



MEMORANDUM

DATE: October 7, 2020

TO: Vina GSA Board

FROM: Christina Buck, Assistant Director

RE: Public Comments on Basin Setting Drafts

Public Comment Overview

Drafts of the Basin Setting and Monitoring Network Chapters were made available August 7, 2020 for a public comment period. The comment period ended on Tuesday September 8, 2020.

The documents are available online at VinaGSA.org:

<https://www.vinagsa.org/groundwater-sustainability-plan-gsp-basin-setting-chapters-public-comment-open>

In addition, a presentation was given as a technical webinar in two parts providing an overview of the Basin Setting content. These presentations are also available online for reference:

<https://www.vinagsa.org/2020-06-16-stakeholder-advisory-committee-meeting>

Comments were received from three individuals and are attached to this report. Several themes emerged which are summarized in the bullets below:

- Commenters highlight the importance of the multiple aquifer zones that are present in the subbasin and the pressurized nature of the deeper zones. This has implications for understanding flow paths, vertical gradients, groundwater conditions and connectivity between zones, interbasin flow in the pressurized deep aquifer zone, connection of shallow groundwater to deeper zones and vulnerability of groundwater dependent ecosystems (GDEs), efficacy of recharge projects to provide benefits to shallow vs. deep zones, delayed and long lasting potential effects of deep pumping on stream-groundwater interactions.
- Commenters point out that monitoring the four defined aquifer zones is a data gap that should be filled with monitoring groundwater levels in each zone. The aquifer zones should also be better defined using well logs, cross sections to understand connectivity between zones, groundwater flow paths, and changes in vertical gradients over time.
- Monitoring of the shallowest portion of the groundwater system was identified as a need to identify baseline and dynamic water levels that support groundwater dependent ecosystems.

Comments suggest a shallow monitoring network needs to be developed and implemented to understand conditions in the shallowest portions of the aquifer system.

- A comment suggested that the rooting depth of the Valley Oak is incorrectly limited by The Nature Conservancy documentation on GDEs to 30 feet. Sources listed by the US Forest Service identify a rooting depth of 80 feet. The urban forest in Chico should also be identified and considered as a GDE and habitat monitoring should survey and monitor impacts on wetlands and other GDE areas.
- A number of clarification questions and comments were submitted
- Comments largely relate to the Hydrogeologic Conceptual Model and have implications for expansion of monitoring to address identified data gaps.

Other significant issues that have been raised include:

- Importance of understanding and characterizing interbasin flows (i.e. groundwater flow between subbasins)
- Climate change impact assessment- concern has been raised that the 2030/2070 climate change scenarios utilized by the water budget analysis in the Basin Setting Chapter do not include the potential for multi-decade drought (i.e. megadrought).

All received comments have been compiled and attached with this memo. In the near future staff will address or respond to each comment. This information is provided for discussion and possible direction to staff. These Groundwater Sustainability Plan (GSP) chapters remain in draft form and will not be considered final until they are combined with the rest of the GSP for review and public comment in mid-2021. Public review and comment now provides a foundation for moving into development of Sustainable Management Criteria (SMC) and other portions of the GSP this fall. Comments received also help inform the Vina Stakeholder Advisory Committee (SHAC) and GSA Board of significant issues that may need to be considered during development of SMCs and Projects and Management Actions (PMAs).

SHAC Discussion

Staff presented highlights from the Basin Setting documents and public comments to the SHAC at their September meeting. The SHAC discussed contents of the documents as well as issues surrounding a shallow monitoring network and evaluation of climate change.

Although the SHAC discussion did not result in a formal recommendation to the Vina GSA Board, their discussion reached the following general agreement on these topics:

1. Understanding the shallow zone is important. The SHAC is interested in establishing monitoring networks (well, vegetation, stream monitoring, etc.) to address this data gap. The SHAC discussed this mostly in relation to protecting shallow domestic wells.
2. It is important to consider the climate change analysis being done by other local efforts (e.g. City and County Climate Action Plans) to ensure consistency and alignment between and among those efforts, when possible. The SHAC would like to review those plans (assumptions and information) before recommending incorporating set analysis into the GSP. However, the SHAC reached high level agreement that it is important to align with and reference other relevant planning efforts taking place.

Consideration by the Vina GSA Board

An overview of the draft Basin Setting documents and public comments will be presented to the Board for information and discussion. It would be helpful to get a sense from Board members whether they see significant issues raised by the Basin Setting or public comments, and how they would like to see any issues be addressed in the next phase of GSP development.

Please note that work regarding identification of GDEs is underway and will be added to the documentation when complete. The analysis will be available for and incorporated into the SMC development process.

A couple of issues for potential Board discussion:

1) Shallow Monitoring Network

The document, public comment, and the SHAC identify the limited extent of existing monitoring in the shallowest portions of the aquifer system as an important data gap. Staff agrees that monitoring groundwater conditions in the shallow zone should be improved. There are options on how to improve the shallow monitoring network. Funding will be available after submission of the GSP in 2022 to support implementation of the Plan. Alternatively, the Vina Subbasin could pursue Technical Support Services from the Department of Water Resources for shallow monitoring wells. Either implementation option will require design and development of a shallow monitoring network. The development of the design for a shallow monitoring network and securing the resources for implementation will occur after GSP submission. There may be regional interest in pursuing resources to improve the shallow monitoring network as well. Staff are seeking direction from the Board regarding whether development of a shallow monitoring network be prioritized to address the identified data gap.

2) Climate Change and Water Budget Sensitivity

The SHAC discussed the approaches used by the Basin Setting work to evaluate the sensitivity of the groundwater system and water budget to changes in climate. Climate change water budget scenarios (run using the Butte Basin Groundwater Model) utilized the 2030 and 2070 Central Tendency climate change datasets provided by DWR. This is an approach used by GSPs throughout the Central Valley. The SHAC suggested evaluating the information and approach utilized by other local climate change planning efforts such as the City of Chico and Butte County Climate Action Plans (CAP) and aligning GSP climate change evaluation with approaches/methods used by the CAPs. The next step would be for staff to evaluate the CAPs to understand how their approach compare to the methodology used for the Basin Setting work. This could inform how climate change is considered when evaluating PMAs developed for inclusion in the GSP. However, if a change to the methodology is needed to align with approaches used by the CAPs, this would need to occur under the 5 year update of the GSP since time and resources are not available to rework the Basin Setting results under current GSP development. Waiting five years for additional analysis would not limit the Board from being more protective in development of the Sustainable Management Criteria now. Climate change scenarios are one of many GSP elements with inherent uncertainties. The Board could determine based on the level of uncertainties and other considerations to set more protective standards in the GSP.

The Basin Setting serves to provide information to understand the current conditions of the groundwater basin and to inform our understanding of its sensitivity to change (whether driven by growth, increased water demand, climate change, etc.). Water budget results from the scenario runs provide ample opportunity to explore the system's sensitivity to a variety of changed conditions. The water budget results point out the large variation in groundwater storage that occurs driven by wet and dry cycles in the region's highly variable hydrology. Climate change and changes in demand exacerbate these swings (see Figure 1-36). Sustainably managing the Vina subbasin will largely hinge on drought resiliency planning to somewhat smooth out the extremes. Discussion and/or direction from the Board will help staff understand what issues the Board is most concerned about and therefore guide how best to use the Basin Setting results to inform the next phase of GSP development. The water budget results do not provide answers on what to do or not do, but rather contributes additional information to the decision-making process to support risk assessment and guide what to plan for.