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# California Regional Water Quality Control Board Central Coast Region

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FROM: Roger W. Briggs  
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DATE: March 30, 2012

SUBJECT: CENTRAL COAST WATER BOARD COMMENTS ON THE FEBRUARY 2012 DRAFT AB-2222 CHAPTER 670 REPORT TITLED "COMMUNITIES THAT RELY ON CONTAMINATED GROUNDWATER"

Central Coast Water Board staff reviewed the February 2012 draft of the State Water Resources Control Board report, "Communities That Rely On Contaminated Groundwater." We provide the following comments:

## **Big Picture Comment**

By focusing on community water system data, the draft report fails to clearly document the significant potential public health threat to the portion of the population who are not connected to a community water system, but that rely on groundwater for drinking water via domestic wells or local small and state small water system wells.

Numerous studies and available drinking water supply well data clearly indicate that domestic and small water system wells in some areas are more susceptible to nitrate or other pollution because of their generally shallower depths and rural locations. Furthermore, domestic wells and small water systems are largely unregulated due to the absence of statewide requirements for regular water quality testing to ensure public health standards are met.

The report mentions and briefly discusses domestic wells and local small and state small water systems in the context that the draft report does not evaluate drinking water

contamination for these wells/systems due to insufficient drinking water quality and public health oversight. The report needs to clearly document the most at-risk portion of the population (within the statewide and county level community) that are currently unprotected from significant potential public health threats given they fall within this category. These findings in conjunction with the documented water quality impacts for community water system wells should be used to better support the conclusion on page 18 of the draft report which states:

Additional data are needed to address water quality issues for domestic well users and other small water systems not regulated by the state.

Moreover, the report should include “potential solutions” or specific recommendations to address this significant shortfall in the public health safety net. Specifically, the report should recommend statewide drinking water program policy changes to require regular testing of domestic wells and local small and state small water systems/wells to adequately protect the most at-risk portion of the population.

The draft report also does not address non-community water systems. These systems are just as susceptible to groundwater pollution as community water systems and they are generally more susceptible to the technical, managerial and financial challenges associated with a polluted well. This is particularly true for non-community water systems located within economically disadvantaged areas. These systems need to be evaluated and discussed with supporting solutions/recommendations as appropriate to protect public health.

## **Specific Comments**

### Community versus Community Water System Definitions and Report Scope

The draft report narrowly defines “community” on page 9 of the draft report as “a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents.”<sup>1</sup> As noted by reference within the draft report, this is the definition of “community water system” pursuant to California Health and Safety Code section 116395<sup>2</sup> (Title 22). Consequently, the term “community” used throughout the report only refers to the portion of the population connected to a community water system.

Chapter 670 of AB-2222 requires the State Water Resources Control Board to submit a report to the legislature that, in part, “identifies communities that rely on contaminated groundwater as a primary source of drinking water.” This is inclusive of all people within the state even though they may not be connected to a community water system.

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<sup>1</sup> A community is typically defined as “a social group of any size whose members reside in a specific locality, share government, and often have a common cultural and historical heritage.”

<sup>2</sup> The correct CA Health and Safety Code section citation for this definition is 116275(i)

Therefore, the AB-2222 report should also identify the segment of the population who are susceptible to or otherwise rely on contaminated groundwater via unregulated groundwater sources of drinking water.

We recommend the report:

1. Maintain its current title, “Communities That Rely On Contaminated Groundwater.”
2. Define a “community” as all the people within specific geographic or regional boundaries, such as the state, counties and groundwater basins.
3. Define “community water system” per Title 22 and replace the term “community” with “community water system” throughout the report where it clearly refers to community water system/well data.
4. More clearly identify and discuss the sizes and types of all water systems within the state and enumerate the portion of the population utilizing the types of water systems other than community water systems (see below for more details).

#### Enumerate Portion of Population Not Served by Community Water Systems

The report should identify, by county, the total number of and population served by community water systems and make comparisons to 1) the number of and population served by community water systems with known water quality impacts (those that rely on contaminated groundwater as identified within Table 1.3) and, 2) the number of and populations served by domestic wells and local small and state small water systems. Based on our experience we understand that county level data is often not available regarding the number of domestic wells and local small and state small water systems/wells. However, an effort should be made to estimate the number of these wells/systems and populations served by them on a county and statewide basis. A relative population served evaluation can easily be done using readily available census data and community water system data.

Specifically we recommend the following:

1. Revise Table 1.1 (Types of Public Water Systems in California) to include domestic wells and local small and state small water systems given these are also classified as public water systems. If data are not available on the “number of systems” indicate so or otherwise provide an estimate.
2. Include an additional table between Tables 1.2 and 1.3 titled “Summary of Community Public Water Systems by County and Population Served” that documents the total number of community water systems and population served on a county and statewide basis. This table should be formatted like Table 1.3 such that:
  - a. The relative number and percentage of community water systems and population served that rely on contaminated groundwater can be determined on county and statewide basis.

- b. Either within the proposed table or supporting table, the population served by community water systems can be compared to county level census data to determine the number and relative percentage of the population who are not served by a community water system on a county and statewide basis (these are the people who are likely using domestic wells or are connected to local small and state small water systems).

These data would be very useful to the State Legislature, State Board, CA Dept. of Public Health, Regional Boards, counties, etc. given they would define the relative percentage and population served by community water systems that rely on contaminated groundwater and the relative percentage and population served by unregulated water systems on a per county basis. We also think an evaluation of these data by groundwater basin would be very appropriate and useful.

3. The report should discuss in more detail the significance of the relatively undocumented portion of the population who may be relying on and drinking contaminated groundwater from sources other than community water systems. The community water system data as well as other studies should be used to infer the relative number of people who are at risk of drinking polluted groundwater from unregulated groundwater sources.

### Non-Community Water Systems are Relevant

The draft report also excludes an evaluation of non-transient non-community water systems (i.e., school or workplace) and transient non-community water systems (i.e., campground or park). The draft report qualifies this exclusion based on the following language:

These types of systems are not included in this report because exposure to water from these systems is temporary. Any associated health risks associated with consuming contaminated water from these systems are generally lower than health risks associated with year-round exposure in community systems.

Although the exposure risks may be reduced in most cases due to limited use and treatment, real people within the local and statewide communities are at risk of pollutant exposure and are bearing the costs associated with polluted non-community water system wells. Schools in particular should be a significant concern given children can be more susceptible to potential health problems associated with chemical exposure. In addition, schools within rural areas typically lack the requisite technical, managerial and financial resources to sufficiently maintain a water system. Consequently, a polluted water supply well can pose significant financial and other challenges to a small private school, particularly one within a disadvantaged community. There are two glaring examples of this in the Central Coast Region that we have identified so far with regard to nitrate pollution. Farm labor camps also fall into the non-community water system category and are also known to be susceptible to nitrate and other pollutants associated with agricultural activities. Labor camps are typically located in economically

disadvantaged areas and therefore are also subject to the technical, managerial and financial challenges associated with a polluted water system well.

The pollution of non-community water system wells serving, schools, labor camps, parks, campgrounds, restaurants, places of business, etc. is relevant to the statewide evaluation of communities relying on contaminated groundwater. Water quality data for these systems is readily available given they are regulated similar to community water systems with regard to water quality testing and treatment. Therefore, the number of these systems and associated water quality impacts should be evaluated on a statewide and by county basis such that appropriate solutions/recommendations can be made to address them along with the other types and sizes of water systems. This will likely entail separate stand-alone analyses given the number of people served by non-community water systems are a subset of the population who get their potable water for in-home use from another private or public water system that may or may not be reliant on groundwater.

#### Solutions and Recommendations to Address Most At-Risk Portion of the Population

The draft report contains “potential solutions to cleanup, treat or provide alternative water supplies” that are primarily focused on community water systems and lacks specific solutions or recommendations to address the most at-risk portion of the population who are served by unregulated water wells and small water systems. The provision of safe drinking water to all people within California is predicated on providing consistent drinking water quality oversight via regular testing requirements for domestic wells and local small and state small water supply systems/wells. Therefore we recommend the report include and discuss specific solutions to ensure people who are not served by a community water system are protected from pollution.

As suggested via promising action D4 within the UC Davis SBX2-1 report, “Addressing Nitrate in California’s Drinking Water,” statewide requirements for the regular sampling of domestic wells and local small and state small water systems/wells are necessary to protect the most at-risk population from nitrate pollution and to provide data for ongoing assessment efforts.<sup>3</sup> A tiered sampling frequency based on pollutant concentration and relative risk should be developed in conjunction with triggered sampling requirements based on point of sale (e.g., as part of home inspection or disclosure requirements) and local permitting applications (e.g., building permits for new construction, renovations, well permits, septic system repairs, etc.).

Specifically we recommend the statewide development and implementation of the following water quality sampling requirements with an emphasis on nitrate, arsenic and

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<sup>3</sup> CDPH and the State/Regional Water Boards need this information to effectively evaluate/address the at-risk population, document improvements over time and address the sources of pollution.

other contaminants of concern:<sup>4</sup>

1. Water quality sampling for all new [individual] domestic water supply wells and local small and state small water system wells.
2. Water quality sampling for existing domestic wells and local small and state small water system wells during property transfers and lot/parcel changes, building improvements requiring a county permit including septic system repairs/upgrades, and well permits for existing residences, unless the well has been sampled within the last two years. Results shall be disclosed to the buyer.
3. Water quality sampling for all existing domestic wells and water system wells with up to fourteen connections, unless the well has been sampled within the last five years and results are available.
4. Follow-up sampling for all individual domestic wells and small water system wells based on initial and routine sampling results in accordance with the following:<sup>5</sup>
  - a. Once every five years if a constituent concentration is less than 25 percent of any applicable drinking water standard
  - b. Once every three years if a constituent concentration is between 25 and 50 percent of any applicable drinking water standard
  - c. Once every two years if a constituent concentration is between 50 and 75 percent of any applicable drinking water standard
  - d. Once every year if a constituent concentration is greater than 75 percent of any applicable drinking water standard
  - e. Immediate confirmation re-sampling if a constituent concentration is greater than an applicable drinking water standard
  - f. If re-sampling confirms a concentration greater than an applicable drinking water standard:
    - i. Provide immediate notification to all water users of unsafe drinking water
    - ii. Require quarterly sampling until alternative water supply, treatment or other measures are implemented to provide a safe and reliable water supply.

These data should be reported directly into an existing statewide drinking water or groundwater quality database such as GeoTracker or the CA Dept. of Public Health Water Quality Management (WQM) system.

#### Potentially Misleading Statement

The “Background” discussion on page six of the draft report states:

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<sup>4</sup> Since 2010 we have been advocating that the local county health departments within our region implement triggered and tiered nitrate sampling requirements for domestic wells and small drinking water systems/wells consistent with these recommended water quality sampling requirements.

<sup>5</sup> Note: This recommended tiered follow-up sampling program is generally consistent with the internal program that Monterey County is currently implementing for water supply systems/wells with two to fourteen service connections.

The vast majority (over 95 percent) of Californians receive safe drinking water that meets all public health standards, even though some groundwater supply sources may contain elevated concentrations of manmade and/or naturally-occurring contaminants.

What is the basis of the 95 percent calculation? This statement implies that the drinking water for over 95 percent of all Californians meets all public health standards. It is very unlikely that this statement is true or defensible given the potentially significant number of people who rely on unregulated domestic wells and small water system wells. It appears that this statement is an incorrect reference to CA Health and Safety Code section 116270, Declaration paragraph (c), pertaining only to large public water systems.<sup>6</sup> Large public water systems are typically defined by CA Dept. of Public Health as serving 10,000 to 100,000 people. If the percentage of 95% is correct, and considering the title and purpose of this report, this corollary statement should be emphasized:

“Nearly two million Californians, predominantly in rural and lower income areas, rely on drinking water that fails to meet public health standards.”

## **Conclusion**

We appreciate the opportunity to comment on the draft AB-2222 report. The current draft is well organized, comprehensive and provides very useful groundwater and drinking water quality data in the context of readily available community water supply well data. However, the draft report does not adequately identify or address the unknown and potentially significant public health threats to portions of the statewide community who rely on groundwater for their potable supply from unregulated sources.

Based on the above recommendations the substantive data evaluations, findings and conclusions of the report will not change appreciably given they are based on readily available data for community water systems. However, the recommended changes will provide additional data and findings that clearly identify the shortfalls in our ability to adequately evaluate the public health threats associated with polluted groundwater and the subsequent inability to protect a potentially significant portion of the public. These data along with other studies such as the UC Davis SBX2-1 report and GAMA Domestic Well Project studies substantiate the need for legislative action to address this statewide shortfall in public health protection.

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<sup>6</sup> CA Health and Safety Code section 116270 (c) states: “According to the State Department of Health Services, over 95 percent of all large public water systems in California are in compliance with health-based action levels established by the department for various contaminants.”