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DEFENDING NORTHERN CALIFORNIA WATERS

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December 18, 2013

Eric Oppenheimer and Gail Linck  
State Water Resources Control Board  
1001 I Street  
Sacramento, CA 95814

Subject: Comments regarding the SWRCB Ground Water Work Plan

Dear Mr. Oppenheimer and Ms. Linck:

AquAlliance supports in concept the idea that the State Water Resources Control Board should develop a ground water work plan to organize its activities and responses to changing conditions with regard to California's important ground water resources. We also agree with the five key elements the work plan emphasizes: thresholds, monitoring and assessment, governance, funding, and enforcement. We sincerely hope that your objective to “[E]nsure that the Water Boards address the groundwater challenges that have the greatest potential to impact beneficial uses...” bears fruit quickly during this hydrologically dire period.

We in the Sacramento Valley are struck by the timing of the release of this concept paper. For months a number of regions in California have acknowledged grappling with critical overdraft conditions that have worsened as surface water sources grow short as two dry years fast become three. Landowners and ground water pumpers in Paso Robles and the Modesto/Turlock area express fears that a race to the bottom of their aquifers is occurring, a race that could take local rivers and streams with it. And, more recently, the United States Geological Survey released a study of land subsidence resulting from still another area of the San Joaquin Valley between El Nido and Mendota where critical overdraft conditions have recurred.

In general, the trend shown in one recent USGS ground water modeling study to attendees at the recent ground water overdraft conference in Tulare clearly demonstrates where acute overdraft has occurred and where opportunities lie to prevent such management and enforcement failures (Faunt, et al, 2009). Her chart below indicates that over a 42 year period between 1962 and 2004, the Tulare Basin's ground water elevations have plummeted as 70 million acre-feet of water were withdrawn cumulatively and not returned. This vast abuse of a common resource is unconscionable.

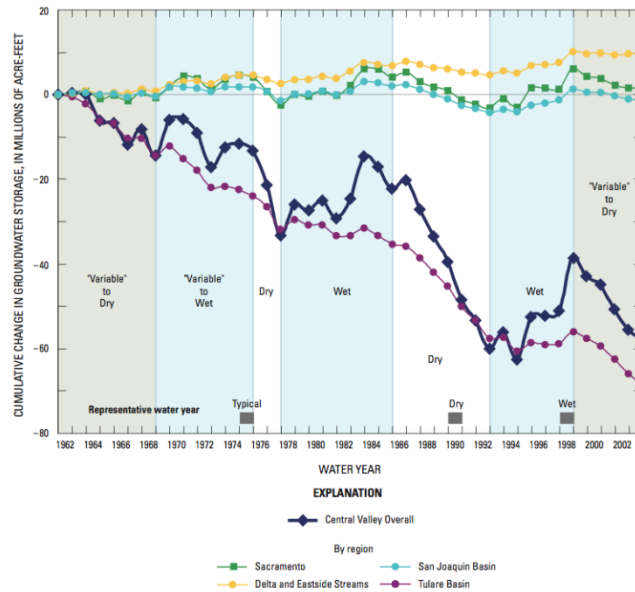


Figure B9. Simulated cumulative annual changes in aquifer-system storage between water years 1962 and 2003 for the Central Valley, California.

The State Water Resources Control Board should include in the work plan a task to survey what is both known and in need of more research and monitoring in California's ground water basins. For lack of anything better, DWR's recent Bulletin 118 could be a starting point for establishing the baseline conditions for ground water elevation, pumping rates, and aggregate withdrawals. Other data sources could be used to describe the baseline conditions of basins with ground water quality problems. From the survey the State Water Board would then have a clearer idea than is now available from the concept paper as to where its priority geographic areas are for action and coordination. Survey results should also establish a baseline set of ground water conditions (both for quantity and quality) against which the State Water Board may readily measure its own progress in addressing ground water quantity and quality issues.

One important sustainable threshold will be to set goals for eliminating critical overdraft from the state's ground water basins. Such a set of thresholds could involve identifying ground water level elevations of a specific quality that would reflect the elimination of critical overdraft conditions in specific basins where critical overdraft persists. Relying on, "Groundwater recharge, conjunctive use and cleanup projects... and storm water capture and recharge programs," (p. 2) illustrates the failure to address ground water historically as the work plan notes and should not be viewed as accomplishments. These actions are band-aids for failures at state, regional, and local levels.

Here is an opportunity for the work plan to expand its vision. Ground water for millennia was the sustaining force for the hydrologic systems in California during extended droughts. For example, midden piles spanning hundreds of years indicate that Mechoopda people ate freshwater species from Rock Creek in Butte County during paleodroughts – meaning the creeks still held water. Where ever ground and surface waters are still hydrologically connected, parts of the Sacramento Valley being one area, the state should aggressively support in vision, goals, and action the connectivity of the ground and surface waters for not only beneficial uses, but for public trust assets.

Another task for the work plan should involve careful study of what other western states have done to monitor, control, protect, and continue using their ground water resources. From this part of the work plan could come policy proposals rooted in the experiences of other states to help shape ground water policy and programs in the years to come. The concept paper currently adopts a timid tone given California's past failed attempts at ground water policy reform (e.g., Proposition 13 in 1982). But the time calls for bold initiatives that are informed by what has worked elsewhere.

The Board's ground water work plan should reiterate the State Water Board's authorities and fiduciary responsibility to regulate and protect the water resources of California, including ground water. The concept paper commendably gestures in this direction by acknowledging that "the State Water Board has broad constitutional authority to prevent the waste and unreasonable use of the State's water resources (including ground water)." The State Water Board maintains a web page showing locations in California where surface water has been adjudicated. The Board would serve the public well by creating and publishing a web page that surveys which basins in California have had ground water adjudications, including links to representative decrees, agreements, watermaster reports, and the like for each such adjudication.

We commend the Board for including as one of its "existing thresholds" the anti-degradation policy of both the Porter-Cologne Water Quality Control Act and the federal Clean Water Act, and that its reach extends to "effects related to quantity, such as recharge." The Board should include a task in its work plan to develop approaches for anti-degradation of water quality and water supply for basins experiencing critical overdraft.

As discussed above, the work plan should also include goals and tasks that protect sustainable thresholds that should apply to ground water basins that have managed to retain some hydrologic health through California's history. Along with the acknowledged weaknesses in California's laws and programs to protect ground water, it should be acknowledged that the all-important connectivity with surface waters has been largely overlooked by water extraction agencies and the SWRCB. Therefore, ground and surface water connectivity should be a serious focus in this work plan. The urgency is reflected in the work mentioned above by Faunt et al, analysis by Sally Manning in the Owens, Valley, and the impacts currently making headlines in media covering the Paso Robles and Modesto/Turlock ground water regions.

Finally, AquAlliance suggests that the SWRCB consider, at a minimum, commenting on water transfer programs undertaken by the CVP and SWP projects and requiring CEQA review for those under its own jurisdiction when a change in place of use is wanted. The federal and state projects have long sought to mine the ground water of the Sacramento Valley without analyzing the potentially major impacts from such extractions and the SWRCB routinely accepts serial 'one-year' transfers without requiring CEQA analysis. With this repeated agency neglect, the interest in ground water substitution transfers is escalating without the benefit of cumulative impact analysis or peer reviewed science. Our concern is based upon the numerous projects and plans that have surfaced over the last two decades and the few professional acknowledgements of serious risk from such projects and plans. Please consider just a few examples:

- *GCID shall define three hypothetical water delivery systems from the State Water Project (Oroville), the Central Valley Project (Shasta) and the Orland Project reservoirs sufficient to provide full and reliable surface water delivery to parties now pumping from the Lower Tuscan Formation. The purpose of this activity is to describe and compare the performance of three alternative ways of furnishing a substitute surface water supply to the current Lower Tuscan Formation groundwater users to eliminate the risks to them of more aggressive pumping from the Formation and to optimize conjunctive management of the Sacramento Valley water resources.*

U.S. Bureau of Reclamation, September 2006. Grant Assistance Agreement

- *There is increased interest in utilizing the Lower Tuscan aquifer system to augment the State's overall water supply. Because there has been somewhat limited regional utilization of this resource in the past, limited information is available about how the aquifer system may respond to increased utilization, and what impacts this increased utilization may have on other water users, recharge sources, recharge areas, and the environment.*

Toccoy Dudley, Butte County Department of Water Resource, July 2, 2007. Needs Assessment Tuscan Aquifer Monitoring, Recharge, and Data Management Project (Draft for grant proposal)

- *All of these groundwater management activities were initiated prior to recognizing that a regional aquifer system exists that extends over more than one county and that certain activities in one county could adversely impact another. Clearly the current ordinances, AB3030 plans, and local BMO activities, which were intended for localized groundwater management, are not well suited for management of a regional groundwater resource like that theorized of the Lower Tuscan aquifer system.*

Toccoy Dudley, Butte County Department of Water Resource, July 2, 2007. Needs Assessment Tuscan Aquifer Monitoring, Recharge, and Data Management Project (Draft for grant proposal)

- *[T]here is currently insufficient information regarding the affected aquifers to adequately anticipate the consequences of withdrawing large amounts of water over a relatively short period of time, for a number of reasons. These reasons include the lack of detailed hydrostratigraphy, the lack of pump-test data characterizing aquifer transmissivity and storativity, the dearth of knowledge concerning the hydraulic connectivity between successive layers, the lack of recharge data, and inadequate recharge estimations under changing climate conditions.*

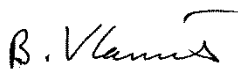
Hoover, Karin A., PhD. CSU Chico, White paper 2008.

- Bureau, *Central Valley Project Water Plan 2011*, February 18, 2011. **North to South Water Transfers In 2010**, Reclamation completed an EA for the 2010-2011 Water

*Transfer Program to allow for the transfer of water from willing sellers upstream of the Delta to buyers that export water from the Delta. The EA covered transfers of up to 220,000 acre-feet; however, because of current pumping restrictions in the Delta and limitation on the quantity that can be transferred from crop idling actions, the anticipated transferred amounts are significantly less. Transfer actions will likely be limited to the amount of water that can be made available by groundwater pumping.*  
[http://www.usbr.gov/mp/PA/water/docs/Water\\_Plan\\_2011\\_02-15-11.pdf](http://www.usbr.gov/mp/PA/water/docs/Water_Plan_2011_02-15-11.pdf)

Please keep us advised of your progress and meetings regarding the ground water work plan.

Sincerely,



Barbara Vlamis  
Executive Director