



---

**Chandra Ferrari**  
California Water Policy Director

December 18, 2013

*Sent via email*

Eric Oppenheimer  
State Water Resources Control Board  
1001 I St.  
Sacramento, CA 95814

**Subject: Groundwater Workplan Concept Paper**

Dear Mr. Oppenheimer,

On behalf of Trout Unlimited (TU), the nation's oldest and largest non-profit organization dedicated to conserving, protecting, and restoring trout and salmon fisheries, I am writing to convey the following comments on the State Water Resource Control Board's (Board) Groundwater Workplan Concept Paper. These comments supplement the in-person comments that I delivered at the November 19 stakeholder meeting at the Board in Sacramento. Trout Unlimited has 150,000 members across the country, including 10,000 in California, and we have offices in Berkeley, Sacramento, Ft. Bragg, Truckee, Sonora, and San Juan Bautista.

TU supports the Board's efforts to identify and implement actions that will lead to more effective management of groundwater resources. Such efforts are particularly important as California increases its reliance on groundwater to confront the challenges presented by population growth and climate change. The Board has indicated that the concept paper will serve as the foundation for a subsequent workplan that will provide more details on the specific tasks that the Board will implement and how it intends to prioritize those tasks. We agree that the plan should include specific, concrete actions with implementation timetables and proposed funding sources to ensure it translates into meaningful on-the-ground change. We also recommend that the public be offered a chance to provide feedback on the workplan once it is completed. Our further comments on the concept paper are described below.

**Organization of the Document**

The concept paper organizes itself around five key management elements. Each element contains current activities that relate to it. The management elements are reasonable and the identification of current activities is useful. However it is difficult to discern from the document where information or regulatory gaps exist. A more useful construct might be identifying where and how current efforts fall short of producing necessary information or achieving desired outcomes. For instance, the concept paper could identify which groundwater basins lack or are not implementing comprehensive groundwater management programs. Identification of these gaps will allow readers (and the Board) to better understand the limitations of current actions and facilitate a more focused assessment regarding what future actions are required to ensure that groundwater is effectively and comprehensively managed and where those actions are needed.

*Trout Unlimited: America's Leading Coldwater Fisheries Conservation Organization*

California Office: 2239 5th Street, Berkeley, CA 94710

Direct: (916) 214-9731 • Fax: (510) 528-7880 • Email: cferrari@tu.org • www.tu.org

## **Comments on Section 2**

### (1) Groundwater – surface water interaction

The concept paper should emphasize the importance of groundwater and surface water interactions. It is important to identify and understand the impacts to surface elevation that arise from groundwater pumping and overdraft conditions. Groundwater pumping can reduce the flow of water in connected streams and rivers to the detriment of surface water beneficial uses. Agriculture, cities, fisheries, and other resources are harmed as a result. The paper notes that “[t]he greatest challenge for groundwater quantity is overdraft.” (p. 2.) Overdraft is clearly a significant issue and can materialize in very alarming and visible ways, as evidenced by the recent United States Geologic Service finding that parts of Merced County south of El Nido dropped more than 21 inches in two years due to over-pumping. The paper notes that land subsidence and reduced aquifer storage capacity are consequences of overdraft. However, the primary cause of overdraft (over-pumping) also causes impacts that are less visible and less well-understood such as declining surface water levels which in turn negatively affect dependent ecosystems and surface water quality and the people who depend on them.

The paper should note that these impacts can be hard to capture (and easy to overlook) as streamflow depletion can continue for a significant amount of time after pumping activities have ceased. Full recovery of the aquifer can take years or decades. The Board should prioritize the gathering of information that will further elucidate how ground and surface water interact in each groundwater basin and how groundwater pumping is affecting connected surface streams. In addition to information gathering efforts, local agencies should explicitly include basin management objectives in their groundwater management plans that seek to ensure that groundwater pumping does not adversely impact surface water levels or fish and wildlife beneficial uses. The Board should commit to using its regulatory authority if local efforts prove inadequate.

### (2) Natural Recharge Areas

The Board should explicitly recognize the value of natural areas to facilitate groundwater recharge and should encourage actions to protect existing recharge areas, such as providing technical expertise to local management agencies to assist them in locating potential recharge areas for protection. In addition, the Board should help enable management actions that have significant natural recharge potential, such as floodplain restoration. Potential Board actions include expedited permitting for ecologically beneficial projects, such as stream restoration projects, that may result in greater groundwater recharge or for small-scale off-stream storage ponds/reservoirs that facilitate decreased surface diversions during drier months and assist with aquifer recharge. Other actions include identification of floodplain restoration objectives in water quality control plans and increased technical support and funding to private landowners seeking to implement environmentally sound activities on their land to improve its recharge potential.

## **Comments on Section 3 (Management Actions)**

### (1) Thresholds

The first management action is the establishment of “[s]ustainable thresholds for water level drawdown and water quality for impacted, vulnerable, and high-use basins.” (p. 4.) The paper should make it clear that thresholds should be developed for all groundwater basins because it is imperative that they are all protected and managed sustainably. Attempting to prioritize basins based on level of vulnerability or

impact can be complicated because, in many cases, information is insufficient to allow an informed comparison of vulnerability between basins. Also, focusing on the most obviously impacted basins may be necessary from a resource perspective but it is a short-sighted strategy. In extremely impacted aquifers, the damage can be irreversible. Thereby, it is particularly important that priority be given to ensuring that other basins don't get impacted to the point of sustaining permanent damage.

With regard to establishing thresholds, the paper should note that part of its challenge will be to acquire enough information about all of the different groundwater basins to set the thresholds in an informed way. The Board should prioritize the development of thresholds intended to avoid impacts to ecosystems and public trust resources particularly in circumstances where the relevant surface and groundwater sources have been found to be interconnected. Possible Board actions include the provision of technical guidance to aid local agencies in threshold development and the inclusion of such thresholds in Board basin plans. In the absence of conclusive information, thresholds should be set with the precautionary principle in mind.

## (2) Monitoring

None of the Board's recommended actions will be possible without better information. The Board should encourage a comprehensive approach to managing and synthesizing groundwater data. The amount and quality of data being collected varies from basin to basin. In addition, it is not universally accessible or contained in usable formats. As a first step, as noted above, the paper should identify the data gaps that currently exist and recommended measures to obtain the information. All groundwater management plans should include robust monitoring plans and the Board should support the State providing some level of technical and financial support for these efforts.

Monitoring efforts should study more than changing groundwater elevation levels. They should include at least two other things: the interaction between surface and groundwater and the effects of groundwater pumping on surface water, and the level of demand for water resources. Programs should include the monitoring of shallow wells, when appropriate, as these tend to be connected to habitats used by sensitive species, such as wetlands. In addition, the impacts to water level and water quality from short-term or seasonal pumping should be studied. Options for obtaining necessary data in the case where local agencies fail to develop or implement a monitoring program must be explored. Finally, the Board should help create tools and guidance that allow management entities to use similar standards and metrics to synthesize data and make conclusions. This will allow for transparent determinations regarding how sustainably the groundwater basins are being managed that can be easily compared between different basins.

## (3) Funding

The Board should encourage the development of regulatory mechanisms that compensate private landowners for providing ecosystem services that are beneficial for species and improve groundwater recharge, such as floodplain habitat and/or soil and land management practices that encourage the retention of water in the landscape.

## (4) Governance/Management/Enforcement

The paper is clear that the primary responsibility for groundwater management will reside with local and regional authorities with the state supplying "support and oversight, where necessary." (p. 1.) This

approach has merit. At the same time, its effectiveness will depend on the Board clearly describing its oversight role and committing to using it when necessary. As the paper notes, many local groundwater management efforts are producing positive results. However, some groundwater basins are not managed in accordance with any plan, or the plan is too narrow or is not being effectively implemented. Effective management of groundwater resources requires that local/regional entities develop and implement robust Groundwater Management Plans with comprehensive basin management objectives, including ecosystem objectives. The Board should advocate for policy changes that require the implementation of or otherwise incentivize robust groundwater management plans. In addition, the Board should be clear that it intends to articulate when and how it will intervene if local efforts prove insufficient to adequately protect public trust resources and beneficial uses.

Whether and how the Board exercises authority over groundwater is certain to generate controversy. However, we encourage the Board to proactively use its numerous authorities, as appropriate, to prevent the waste and unreasonable use of water and to protect public trust resources. The Board should be particularly clear about its intent to intervene should available information indicate that groundwater withdrawals are adversely impacting surface water beneficial uses.

We also recommend that the Board provide guidance, consistent with recent court determinations, related to how its anti-degradation policy applies to groundwater. These steps will help ensure that the Board acts as an effective backstop should local groundwater management efforts prove unsuccessful.

### **Subterranean Streams**

The relationship between “groundwater” pumping and pumping from subterranean streams should also be addressed in the workplan, at least insofar as it relates to recommendations regarding data gaps. It is well established that the Board has permitting authority over subterranean streams flowing through known and definite channels. Unfortunately, most subterranean streams have never been mapped making it difficult for the Board to provide guidance to landowners as to when their well requires a water right permit (or statement of diversion and use). Current information is incomplete regarding how many wells exist in California, whether they are drawing from groundwater or subterranean streams, how much water they divert, or what their impact is to aquifers, instream beneficial uses, or senior diverters. As a result, there are hundreds or thousands of wells that operate in an uncertain regulatory climate. This is unfair to landowners and affected water right holders and destructive to fisheries and other public trust resources. The Board should prioritize addressing the data gaps relating to wells for which it has permitting jurisdiction. Additionally, it should provide guidance to well owners to assist them in determining whether or not they are pumping from a subterranean stream. The Board should also explore the potential benefits of designating subterranean streams on a watershed-wide basis.

Thank you for the opportunity to comment on the Groundwater Concept Working Paper. We look forward to working with the Board as it continues to refine its workplan. If you have any questions, please contact me at 916-214-9731 or cferrari@tu.org.



Chandra Ferrari  
CA Water Policy Director