Dear Mr. Guzman,

Thanks for the opportunity to review and provide comments on California Water Plan Update 2018 Public Review Draft (Update 2018). I am a California Certified Hydrogeologist with +30 years experience in California groundwater management, and my comments focus on groundwater. I participated as a member of the Update 2013 Policy Advisory Committee and Groundwater Caucus on behalf of GRA, and recognize the significant effort of DWR’s Update 2018 team to develop a focused document with an articulate investment strategy.

I am concerned that Update 2018 is incomplete in its presentation of groundwater condition changes since Update 2013, implications of the Sustainable Groundwater Management Act (SGMA), and the funding required to achieve mandated groundwater sustainability. My further concern is that Update 2018 does not follow a consistent framework of water conditions reporting to allow lay readers and the Legislature to understand comprehensively how conditions have changed since Update 2013, in order to provide a foundation to inform future planning and policy decisions. I would be willing to take the time to discuss with DWR several ideas to consider for possible incorporation to address the comments below, which may help improve this and future Water Plan Updates.

**Groundwater Conditions have Degraded Over the Past Five Years**

Since Update 2013, the state has experienced a significant drought from 2012-2016, followed by the second wettest year on record. The drought, along with the failure of Oroville Dam, has exacerbated chronic groundwater depletion in the state with less available surface water to deliver, increasing groundwater extraction and associated land subsidence, most significantly in the San Joaquin Valley. This situation underscores the need for funding for groundwater programs such as recharge, and rehabilitation of aging infrastructure and enhancements to conveyance to move available water south in the state.

**Significance of the Sustainable Groundwater Management Act to Update 2018**

Update 2018 includes very little information on SGMA and does not articulate the significant mandates, and linkages to statewide surface water planning. It also provides little on the implementation progress and future challenges for DWR, other state agencies, or groundwater sustainability agencies (GSAs) and cooperating local agencies. This historic law, which in effect regulates groundwater for the first time 100 years after surface water became regulated in California, changes the way groundwater is managed in the state. Based on information obtained from the DWR SGMA website:

- There are now 265 new and unique GSAs formed in 144 groundwater basins (DWR SGMA portal [https://sgma.water.ca.gov/portal/gsa/all](https://sgma.water.ca.gov/portal/gsa/all)).
- There are 56 basins finalized and 59 basins pending requiring GSPs to be developed currently under SGMA ([https://water.ca.gov/News/News-Releases/2019/January/DWR-Finalizes-Basin-Prioritizations-under-SGMA](https://water.ca.gov/News/News-Releases/2019/January/DWR-Finalizes-Basin-Prioritizations-under-SGMA)).

Important SGMA-related needs with regard to groundwater sustainability plan (GSP) preparation and implementation that are missing include legacy data assemblage; data collection, management and transparency; efforts to meet sustainability such as increased...
recharge, water demand management, and water use practices; technical review and guidance; and regulation of SGMA programs in the future.

**Funding Needed for Groundwater Programs Critical to SGMA Success**

There are very significant funding needs for GSP development, implementation and capital costs for projects to meet the rigorous SGMA mandates to obtain groundwater sustainability by 2040/42, and Update 2018 appears to underestimate these needs. Already many GSAs are finding that their funds running low to complete the GSPs, and the assessment of fees to provide a sustainable stream of funding for SGMA programs in most groundwater basins has made not significant progress, many deferring until after GSPs are completed. Reliable infrastructure will be a key element to increase recharge of groundwater basins on a statewide scale, increasing resiliency of supplies, one of the tools to obtaining sustainable groundwater supplies required under SGMA. The tie of SGMA success to the reliability and certainty of statewide surface water supplies and infrastructure cannot be understated, and should be articulated in Update 2018.

**Consistent Water Plan Update(s) Reporting of Water Conditions**

Water Plan Update 2013 was the first recent version to comprehensively include groundwater, not only in terms of data and information included, but also with the establishment of a groundwater caucus. Some groundwater facts in Update 2013 include:

- Thirty million Californians rely on groundwater for a portion of drinking water.
- From 2005 to 2010, 16.5 million acre-feet of groundwater were used on average to meet urban, agricultural, and managed wetland demands (or about 40 percent of their total demands).
- During this period (2005 to 2010), up to 13 million acre-feet of groundwater storage were depleted in these areas, more than enough to meet all urban water demands in California for one year.
- As a result, land subsidence rates of up to 1 foot per year have returned to some San Joaquin Valley localities heavily reliant on groundwater supplies.
- ...over the past decade as much as 3.9 feet of subsidence occurred near Corcoran during a 3.5-year period.

I would like to suggest it would be appropriate for Water Plan Update 2018 and all future Water Plan Updates to provide similar, comparable metrics as in Update 2013. In particular, for Update 2018, 2010-2017 was a period of record hydrology. These metrics help set the stage for needed future planning efforts in the state that align with raising the bar on groundwater management under SGMA and the call to action to increase groundwater recharge statewide (http://ucwater.org/rechargeroundtable).

I greatly appreciate your consideration of these comments and hope they lead to an improved Update 2018. Please feel free to contact me at (916) 596-9163 tim@pg-tim.com, and as previously indicated, I would be willing to take the time to discuss further with DWR ideas to consider for incorporating into this and future Water Plan Updates.

Sincerely,

Timothy K. Parker, PG, CEG, CHG
President and Principal Hydrogeologist

Cc: Taryn Ravazinni