Table 1. Summary of deficiencies Board Staff identified in Kern County Subbasin's 2022, 2024 and Draft 2025 Groundwater Sustainability Plans (GSPs) and proposed potential actions to correct deficiencies in the 2025 Draft GSPs

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency Coordination 1 (CRD)-1: Undesirable results and sustainable management criteria are not coordinated. • **Deficiency CRD-1a:** Undesirable results are poorly described, unworkably complex, and inconsistently implemented. • **Deficiency CRD-1b:** Sustainable management criteria rely on inconsistent datasets and methodologies.	**2024 Draft GSPs Evaluation:** The 2024 Draft GSPs implement consistent and clear plain language definitions of undesirable results and Sustainable Management Criteria (SMC). Board staff does not recommend further action specific to Deficiency CRD-1a or 1b but still note a fragmented approach for defining undesirable results and SMC across the Hydrogeologic Conceptual Model (HCM) Areas. **2024 Final GSPs Tentative Evaluation:** These deficiencies (CRD-1a and 1b) were addressed in the 2024 Draft GSPs based on Board staff's full review.	**2025 Draft GSPs Evaluation CRD-1a:** This deficiency was addressed in the 2024 GSPs. **2025 Draft GSPs Evaluation CRD-1b:** This deficiency was addressed in the 2024 GSPs.	**Potential Action CRD-1a:** No further action is necessary. **Potential Action CRD-1b:** No further action is necessary.
Deficiency CRD-2: The Coordination Agreement, GSPs, and Management Area Plans lack key details necessary for coordinated implementation. • **Deficiency CRD-2a:** The Coordination Agreement is not sufficient to address disputes. • **Deficiency CRD-2b:** The Groundwater Sustainability Agencies (GSAs) do not explain how the multiple plans will satisfy Sustainable Groundwater Management Act (SGMA) requirements, particularly for management areas.	**2024 Draft GSPs Evaluation CRD-2a:** The GSAs have developed a minimum threshold (MT) exceedance policy that describes how MT exceedances will be investigated by the GSAs and reported to the subbasin coordination committee for recommended actions. **2024 Final GSPs Tentative Evaluation CRD-2a:** This deficiency was addressed in the 2024 Draft GSPs. **2024 Draft GSPs Evaluation CRD-2b:** As noted in CRD-1a and CRD-1b, Board staff does not agree with the justification of some SMC and undesirable results established based on HCM Areas in the 2024 Draft GSPs. See sustainability-indicator-specific deficiencies for more details.	**2025 Draft GSPs Evaluation CRD-2a:** This deficiency was addressed in the 2024 GSPs. **2025 Draft GSPs Evaluation CRD-2b:** This deficiency appears to be addressed. (See GL-1b evaluation summary for additional information.)	**Potential Action CRD-2a:** No further action is necessary. **Potential Action CRD-2b:** No further action is necessary.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
• **Deficiency CRD-2b continued**	**2024 Final GSPs Tentative Evaluation CRD-2b:** This deficiency does not appear to be addressed. The GSPs continue to use HCM Areas to set SMC in a manner that may not be protective of beneficial uses and users.		
Deficiency CRD-3: The GSAs in the subbasin have not demonstrated basin-wide management.	**2024 Draft GSPs Evaluation CRD-3:** It is unclear whether the basin possesses basin-wide GSA oversight or management. Board staff is unable to properly evaluate basin management due to the complex arrangement of agencies involved and lack of clear detail demonstrating adequate coverage. Board staff notes that insufficient coverage and authorities could undermine the subbasin's ability to reach sustainability. **2024 Final GSPs Tentative Evaluation CRD-3:** This deficiency does not appear to be addressed. It is still unclear to Board staff if the Kern Non-Districted Land Authority is an official GSA that has the authority to manage groundwater in non-districted areas under the current Joint Exercise of Powers Agreement.	**2025 Draft GSPs Evaluation CRD-3:** This deficiency appears to be partially addressed. Kern Non-Districted Land Authority filed as an official GSA with the authority to manage groundwater in the non-districted areas. Article 2.3 of the Third Amended and Restated Joint Exercise of Powers Agreement between the member agencies of the Kern Non-Districted Land Authority and Kern County Water Agency signed in May 2024 states that the agreement "will remain in effect for a period of two years following the Effective Date unless earlier terminated." On the date of the hearing, as per the terms of the agreement, the Kern Non-Districted Land Authority will sunset in approximately seven months. This could result in certain areas in the subbasin becoming unmanaged, which is a potential basis for state intervention. Board staff is unaware of any other GSA that has a fixed date termination clause in its Joint Exercise of Powers Agreement.	**Potential Action CRD-3:** Board staff recommends that the Kern Non-Districted Land Authority amend the Joint Exercise of Powers Agreement to ensure the GSA has proper authorities to fully implement and enforce SGMA within its respective management areas throughout the planning and implementation horizon of SGMA.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency Groundwater Level 1 (GL-1): Groundwater level undesirable results and SMC are not defined consistent with the requirements of SGMA. • **Deficiency GL-1a:** Undesirable results are not protective of beneficial uses and users. • **Deficiency GL-1b:** Sustainable management criteria were not established consistent with the requirements of SGMA.	**2024 Draft GSPs Evaluation GL-1a:** This deficiency appears to be addressed. **2024 Final GSPs Tentative Evaluation GL-1a:** This deficiency was addressed in the 2024 Draft GSPs. **2024 Draft GSPs Evaluation GL-1b:** The GSAs have made improvements in creating a method to establish SMC that are coordinated and consistently used across the subbasin. However, this method has not resulted in SMC that are consistent with the requirements of the SGMA in that: (1) the trends that inform MTs are based on broad spatial averages and therefore do not represent local conditions that may cause undesirable results and result in MTs that vary substantially across HCM boundaries, (2) some MTs would never be reached unless pumping accelerated, and (3) the MTs and the trends that inform MTs do not differentiate between upper and lower portions of the aquifer system where necessary. **2024 Final GSPs Evaluation GL-1b:** This deficiency does not appear to be addressed. Although some MTs were improved, the identified issues in the deficiency remain.	**2025 Draft GSPs Evaluation GL-1a:** This deficiency was addressed in the 2024 Draft GSPs. **2025 Draft GSPs Evaluation GL-1b:** The GSAs supplemented their existing basin-wide MT methodology by: (1) adjusting some MTs to shallower depths to ensure none fall within the Corcoran clay, where it is present, and (2) adopting other more protective MTs based on local conditions. The MTs set by 19 GSAs appear adequately protective of beneficial uses and users as long as the GSAs implement their mitigation plans. The Henry Miller Water District GSA set the MTs following the basin-wide methodology including the 61 feet limit below recent lows, but did not make other adjustments considering local conditions, eliciting Board staff concerns about the meaningfulness and adequacy of those minimum thresholds in relation to historical trends, projected water use, and the sustainability goal. The MT for any of the five representative monitoring wells in the Henry Miller Water District GSA does not appear to be supported by either historical trends or projected water use.	**Potential Action GL-1a:** No further action is necessary. **Potential Action GL-1b:** Board staff recommends that the Henry Miller Water District GSA: (1) raise MTs consistent with the basin's method to account for local conditions, or (2) establish its minimum thresholds (and measurable objectives) at levels that account for expected local groundwater level rebounds after irrigation pumping ends.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency GL-2: The GSPs' monitoring network and mitigation plans are incomplete. • **Deficiency GL-2a:** The monitoring network was not developed consistent with the requirement of SGMA. • **Deficiency GL-2b:** The well impact mitigation plan is incomplete.	**2024 Draft GSPs Evaluation GL-2a:** The monitoring network does not adequately monitor the upper and lower portions of the aquifer and well construction data are not disclosed. **2024 Final GSPs Tentative Evaluation GL-2a:** This deficiency does not appear to be addressed. The GSAs identified some data gaps for shallow monitoring wells to be addressed within a year, but it remains unclear if they have addressed all areas that may have separate shallow and deep groundwater users. **2024 Draft GSPs Evaluation GL-2b:** Board staff cannot assess whether the mitigation plan will correct the impacts caused by groundwater management activities, because the monitoring network may not be representative of all beneficial uses and users. **2024 Final GSPs Tentative Evaluation GL-2b:** This deficiency appears to be partially addressed. The GSAs have developed a mitigation plan, however, Board staff has concerns regarding potential impacts on beneficial uses and users, because it is unclear whether the impact analysis and subsequent budget are adequate.	**2025 Draft GSPs Evaluation GL-2a:** This deficiency appears to be mostly addressed. The GSAs conducted a spatial data gap analysis using a grid of 111 hexagons of approximately 24-square miles in area and incorporating a statistical approach, local hydrogeologic conditions, and well construction details to identify data gaps relevant to domestic and agricultural well users. Board staff identified additional data gaps that were not initially recognized by the GSAs and advised that properly addressing certain data gaps in specific hexagons could help resolve gaps in adjacent areas. The 2025 Draft GSPs recognize three hexagons as confirmed data gaps and seven hexagons as potential data gaps for further evaluation over the next two years. It appears that the GSAs overlooked or did not prioritize addressing two of the seven data gaps (hexagons 21 and 87) that staff identified. In these areas, local hydrogeologic conditions have historically caused significant variation in groundwater levels between the upper and lower aquifer zones. A failure to sufficiently account for this variability may lead to deficiencies in the data gap analyses, particularly impacting areas with a high density of domestic drinking water wells. **2025 Draft GSPs Evaluation GL-2b:** This deficiency appears to be partially addressed. Board staff recognizes the GSAs' commitment to mitigate drinking water wells impacted by GSA-related activities after January 1, 2015. However, staff noted that state small water system wells would be placed on the technical assistance track and not be eligible for well replacement, which staff proposes is not sufficient.	**Potential Action GL-2a:** Board staff recommends prioritizing filling data gaps in areas with a high density of shallow domestic wells, such as hexagon 87, which contains up to 64 domestic wells screened above the confining clay layer and resolving the data gap in hexagon 21. When identifying new representative monitoring wells, the GSAs should continue to consider site-specific characteristics at individual wells in addition to local geology, particularly in areas where confining/semi-confining clay layers are present, to ensure the wells adequately represent all beneficial uses and users in the area. **Potential Action GL-2b:** Board staff recommends that the GSAs: (1) place state small water systems on the mitigation track rather than the technical assistance track, and (2) consider funding, in an amount at least equivalent to well replacement, for consolidation of impacted state small water systems with existing public water systems, where that option is available and feasible.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency GL-3: The GSPs do not describe a feasible path for halting chronic lowering of groundwater levels.	**2024 Draft GSPs Evaluation:** The GSAs do not establish that they are on a path to reach sustainability. Demand management Projects and Management Actions (PMAs) still lack key details and do not appear to be developed for many parts of the subbasin. It is unclear which PMAs are included in projected paths to sustainability. It is unclear how the GSAs will stop overdraft in the subbasin and avoid undesirable results. Moreover, Board staff notes key concerns over water budgets that may indicate that need for further PMAs. **2024 Final GSPs Tentative Evaluation:** This deficiency appears to be partially addressed. The GSAs continue to rely on various proposed PMAs at various stages of implementation to reach sustainability. Board staff cannot assess the feasibility of the PMAs without representative water budgets and clarity on PMAs implementation. The GSAs included new operational water budgets derived from a mass balance analysis that is inconsistent with overlying crop types and with the Todd Groundwater Model. It remains unclear whether PMAs, if implemented, are feasible and sufficient to achieve sustainable groundwater management.	**2025 Draft GSPs Evaluation GL-3:** This deficiency appears to be addressed. Board staff observe sufficient demand reduction in some of the GSAs' PMAs cumulatively. However, Board staff cautions that the GSAs not accomplishing supply augmentations and demand management goals could greatly impact the basin-wide sustainability goal.	**Potential Action GL-3:** No further action is necessary.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency GL-4: The GSPs do not define groundwater storage sustainable management criteria consistent with SGMA requirements.	**2024 Draft GSPs Evaluation:** The 2024 Draft GSPs state that if all groundwater level MTs are met, groundwater storage would decline by 9.3 million acre-feet (MAF) relative to the baseline total usable storage volume. The GSPs further state that this loss is 4% to 10% compared to total usable storage values of 90 MAF to 260 MAF. These total storage values appear to include storage in clay layers, exempt areas, and areas or poor groundwater quality. The calculated percentage of lost usable storage is likely too low. Additionally, the GSAs do not explain why a loss of 9.3 MAF would not constitute an undesirable result. **2024 Final GSPs Tentative Evaluation:** This deficiency does not appear to be addressed. The GSAs have not revised their methodology used to calculate groundwater storage.	**2025 Draft GSPs Evaluation GL-4:** This deficiency appears to be addressed. The GSAs use groundwater levels as a proxy for groundwater storage in the 2025 Draft GSPs. Consequently, 25 percent of groundwater level representative monitoring wells exceeding their water level minimum thresholds over a single year defines an undesirable result for reduction of groundwater storage. Board staff recognizes the strong correlation between groundwater levels and storage.	**Potential Action GL-4:** No further action is necessary.
Deficiency Land Subsidence 1 (LS-1): Land Subsidence undesirable results and SMC are not defined consistent with the requirements of SGMA • **Deficiency LS-1a:** Undesirable results are poorly described, unworkably complex, and inconsistently implemented. • **Deficiency LS-1b:** Sustainable management criteria were not established consistent with the requirements of SGMA.	**2024 Draft GSPs Evaluation:** Undesirable result definitions are adopted across the subbasin, and the HCM Area approach likely reduces variability and inconsistencies across the subbasin. However, Board staff is concerned with: (1) the GSAs' ability to determine GSA vs non-GSA related subsidence, (2) the processes to determine what is economically feasible to repair, (3) The GSPs' exclusions of industry wells (oil and gas) contributing to subsidence, and (4) methodologies used to calculate subsidence SMC for HCM Areas.	**2025 Draft GSPs Evaluation LS-1a:** This deficiency appears to be partially addressed. The GSAs updated the exceedance policy and action plan for land subsidence to address inconsistent language in the 2024 Final GSPs. The definition of an undesirable result for land subsidence requires the GSAs' to separately quantify subsidence caused by GSA from non-GSA activities. However, the GSAs do not demonstrate the ability to accurately quantify and attribute subsidence extents to GSA and non-GSA activities, particularly along certain sections of the California Aqueduct where both types of activities are present.	**Potential Action LS-1a:** Board staff recommends that the GSAs: (1) improve methodologies for characterizing GSA and non-GSA caused subsidence in areas where that can be an important distinction, and (2) work with government agencies such as the Department of Water Resources (DWR) and the California Geologic Energy Management Division, as well as non-government entities such as oil and gas extraction companies to ensure accurate assessment of GSA and non-GSA subsidence contributions.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
• **Deficiency LS-1a continued** • **Deficiency LS-1b Deficiency LS-1b continued**	**2024 Final GSPs Tentative Evaluation LS-1a:** This deficiency appears to be partially addressed. The updated plain-language undesirable result definition no longer hinges on the economic feasibility of retrofitting or replacement of infrastructure on the part of beneficial users. The updated definition also indicates that the GSAs will be responsible for mitigating losses of infrastructure functionality. The MT exceedance policy was revised, but it is not clear if they are sufficiently protective of all beneficial uses and users. The MT exceedance language in the undesirable result criteria differs from what is in the MT exceedance policy. **2024 Final GSPs Tentative Evaluation LS-1b:** This deficiency appears to be partially addressed. SMC development is less complicated, and Regional Critical Infrastructure MTs appear to be protective of conveyance capacity in vulnerable areas. SMC values are established consistently with a goal of reducing subsidence as 2040 approaches. However, staff is concerned that the HCM Area 2040 interim milestones for subsidence extents exceed the MOs in three of the five HCM Areas, and 2040 IM extents for the Friant-Kern Canal and California Aqueduct exceed the MOs.	**2025 Draft GSPs Evaluation LS-1b:** This deficiency appears to be addressed. The GSAs have plans to ramp down subsidence prior to 2040 with no additional subsidence to occur after 2040. Accordingly, the GSAs updated the sustainable management criteria tables for the California Aqueduct, Friant-Kern Canal, and HCM Areas.	**Potential Action LS-1b:** No further action is necessary.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency LS-2: The GSPs do not provide adequate implementation details.	**2024 Draft GSPs Evaluation:** The 2024 Draft GSPs lack adequate implementation details related to PMAs that address expected, or potential, impacts of subsidence on infrastructure. **2024 Final GSPs Tentative Evaluation:** This deficiency does not appear to be addressed. The Final GSPs include a subsidence exceedance "Action Plan" and a mitigation plan. A $3.5 million mitigation fund is discussed in the mitigation plan, but it is specific to mitigating impacts to wells caused by declining groundwater levels, not subsidence, and there is no mention of infrastructure mitigation. GSPs state that the GSAs do not anticipate subsidence to cause significant impacts to wells. The subsidence action plan is initiated if: (1) one subsidence IM rate or extent exceedance occurs at a California Aqueduct or Friant-Kern Canal monitoring location or (2) a subsidence IM rate or extent is exceeded for a GSA or HCM Area average after six consecutive quarterly sampling events. This language conflicts with the description of the exceedance policy in Section 13.5.1.4 of the GSPs, where it states that action is triggered by exceedances of the MT rate.	**2025 Draft GSPs Evaluation LS-2:** This deficiency appears to be partially addressed. The GSPs state that the action plan for subsidence will be updated within six months of the release of DWR's final Land Subsidence Best Management Practices document to reflect any standardized protocols, actionable timelines, and projects and management actions responses. Additionally, the GSAs expect to revise their mitigation action plan to include mitigation alternative(s), as appropriate, once DWR's California Aqueduct Subsidence Program publishes "the framework for California Aqueduct long-term rehabilitation" (2025 Kern Draft GSP, Appendix K). Many of the substantial updates to the mitigation and implementation details appear to be pending further guidance from DWR.	**Potential Action LS-2:** Board staff recommends that the GSAs develop infrastructure mitigation programs with clear initiation thresholds, eligibility requirements, actionable timelines, and funding sources. Staff additionally recommends the GSAs start reviewing and considering elements of DWR's draft Land Subsidence Best Management Practices document, so that the recommendations in the final document can be incorporated into the GSPs in a timely manner.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency Groundwater Quality 1 (GWQ-1): The GSPs do not establish undesirable results and sustainable management criteria consistent with the requirements of SGMA. • **Deficiency GWQ-1a:** Undesirable result definitions are not protective of beneficial uses and users. • **Deficiency GWQ-1b:** The GSPs are missing critical information about how the GSAs will determine whether an undesirable result has occurred.	**2024 Draft GSPs Evaluation:** The quantitative definition of an undesirable result is defined as MT exceedances in three representative monitoring wells in an HCM area. Concerns include: (1) significant portions of the subbasin could experience degradation of groundwater quality without triggering an undesirable result, and (2) the trigger for an undesirable result may result in disproportionate impacts in different areas in the subbasin. **2024 Final GSPs Tentative Evaluation GWQ-1a:** The deficiency does not appear to be addressed. The updated undesirable result definition still lacks the detail necessary to determine whether all beneficial uses and users have been considered. **2024 Final GSPs Tentative Evaluation GWQ-1b:** The deficiency does not appear to be addressed. The technical analysis process developed by the GSAs fails to consider driving mechanisms for each Constituent of Concern (COC).	**2025 Draft GSPs Evaluation GWQ-1a:** This deficiency appears to be addressed. The updated undesirable result definition is if any of the following occur at any time: (1) if 15 percent of representative monitoring wells exceed the MT for any COC due to groundwater management actions, or (2) five percent of domestic wells in the subbasin annually or 15 percent cumulatively through 2040 are estimated to have MT exceedance, or (3) a GSA is unable to meet well mitigation needs. Of the 330 individual MTs set at 55 representative monitoring wells across the subbasin for six COCs, 308 (approximately 93 percent) are set at the drinking water standards. The remaining 22 MTs were set above the drinking water standards due to water quality degradation that was already occurring when SGMA took effect in 2015. The GSAs established minimum thresholds and a quantitative definition of an undesirable result that are designed to protect water quality from impacting beneficial uses and users or prevent further degradation of groundwater quality beyond January 1, 2015 conditions due to groundwater management activities. **2025 Draft GSPs Evaluation GWQ-1b:** This deficiency appears to be addressed. The GSAs revised their MT exceedance investigation methodology for groundwater quality to specify a timeline, who will conduct it, required tasks, and factors to be evaluated, including potential driving mechanisms that can lead to groundwater quality degradation.	**Potential Action GWQ-1a:** No further action is necessary. **Potential Action GWQ-1b:** No further action is necessary.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency GWQ-2: Groundwater quality monitoring network is not consistent with the requirements of SGMA. • **Deficiency GWQ-2a:** The monitoring network is not protective of all beneficial uses and users in the subbasin. • **Deficiency GWQ-2b:** Water quality sampling frequencies are sometimes insufficient. • **Deficiency GWQ-2c:** It is unclear how the GSAs will assess the impacts of projects and management actions.	**2024 Draft GSPs Evaluation:** The GSPs' monitoring network is not protective of beneficial uses and users. It does not result in spatial or temporal coverage sufficient for characterizing groundwater quality conditions or changes to those conditions that may occur throughout the implementation of the GSPs. **2024 Final GSPs Tentative Evaluation GWQ-2a:** This deficiency does not appear to be addressed. The GSPs do not include depths or screen intervals of any representative monitoring wells. Without this information, Board staff cannot evaluate whether the monitoring network adequately represents beneficial uses and users. It is unclear whether the representative monitoring wells will be sufficient to identify impacts to domestic wells since no groundwater quality-specific impact analysis was not completed. **2024 Final GSPs Tentative Evaluation GWQ-2b:** This deficiency was addressed in the 2024 Draft GSPs. **2024 Final GSPs Tentative Evaluation GWQ-2c:** This deficiency does not appear to be addressed. It is unclear how the monitoring network is evaluating the potential impacts of PMAs.	**2025 Draft GSPs Evaluation GWQ-2a:** This deficiency appears to be addressed. The GSAs conducted a spatial analysis based on a grid of 111 hexagons of approximately 24-square miles in area to identify gaps in the groundwater quality monitoring network. Board staff, particularly focusing on monitoring shallow domestic wells, recommended additional potential gaps for the GSAs' consideration. Through this analysis, 32 data gaps (hexagons) were identified. The GSAs plan to fill all identified gaps by the end of 2026. **2025 Draft GSPs Evaluation GWQ-2b:** This deficiency was addressed in the 2024 Draft GSPs. **2025 Draft GSPs Evaluation GWQ-2c:** This deficiency appears to be addressed. As stated under deficiency GWQ-2a, the GSAs identified gaps in the groundwater quality monitoring network and committed to fill all identified gaps. The GSAs also identified potential water quality degradation driving mechanisms related to projects and management actions.	**Potential Action GWQ-2a:** No further action is necessary. **Potential Action GWQ-2b:** No further action is necessary. **Potential Action GWQ-2c:** No further action is necessary.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency GWQ-3: Management actions are not responsive to water quality degradation. • **Deficiency GWQ-3a:** Management actions are not protective of beneficial uses and users once a minimum threshold exceedance is triggered. • **Deficiency GWQ-3b:** Well mitigation plan does not address water quality degradation.	**2024 Draft GSPs Evaluation:** The GSPs lack management actions and mitigation plans that are responsive to MT exceedances. These management actions are important for ensuring that the GSAs avoid undesirable results. Board staff notes multiple deficiencies concerning mitigation plans and PMAs in the 2024 Draft GSPs. **2024 Final GSPs Tentative Evaluation GWQ-3a:** This deficiency appears to be partially addressed. Board staff is still concerned that beneficial uses and users may be impacted prior to an undesirable result occurring due to the Exceedance Policy's insufficient correlation procedure. **2024 Final GSPs Tentative Evaluation GWQ-3b:** This deficiency appears to be partially addressed. The GSPs still lack an appropriate method for evaluating whether groundwater quality degradation may be due to groundwater management activities or actions. Without a clear understanding of potential impacts, Board staff cannot determine if the well mitigation plan will address the degradation of water quality.	**2025 Draft GSPs Evaluation GWQ-3a:** This deficiency appears to be addressed. The GSAs improved their groundwater quality MT exceedance action plan and investigation methodology. The action plan outlines when and how GSAs will notify drinking water well owners within the zone of influence of a water quality minimum threshold exceedance. **2025 Draft GSPs Evaluation GWQ-3b:** This deficiency appears to be partially addressed. The GSAs developed a plan to mitigate drinking water wells impacted by degraded groundwater quality resulting from groundwater management activities. Board staff finds a number of shortcomings in that plan. A qualified professional will investigate to determine the potential cause after a groundwater quality MT exceedance. It is unclear how the GSAs will address impacts if the cause of the exceedance is either partially attributed to groundwater management or attribution is inconclusive. The GSAs plan to mitigate for COCs that have established primary maximum contaminant levels by installing point-of-entry reverse osmosis systems in impacted households. Staff is concerned with the mitigation prerequisite because water quality standard for total dissolved solid is a secondary maximum contaminant level making it ineligible for mitigation. Staff also has concerns about the GSAs' reliance on reverse osmosis systems because these systems only partially remove 1,2,3-TCP from water.	**Potential Action GWQ-3a:** No further action is necessary. **Potential Action GWQ-3b:** Board staff recommends that the GSAs: (1) provide additional information on how they plan to address impacted wells if the cause of groundwater quality degradation is partially attributed to groundwater management actions or attribution is inconclusive, (2) clearly describe a plan for effectively mitigating wells impacted by increasing concentrations of any constituent for which a minimum threshold is established in the GSPs, including 1,2,3-TCP, attributed to groundwater management activities. Board staff also recommends that the GSAs re-evaluate whether "ongoing standard basin operations that are consistent with operations taking place prior to 2015" are causing groundwater quality undesirable results and, if so, incorporate projects and management actions to avoid or mitigate those undesirable results. The GSAs should ensure their groundwater management activities do not exacerbate groundwater quality issues associated with exiting contaminants in some zones of the aquifer system.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
• **Deficiency GWQ-3b continued**	• **Deficiency Evaluation summary for GWQ-3b continued**	The well mitigation plan states that the cause of degraded groundwater quality will be determined through a case-by-case evaluation considering many essential factors including “Whether GSA projects and management actions at issue are related to ongoing, standard basin operations that are consistent with operations taking place prior to 2015”, and “If the presence of the constituents/contaminants in the aquifer are due to the actions of others that are likely responsible parties”. Any degradation of groundwater quality caused by projects and management actions after January 1, 2015 should be addressed by the GSAs. The GSAs should also address groundwater quality degradation resulting from contaminant migration or mobilization due to groundwater management actions, except for undesirable results occurring prior to 2015.	Additionally, Board staff recommends that the GSAs consider the potential for lateral or vertical migration of existing constituents of concern caused by groundwater management activities when evaluating MT exceedances.
Deficiency Interconnected Surface Water 1 (ISW-1a and ISW-1b): Interconnected Surface Water Undesirable results and SMC are not coordinated.	**DWR Inadequate Determination summary:** None. **2024 Draft GSPs Evaluation:** None. **2024 Final GSPs Tentative Evaluation:** This deficiency was addressed in the 2024 Final GSPs.	**2025 Draft GSPs Evaluation ISW-1a:** This deficiency was addressed in the 2024 GSPs. **2025 Draft GSPs Evaluation ISW-1b:** This deficiency was addressed in the 2024 GSPs.	**Potential Action ISW-1a:** No further action is necessary. **Potential Action ISW-1b:** No further action is necessary.

Deficiency Identified in 2022 and/or 2024 GSPs	Deficiency Evaluation Summary – 2024 GSPs	Deficiency Evaluation Summary – 2025 Draft GSPs	Potential Actions to Correct the Deficiency
Deficiency ISW-2: The GSAs do not adequately demonstrate that undesirable results related to the depletion of ISW are not present and are not likely to occur.	**DWR Inadequate Determination summary:** None. **2024 Draft GSPs Evaluation:** The GSPs state that there is no ISW and therefore no potential undesirable results would occur. However, GSPs do not provide adequate technical justification to demonstrate ISW is not present in the subbasin. **2024 Final GSPs Tentative Evaluation:** This deficiency appears to be addressed. The 2024 Final GSPs include a more robust description of the methodology used to conclude the absence of ISW and GDE in the subbasin.	**2025 Draft GSPs Evaluation ISW-2:** This deficiency was addressed in the 2024 GSPs.	**Potential Action ISW-2:** No further action is necessary.