 5-10% compare with other basins? It's surprising that the number is so small, but it would still impact a lot of people.	Dec. 2	Not sure, but there are certainly a lot other basins that are much worse off.
Public Draft Ch 6, Future Wtr Budget	30		Land System Water Budget Chart, item 2 (inflow between systems): This uses surface water. Ash Creek Wildlife Refuge is here. The assumption is that ag is the only sector that uses surface water. There are other uses and users of surface water.	Dec. 2	The wetlands are also a surface water user and text has been added to describe that. There are also illegal uses, fire uses. There is not a way to measure or quantify those uses. If some reasonable and defensible data or assumptions were provided to the GSP development team, then those uses could be incorporated into the budget.
Public Draft Ch 6, Future Wtr Budget			Land System Water Budget Chart, item 3 (population): This only uses the population from the census of Bieber, there's Adin, New Bieber and Lookout. Those need to be added in.	Dec. 2	The water budget considers the entire population of Big Valley published by DWR. A distinction is made between Bieber and the rest of Big Valley, because Bieber is served by a public water supply system while the rest of domestic use in Big Valley is from individual wells. This is a distinction between "municipal" and "domestic" uses, which SGMA categorizes differently. However, all household use is considered and accounted for in the water budget.
Public Draft Ch 6, Future Wtr Budget			There's a piece of ground that's not on the map that needs to be included (Jimmy Nunn).	Dec. 2	This information can be incorporated once the land is clearly identified. Such information will be solicited at future BVAC and/or public outreach meetings.
Public Draft Ch 6, Future Wtr Budget	6-2	Line 38	<del>Ideally</del> In concept, each component could be quantified precisely and accurately, and the budget <del>would</del> could	Jan. 22	Changes will be made to next iteration of chapter.
Public Draft Ch 6, Future Wtr Budget	6-2	Line 39	come out balanced. In practice, <del>many</del> most of the components can only be roughly estimated, and in	Jan. 22	Changes will be made to next iteration of chapter.
Public Draft Ch 6, Future Wtr Budget	6-2	Line 40	<del>some</del> many cases not at all. Therefore, much of the work to balance the water budget is adjusting <del>some</del> many	Jan. 22	Changes will be made to next iteration of chapter.
Public Draft Ch 6, Future Wtr Budget	6-3	Line 44	components estimated through the use of the water budget are order of magnitude. Estimation of <b>Suggested wording change to "order of magnitude" comments were that the content needs to be made clearer to the reader</b>	Jan. 22	Wording will be adjusted in the next iteration to make the concept of "order of magnitude" estimates more clear.
Public Draft Ch 6, Future Wtr Budget	6-3	Line 56	because it represents an average set of climatic conditions and <u>adequate water</u> level, land use, <b>"adequate water level" What is adequate? Define adequate water levels</b>	Jan. 22	This refers to the fact that many of the wells with water level measurements started in 1983, so the amount of data was "adequate". We can remove the word "adequate"
Public Draft Ch 6, Future Wtr Budget	6-4	Line 73	<b>Add a footnote to Figure 6-4 regarding DWR using inaccurate data. Including in the footnote there should be a mention of better data needed for the water budget and that observational and public input has been received regarding the inaccuracy of the map from DWR. (crop and wetland acreages)</b>	Jan. 22	The land use data used for the water budget is different from the data used for basin prioritization. This part of the GSP is not addressing prioritization. We discuss data gaps in previous chapters, but can re-emphasize here.
Public Draft Ch 6, Future Wtr Budget	6-4	Line 87	also has three wells that extract groundwater from the <u>deeper aquifers</u> and is applied in portions	Jan. 22	Not sure what the comment is here. Deeper aquifers emphasizes that the ACWA wells are around 800 feet deep and are not pulling solely from shallow (wetland) portion of the aquifer. In other words, the wells are simply re-distributing groundwater from deep portions of the aquifer to shallow (wetland) portions.
Public Draft Ch 6, Future Wtr Budget	6-5	Line 110-111	<del>Overdraft occurs when the groundwater system change in storage is negative over a long period. (Remove this sentence)</del>	Jan. 22	Change will be made to next iteration of chapter.

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Public Draft Ch 6, Future Wtr Budget	6-5	Line 115-116	The current water budget is demonstrated by looking at water year 2018, which is the most recent year with reliable data. (Is 2018 the only year with reliable data? Who states what is reliable?)	Jan. 22	We (GEI) have determined that 2018 is more reliable than 2019 because there were several wells without measurements. We can remove the " <del>which is the most recent year with reliable data.</del> " in the next iteration of the Chapter.
Public Draft Ch 6, Future Wtr Budget	6-5	Footnote	long-term undesirable results Who determines this? <b>Suggested to add a note to the chapter where information which covers the details of DWR guidelines for establishing long-term undesirable results.</b>	Jan. 22	Undesirable results are locally defined. This will be discussed in Chapter 7