
State Water Resources Control Board

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SANTA CRUZ MID-COUNTY GROUNDWATER SUSTAINABILITY PLAN, GROUNDWATER BASIN NO. 3-001

Provided for your consideration are comments submitted on behalf of the State Water Resources Control Board (State Water Board) by the State Water Board's Groundwater Management Program in support of the Department of Water Resources' (DWR) review of the Groundwater Sustainability Plan (GSP) for the Santa Cruz Mid-County Groundwater Basin (basin). The State Water Board recognizes that DWR will determine the adequacy of the GSP, and these comments are intended to support DWR's review by providing the State Water Board's additional expertise and regulatory experience with regard to GSPs. In preparing comments, the Groundwater Management Program has consulted the State Water Board's Division of Water Rights and Division of Drinking Water as well as the appropriate Regional Water Quality Control Board to seek local information and programmatic concerns.

The State Water Board's comments on the GSP relate to the following areas:

- General Comments
- Beneficial Uses and Users
- Groundwater Quality
- Drinking Water
- Depletions of Interconnected Surface Water
- Water Budget
- Projects Reliant on Water Rights
- Engagement

General Comments

1. Staff commend the Santa Cruz Mid-County Groundwater Agency (GSA) for: setting protective sustainable management criteria (SMC); clearly linking the SMC to potential effects of groundwater conditions on beneficial uses and users

of water; and conducting extensive public outreach and involvement in the development of the GSP.

2. Available data on groundwater conditions, representative monitoring points (RMPs), and sites for projects and management actions are generally concentrated in deeper aquifers in the areas of the basin closer to the coast. The GSP's focus on conditions near the coast is reasonable, given ongoing problems with seawater intrusion and municipal water use and well locations; however, changes in lower-volume pumping in less populated areas of the basin could have localized impacts on groundwater levels, water quality, and interconnected surface water in ways that affect beneficial uses and users of water. The GSP should either 1) better explain how the existing and proposed monitoring network and representative monitoring points adequately represent groundwater conditions in the basin's more inland areas or 2) develop a plan for further filling data gaps in those areas.

Beneficial Uses and Users

3. The plan appears to limit the scope of its consideration of groundwater-dependent ecosystems (GDEs), as beneficial users of groundwater in the basin, to GDEs associated with interconnected surface water. This approach may miss GDEs in low-lying areas distant from surface water bodies that may depend on shallow groundwater and could be affected by declining groundwater levels independent of interconnected surface water depletions. The GSP should include a discussion of whether other GDEs may be present in the basin and how the needs of those GDEs may be considered in development of SMC for declining groundwater levels.

Groundwater Quality

4. The GSP includes SMC for most locally relevant groundwater constituents of concern; however, while the GSP acknowledges high concentrations of 1,2,3-trichloropropane (1,2,3-TCP) near Soquel Creek Water District's (SqCWD) off-line Country Club Well, the GSP does not propose SMC for 1,2,3-TCP. The GSP notes that SqCWD plans to use the well after constructing a treatment facility for 1,2,3-TCP, but does not discuss potential effects on other nearby groundwater users. The GSA should consider setting SMC for 1,2,3-TCP because it is prone to migrate through groundwater pumping and recharge projects.
 - a. In deciding which water quality constituents to consider when setting SMC, a GSA should consider the best available water quality information for the basin, including data used to develop the hydrogeologic conceptual model, geochemistry of geological formations (for the potential of mobilization of natural constituents), and groundwater uses in the vicinity of the RMPs and the basin as a whole when determining which constituents to evaluate for minimum thresholds. Different constituents may cause undesirable degradation of water quality in different areas based on the purposes for which groundwater is beneficially used. Not all water quality impacts to groundwater must be addressed in the GSP but

significant and unreasonable water quality degradation due to groundwater conditions occurring throughout the basin, and that were not present prior to January 1, 2015, must be addressed in the GSP's minimum thresholds. Both groundwater extraction and the implementation of projects to achieve sustainability may cause impacts from migration of contaminant plumes, changes in the concentration of contaminants due to reduction in the volume of water stored in the basin, or release of harmful naturally occurring constituents. A GSA should particularly consider whether any groundwater quality constituents in the basin may impact the state's policy of protecting the right of every human being to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes (Water Code Section 106.3). Coordination by the GSA with agencies that oversee the remediation of existing groundwater contamination is highly recommended, both in setting minimum thresholds and developing a plan of implementation.

Drinking Water

5. The GSP's approach to setting minimum thresholds is explicitly designed to avoid dewatering of wells, which staff appreciate; however, given the relative scarcity of RMPs in the northern and northwestern areas of the basin, staff suggest the body of the GSP more clearly explain how well the RMPs reflect shallow groundwater levels in those areas of the basin, particularly given topography, data gaps, and the share of overall groundwater demand by non-municipal domestic users.

Depletions of Interconnected Surface Water

6. Staff appreciate the GSA's approach of convening a diverse Surface Water Working Group to support management of interconnected surface water and supports its proposal to continue to work with Working Group partners as it expands its monitoring network and reevaluates its SMC and data gaps, as the GSA proposes; however, staff recommend the GSP still describe the general approach it will take in setting minimum thresholds and measurable objectives for future shallow well RMPs. The GSP defines an undesirable result by comparing depletions to those experienced since the start of shallow groundwater level monitoring through 2015. Given pre-2015 data won't be available for new shallow groundwater monitoring wells, the GSP should explain how this definition will be adapted for new RMPs.
7. The GSP identifies general proposed locations for new shallow monitoring wells and associated stream gages to help close data gaps regarding interconnected surface water in the basin. While the GSP briefly describes why each location was selected (Table 3-11), the GSP should more broadly describe how well existing and proposed shallow monitoring wells represent groundwater conditions and interconnected surface water in the basin, particularly given diffuse distribution of smaller, shallower wells in the interior of the basin.

Water Budget

8. Staff acknowledge the fundamental uncertainty in projecting future conditions under climate change, particularly along the coast. The GSP notes that there is significant variance in future conditions projected by Global Climate Models (GCMs). The GSP indicates that GCM projections all indicate warmer conditions in the future, but some indicate increased precipitation while others indicate decreased precipitation. The net impacts to basin inflow and evapotranspiration are therefore uncertain. Due to this uncertainty, the GSP does not use GCM projections to inform its future climate water budgets. It instead selects a randomized sample of the historical annual temperature and precipitation record to project future conditions. The randomized sample was selected using a statistical weighting system that prefers warmer years to cooler years. This results in a “re-shuffling” of the historical record, but with a sample with more frequent warm years than the actual historical record. Because this projection is based on the historical record, neither maximum temperatures nor drought severity increase. Both are capped to the highest temperature and most severe drought in the historical record. While staff appreciate the desire to rely on empirical data given the variance in GCM projections, staff recommend that, in future updates, the GSA also evaluate future budgets under hotter and wetter scenarios indicated by GCM projections to better evaluate the impacts of potential future conditions. It is in the GSA’s best interest to explore future uncertainty so that it can ensure its projects and mitigation offer adequate contingency. To this end, the GSA should assess various projections to best understand worse-case scenarios for declining inflow or increased evapotranspiration.
9. Staff suggest the GSP’s discussion of its projected water budgets better clarify how individual projects and management actions influence those budgets; this will make it easier to understand the implications of any changes to proposed projects or management actions.

Projects Reliant on Water Rights

10. Implementing some of the projects identified in the GSP may require new or amended water rights:
 - a. New surface water right permits: An applicant must gather all information necessary to complete the application, which could be extensive. Once the application is publicly noticed, other water right holders may protest the project based on potential injury to their water rights. Parties may also protest if the project has the potential to harm public trust resources. The GSA should contact the Division of Water Rights’ Permitting and Licensing Division or consult the Division’s [Permitting and Licensing Frequently Asked Questions \(https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/faqs.html\)](https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications/faqs.html) to develop an informed timeline for project implementation that includes necessary water right actions.

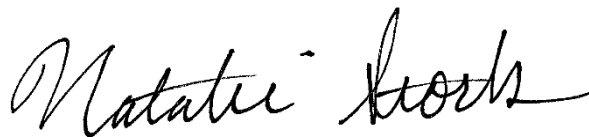
- b. Amendment of an existing surface water right: The time required to amend an existing water right depends on multiple factors, including but not limited to whether the change is minor, major, or controversial. The GSA can learn more from the Division of Water Rights' [Petitions Frequently Asked Questions \(https://www.waterboards.ca.gov/waterrights/water_issues/programs/petitions/faqs.html\)](https://www.waterboards.ca.gov/waterrights/water_issues/programs/petitions/faqs.html).
11. Given there is no certainty that a particular water right permit or petition will ultimately be approved, or when, it is important the GSP clarify its proposed timelines for projects and management actions and consider how changes in those timelines could impact the basin's ability to achieve sustainability by 2040. This would ensure the GSP can effectively evaluate when it should move towards implementing contingency projects or management actions if primary projects or management actions are not implemented on projected timelines.

Engagement

12. Staff appreciate that the GSP describes the Ohlone people's ancestral ties to the basin, and that the County of Santa Cruz is in contact with representatives of the Amah Mutsun Tribal Band on water issues. In the interest of ensuring the GSA considered the interests of California Native American Tribes (Water Code §10723.2(h)), staff recommend the GSP more explicitly describe how the GSA identified California Native American Tribes with potential interest in the basin, as well as the extent and content of the GSA's discussions with the Amah Mutsun Tribal Band regarding development of the GSP. If the GSA has not already done so, the GSA should consult with the Native American Heritage Commission (NAHC) to obtain information about Tribes that have current and ancestral ties in the Basin. To request this information, the GSA can email the NAHC at nahc@nahc.ca.gov.

If you any have questions regarding these comments, please do not hesitate to contact State Water Board Groundwater Management Program staff by email at SGMA@waterboards.ca.gov or by phone at 916-322-6508.

Sincerely,



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