

Water Quality Requirements Under the Sustainable Groundwater Management Act

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SGMA requires GSAs avoid causing any of *six specified undesirable results*, including undesirable result number 4 (UR No. 4) labeled “significant and unreasonable degraded water quality” throughout the basin. UR No. 4 is the subject of robust federal, state and local regulatory regimes carried out by a number of different entities, unlike most other undesirable results.

While the state and Regional Water Resources Control Boards have the broadest responsibilities to protect groundwater quality, many other agencies also have relevant responsibilities. The other distinctive feature of UR No. 4 is that groundwater management that prevents chronic lowering of groundwater levels may be insufficient to prevent significant and unreasonable degradation of groundwater quality. For example, significant changes in groundwater pumping can potentially mobilize naturally occurring constituents, or cause either migration or expansion of contaminant plumes even when extracted amounts are within the basin’s sustainable yield.

This guide intends to assist in understanding the meaning of UR No. 4 and provide insights into how GSAs can successfully fulfill their legal responsibilities regarding groundwater quality. To avoid UR No. 4 this guide recommends GSAs do the following:

1. **Understand the existing regulatory regime for groundwater quality** and, as necessary, confer with entities that have regulatory authority over groundwater quality in their basins. (See Section 3)
2. **Consider existing federal, state and local groundwater quality standards when developing groundwater quality minimum thresholds in their basins.** Federal, state or local regulatory requirements were established after careful scientific study, legal review and procedural steps mandated by law. They are designed to protect public health and welfare, and they provide the clearest indication of the point beyond which there is a real risk of an undesirable result. (See Section 3.1)
3. **Work closely with their Regional Water Quality Control Boards** to address all groundwater quality issues. GSAs working in the Central Valley are especially encouraged to work with the Central Valley Regional Board to address salt and nutrient groundwater contamination. Programs in this region are evolving and will require that GSAs remain aware of changing regulatory requirements. Additionally, there are many groundwater quality monitoring efforts in this region generating groundwater quality data. GSAs should align any groundwater monitoring efforts with those already in place. (See Sections 3.4.2 and 4.3.2)

4. **Use existing groundwater quality data and information to:**
 - a. assess and prioritize groundwater quality issues in their basins;
 - b. meet requirements that GSPs include a description of current and historical groundwater conditions within the basin; and
 - c. serve as either the basis for or a complement to local groundwater quality monitoring programs developed by GSAs.

5. **If groundwater quality problems arose or were exacerbated after Jan. 1, 2015, consider the following:**

Where there is a significant groundwater quality problem that is clearly under the purview of another agency, confer with that agency and seek to confirm a reasonable plan to address the groundwater quality problem. If such a plan exists, the water quality problem and the plan should be referenced in the GSP. Section 3 and Table 1 in the guides provide information on existing regulatory programs and the agencies responsible for their enforcement.

Where a significant groundwater quality problem is not clearly under the purview of another agency, or the responsible agency is unable to confirm a reasonable plan to address the problem, confer with regional or state board staff, and perhaps affected parties, to identify a reasonable plan to address the problem. If no reasonable plan is identified, and remediating the problem is impractical, wasteful of resources or otherwise infeasible, the GSA should include in the plan an explanation of the problem and the reasons why remediation is impractical or infeasible.

6. **Consider the following approach (discussed in Section 5) if projects or actions may affect groundwater quality:**

Assess potential impacts the projects or actions are likely to have on groundwater quality over time. If the proposed project or action could have unacceptable adverse impacts on water quality, GSAs should consider revising or developing alternative projects that avoid or mitigate water quality impacts.

Ensure regulatory compliance for any GSP management actions (e.g., recharge projects, water banking) that have the potential to negatively impact water quality in their basins or adjacent basins. (Sections 3 and 5 provide information on regulatory requirements and considerations associated with groundwater recharge and active basin management, respectively.)

7. **Develop supplemental groundwater monitoring networks where necessary.** Many basins being managed under SGMA have significant water quality data gaps. Thus, GSAs in many basins will likely need to develop or expand local groundwater quality monitoring networks. Decisions to do so should be informed by:
 - a. the extent and quality of existing groundwater quality data in the region;
 - b. the level of groundwater development;
 - c. the severity of existing groundwater quality issues and their proximity to domestic or irrigation wells, public water supply sources or other vulnerable users;
 - d. current or proposed groundwater management actions or projects;
 - e. local resources; and
 - f. hydrogeologic complexity of the basin (Section 6).

While GSAs are not responsible for enforcing existing water quality standards or collecting data to support existing water quality programs, they are responsible for avoiding “significant and unreasonable” degradation of water quality in their basins. Working with federal, state and local water quality monitoring and enforcement entities will help GSAs understand groundwater quality issues in their basins, enabling them to develop GSPs that avoid UR No. 4.

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