

ASSEMBLY THIRD READING
AB 356 (Williams)
As Amended June 1, 2015
Majority vote

Committee	Votes	Ayes	Noes
Natural Resources	6-2	Williams, Cristina Garcia, McCarty, Rendon, Mark Stone, Wood	Dahle, Harper
Appropriations	11-6	Gomez, Bonta, Calderon, Eggman, Eduardo Garcia, Gordon, Holden, Quirk, Rendon, Weber, Wood	Bigelow, Chang, Daly, Gallagher, Jones, Wagner

SUMMARY: Requires, prior to submitting a proposal to exempt an aquifer to the United States Environmental Protection Agency (U.S. EPA), that the Division of Oil, Gas and Geothermal Resources (DOGGR) hold a public hearing and gain concurrence from the State Water Resources Control Board (SWRCB) on the proposal. Requires groundwater monitoring plans for underground injection projects (projects) as part of an application for approval of the project or for the annual review of the project.

EXISTING LAW:

- 1) Pursuant to the Federal Safe Drinking Water Act (SDWA):
 - a) Prohibits certain well activities that affect underground sources of drinking water unless those sources are located in an exempt aquifer.
 - b) Declares that the Underground Injection Control (UIC) program for class II wells in the State of California, except those on Indian lands, is administered by the DOGGR approved by U.S. EPA pursuant to SDWA Section 1425.
 - c) Allows DOGGR to propose and the regional administrator of U.S. EPA to approve an exemption of an aquifer or its portion that meets the criteria in the definition of "underground source of drinking water" after considering its current and potential future use as drinking water.
- 2) Requires the state's Oil and Gas Supervisor (Supervisor) to supervise the drilling, operation, maintenance, and abandonment of wells and the operation, maintenance, and removal or abandonment of tanks and facilities attendant to oil and gas production.
- 3) Authorizes the Supervisor to implement a monitoring program, designed to detect releases to the soil and water for aboveground oil production tanks and facilities.
- 4) Requires groundwater monitoring in the vicinity of a well subject to a well stimulation treatment.

This Bill:

- 1) Requires, prior to submitting a proposal to exempt an aquifer to U.S. EPA, that DOGGR hold a public hearing and gain concurrence from the SWRCB on the proposal.

- 2) Authorizes SWRCB to concur with the proposal if the following conditions are met:
 - a) The proposed aquifer cannot now, or will not in the future, serve as a source of drinking water or for other beneficial uses.
 - b) Injection into the proposed aquifer will stay in the proposed area and will not impact the ability of nearby nonexempt aquifers to be a source of drinking water or for other beneficial uses.
- 3) Requires, by July 1, 2018, and annually thereafter, DOGGR to review all projects for compliance with applicable law.
- 4) Requires, by July 1, 2018, operators for all projects to submit to SWRCB or appropriate regional water quality control board (RWQCB) for review and concurrence a groundwater monitoring plan that provides various information including data from monitoring wells that demonstrate that the injection fluid is confined to the intended injection zone or zones of injection.
- 5) Clarifies that each project is only required to have one monitoring plan for the life of the project.
- 6) Authorizes SRWCB or appropriate RWQCB to revise monitoring plans to avoid duplication and assist with regional monitoring plans associated with oil and gas activities.
- 7) Authorizes SRWCB or appropriate RWQCB to authorize a well operator to rely on a regional monitoring plan instead of their own monitoring sites.
- 8) Authorizes, subject to appropriation by the Legislature, DOGGR's fee authority to be used to fund a public entity's costs associated with implementing this article.

FISCAL EFFECT: According to the Assembly Appropriations Committee:

- 1) Increased administrative costs for Department of Conservation/DOGGR in the \$10 million range (special fund/fee authority).
- 2) Increased costs for SWRCB in the \$2 million to \$2.5 million range (special fund/fee authority).
- 3) Potential revenue delay or loss associated from the state's share of oil extraction on lands regulated by the State Lands Commission. The state's share is several million dollars per year, depending on the price of oil.

COMMENTS:

- 1) **UIC Program.** In 1974, the SDWA gave the U.S. EPA the authority and responsibility to control underground injection to protect underground drinking water sources. In 1982, a primacy agreement was signed that allowed DOGGR to implement the U.S. EPA's UIC program for oil and gas wells in California. It has recently been discovered that there were two versions of this agreement, one allowing exemptions for 11 aquifers with high water quality and another denying those exemptions and requiring all existing injection wells into those aquifers be phased out over 18 months. The aquifers were non-hydrocarbon-producing and all had a total dissolved solids (TDS) concentration below 3,000 mg/l. The SDWA is supposed to protect underground sources of water with TDS concentrations below 10,000 milligram/liter. DOGGR's UIC

permitting decisions have been based on the assumption that these exemptions were granted for the 11 aquifers in question.

A 2011 U.S. EPA audit of DOGGR's UIC program implementation concluded that DOGGR was misclassifying underground sources of drinking water and doing an insufficient job monitoring the UIC program. In June 2014, it was discovered that DOGGR was approving injection wells in nonexempt aquifers. This included injections into the 11 aquifers that were not properly exempted, but also included injections into aquifers that were never exempt. California Environmental Protection Agency's (CALEPA) review found that DOGGR's district offices were approving projects without review from DOGGR and were making errors identifying the injectable zone of exempt aquifers. This included misidentifying the borders and depth of the aquifer and allowing expansion of productive limits over time beyond boundaries established in the Primacy Application. Initially there were 2,553 injection wells operating in non-exempt aquifers; after a review, 76 wells were removed from that list. The wells represented both disposal wells and enhanced oil recovery wells. To date, the state has shut down 23 injection wells, because they were injecting into aquifers that could be suitable for drinking water. In addition, these wells could potentially have had an impact on nearby water supply wells. While no contamination of water supply wells has been found yet, it is clear that aquifers that could have been a source of underground drinking water have been contaminated with injection fluid.

- 2) **Aquifer exemptions.** Any aquifer less than 10,000 milligram/liter TDS must be exempted by U.S. EPA to be injected into. The state can decide which aquifers to propose to U.S. EPA. In response to U.S. EPA's audit and concerns over aquifers that were not properly exempted, DOGGR will now require SWRCB concurrence on any aquifer exemption proposal. In addition, the operator will be required to demonstrate that the aquifer cannot now, and will not in the future, serve as a source of drinking water or for other beneficial uses. This bill codifies this new procedure to ensure that aquifer exemptions will be thoroughly vetted by DOGGR and SWRCB with public input. As California deals with the fourth year of drought conditions, protecting groundwater has become more important than ever. Past actions by DOGGR harmed aquifers that could have been used for a beneficial use. Thorough vetting of aquifers will help prevent that from happening again.
- 3) **Groundwater monitoring.** California's 515 alluvial (loose) groundwater basins and sub-basins provide close to 40% of the state's water supply in an average year. In dry or drought years, groundwater accounts for as much as 60% of the state's water supply. Many disadvantaged communities rely on groundwater for 100% of their water supply. There are approximately 42,000 oil and gas injection wells in California; however, those wells are grouped together as injection projects. According to DOGGR, there are 897 active injection projects and 2,146 total projects in DOGGR's database. DOGGR estimates that these projects inject into 350 aquifers, but does not definitively know the number of aquifers being injected into. Injection projects can also be into sand or rock that are not aquifers. When wastewater and other fluids associated with the extraction of oil or gas are injected into an aquifer, they can change the chemistry of and contaminate that aquifer. In addition, there is concern that injection fluids may not stay in the aquifer they are injected into. Zonal isolation is important to protect other nearby aquifers. There have been examples in other states, such as Pennsylvania, where drinking water has been contaminated by nearby oil and gas activities. According to USGS, chemical additives used in well stimulation are also used in enhanced oil recovery and chemicals are mixed into the produced wastewater stream. SB 4 (Pavley), Chapter 313, Statutes of 2013, requires groundwater

monitoring for wells that have been stimulated. SWRCB released its Draft Model Criteria on April 29, 2015, to govern the groundwater monitoring plans required by SB 4.

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