

May 29, 2015

Jeanine Townsend, Clerk to the Board
State Water Resources Control Board
1001 I Street, 24th Floor [95814]
P.O. Box 100
Sacramento, CA 95812-0100



Dear Ms. Townsend:

We are providing written input on the draft model criteria for groundwater monitoring recently released by the State Water Resources Control Board.

Hydraulic fracturing has been practiced in California for many decades in thousands of wells. There has been no confirmed contamination of groundwater. Additionally, there is no instance of domestic or agricultural water wells being rendered unusable due to hydraulic fracturing. Therefore, it can be concluded that existing regulations are effective and the chance of contaminating groundwater is extremely low. Additionally, the disclosure of hydraulic fracturing fluids provides an opportunity to test groundwater for these chemicals if a need arises.

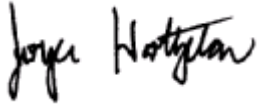
The proposed monitoring regulations are uneconomic for small scale hydraulic fracturing projects and are not necessary since these projects do not pose a risk to protected groundwater. Many California reservoirs will not produce at economic rates in vertical wells without small scale hydraulic fracture stimulation. Generally, these stimulation programs call for less than 30,000 pounds (11 cubic yards) of sand proppant and 600 barrels (25,000 gallons) of carrier fluid (crude oil or lease water and polymer) and when applied per DOGGR regulations in appropriate geologic conditions pose no threat to groundwater as proven by decades of experience. These small scale projects should be allowed without monitoring provided the operator demonstrates to the DOGGR and Water Resources Control Board that:

- a. The zone of hydraulic fracturing is confined vertically by sufficiently thick plastic shale to prohibit upward fracture propagation.
- b. The well has a satisfactory cement bond 500 feet above the zone to be treated.
- c. After the procedure, the operator provides DOGGR with pressure records from the treatment that show a fracture gradient consistent with the depth and known physical properties of the zone.
- d. If the data presented to the DOGGR is not consistent with fracturing of the intended zone, the operator will provide DOGGR and Water Resources Control Board with an explanation of what occurred, a means to verify what occurred and work with the agencies to determine the best plan forward.

E&B Natural Resources

Stipulating monitoring wells for these small scale projects will make them uneconomic and also deny mineral owners a viable means of extracting their minerals. We respectfully request your consideration on this aspect of the draft model criteria and appreciate your commitment to carefully consider our input.

Sincerely,

A handwritten signature in black ink that reads "Joyce Holtzclaw". The signature is written in a cursive, flowing style.

Joyce Holtzclaw
VP Western Division