



O.W.L. Foundation
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<http://owlfoundation.net>

November 19, 2013

Mr. Eric Oppenheimer
California State Water Resources Control Board
eric.oppenheimer@waterboards.ca.gov

Dear Mr. Oppenheimer,

The following are comments on the State Water Resources Control Board Groundwater Workplan Concept Paper, Discussion Draft, from the O.W.L. Foundation, which advocates for the preservation of Open Space and Water Resources Protection, through rational Land Use policies.

The O.W.L. Foundation finds that the Workplan Concept draft document has good objectives, and identifies many of the critical concepts and actions needed to provide Californians with a reliable water supply in a potentially drought-ridden future. We suggest adding another few critical concepts that are required before the plan can actually fulfill that goal.

The introductory statement (p. 1) defines the Workplan objective as to “address groundwater challenges that have the greatest potential to impact beneficial uses.”

One of these challenges is the potential for drawing down groundwater so far that it reduces or eliminates stream and river underflow, and thus baseflow in streams. This requires recognizing the scientifically-established connection between percolating groundwater and groundwater connected to streams. This connection must be recognized for this Workplan to have any validity. The only place where the concept comes close to being addressed is a single reference to conjunctive management, in Section 3.3 (p. 6).

Section 1. Regional Leadership (p. 1)

References to the objectives of management in these statements refer only to human uses, and avoid confronting the uncomfortable fact that human well-being depends on maintaining healthy ecosystems, including forests, grasslands, wetlands, and streams.

We strongly suggest that the Board add the aim of maintaining groundwater and surface water resources for the benefit of humanity by supporting wildlife and natural ecosystems.

Section 2. Implementing the Vision (p. 2)

This section needs a statement added that recognizes the protection of natural areas, especially natural recharge areas, as one of the best and most reliable ways to protect groundwater quality. Another goal should be to identify other potential recharge areas, whether in a natural condition or not, and preserve them for recharge, as the highest and best use of such lands.

Section 3. Management Elements and Potential Actions

3.1 Sustainable Thresholds (p. 3)

The definition of sustainability should include sustaining GW levels to support functions of natural systems and ecosystems, including natural springs and baseflow levels in desert streams. For example,

groundwater withdrawals for irrigating agriculture, recreation centers (water parks), and growing populations in the area between I-40 and I-15, east of Barstow, has lowered the Mojave River Valley groundwater table to such depths that sand blown from the river bed has buried houses, farms, and utility buildings. This is just one example of the extent to which human populations do rely on preserving natural systems.

3.1.1 Potential Water Board Actions (p. 4)

The Workplan should put equal focus on high-use basins and perhaps lesser basins in southeastern CA deserts, where groundwater is being overused, even if it's not yet considered high-use.

3.2 Monitoring and Assessment (p. 4)

The introductory statement should note that monitoring will be especially important where fracking techniques are used for oil and gas production, as acknowledged in Section 3.2.1 Potential Water Board Actions.

Monitoring to assess the approach to or exceeded thresholds should be accompanied by a list of the specific actions necessary to restore groundwater abundance and composition to desired conditions, also indicating what entities perform the actions and how they are to be enforced.

The Workplan also needs to include consideration of how chronic groundwater over-withdrawals at privately owned wells might be addressed, especially in areas of mixed residential and farm irrigation uses.

Any attempt to "work with" the Division of Oil, Gas, and Geothermal Resources will be daunting, since it is dominated by the oil and gas industry. In advance of any legislative outcome, careful consideration of steps that could protect groundwater must begin, and what to do if legislation fails to materialize must be carefully considered as well.

Section 3.2.2 Potential Actions for Others (p. 4)

Expand the state Recordation Program to include basins in which current pumping is predicted to cause critical overdraft under extended drought conditions.

3.3 Governance and Management (p. 6)

The introductory statement posits "Managing groundwater levels ... generally requires maintaining a balance between pumping, natural depletion, and recharge at the basin scale..."

We suggest that the Board change the term "natural depletion" to "natural groundwater discharges," for the following reasons:

The definition of depletion is: The state of being depleted; exhaustion. The use or consumption of a resource, especially a natural resource, faster than it is replenished.

Discussion: Prior to European settlement of California, even groundwater basins in the most arid zones, including the Mojave and Colorado Deserts and the Salton trough, accumulated large groundwater volumes over time, in spite of natural discharge processes. It's possible to conceive of natural processes that lead to local or transient depletion of some natural resources, but the natural water cycle on continental areas, absent human groundwater pumping, does not seem to produce groundwater depletion.

In the next sentence, "conjunctive use" is listed as a means of achieving the balance between pumping, natural discharges, and recharge, but the term is not explained. It is imperative that this Workplan specifically state the important role of all underground water to maintaining stream flows.

3.3 Governance and Management (p. 6-7) This table contains a reference to the existing Water Rights Administration, which oversees *subterranean streams and interconnected groundwater*. This is so close to

recognizing the interconnectedness of all underground water, as to beckon the state to officially and explicitly recognize the reality, which is well documented by scientific investigations worldwide, and has been for more than fifty years.

3.5 Oversight and Enforcement (p. 10)

It is refreshing to see a strong statement identifying the Water Board's authority to protect the public trust and public trust resources, and we congratulate the Board for including it.

Sincerely yours,

A handwritten signature in black ink that reads "Jane E. Nielson". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Jane E. Nielson, Ph.D.
O.W.L Foundation Secretary

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