



Division of Oil, Gas, and Geothermal Resources

Potential Aquifer Exemption Expansion in the Sespe Oil Field

The California Division of Oil, Gas, and Geothermal Resources (DOGGR) has a joint plan with the U.S. Environmental Protection Agency and the State Water Resources Control Board to ensure that California's oil operations are in compliance with the federal Safe Drinking Water Act (SDWA), which protects groundwater suitable for drinking or other human use. State law protects groundwater for all beneficial uses, including domestic and municipal drinking water supply and irrigation. This aquifer exemption proposal is part of that larger process.

Frequently-Asked Questions

What is an aquifer exemption? The SDWA has broad requirements to protect underground sources of drinking water, but exemptions are allowed under certain conditions for aquifers that do not provide water suitable for drinking, irrigation or other beneficial uses. This includes aquifers that are naturally mixed with oil and briny water, such as the one under consideration in this exemption proposal.

If approved, a Sespe aquifer exemption would be issued by the U.S. Environmental Protection Agency, which would allow water produced during oil production to be injected back into the same aquifer, or water and steam to be injected for enhanced oil recovery. Among the factors that are considered in the exemption process: Does the aquifer currently serve as a source of drinking water? Is it unlikely to ever be used as a source because it contains commercially producible amounts of oil or other minerals? Does it have a natural TDS (total dissolved solids) level between 3,000 and 10,000 mg/l? Is it so deep, remote, or contaminated with natural elements such as arsenic or boron that it is economically or technically impractical to utilize as a source of drinking water?

Why is an aquifer exemption needed in the Sespe oil field? There is already an aquifer exemption in the Sespe field. It was approved in 1983, when the US EPA granted the State of California "primacy" to regulate injection for enhanced oil recovery and the disposal of fluids produced during oil and gas production. The exempted portion of the aquifer matched the known extent of the underground oil reservoir at that time. Since, modern mapping technologies have shown that oil reservoir is larger than was known three decades ago.

What is the process for creating an exemption? An oil and gas operator brings a request and supportive data to DOGGR. If DOGGR determines the SDWA exemption criteria have been met, it

consults with and seeks concurrence from the State Water Resources Control Board. If the state regulators agree that the proposal has merit, a public comment period is conducted. If DOGGR and the State Water Board continue to concur that an aquifer exemption may be appropriate after the public comments are reviewed, an application is submitted to US EPA. The federal agency has authority to make the final decision.

If a proposed aquifer exemption is sent to US EPA for approval, DOGGR will publish a document announcing that decision and summarize the substantive public comments received and the disposition of those comments.

Will expanding the aquifer exemption in the Sespe oil field affect drinking water supplies? No. The fundamental purpose of the aquifer exemption is to protect water used for drinking or agriculture. The water produced with the oil, or used to enhance oil production, will only go into the underground geological formation that naturally contains an unusable oil/water mix. The subsurface geology ensures that injected water will not migrate to other aquifers and mingle with water suitable for drinking or agriculture.

The nearest public water supply well is about three miles away from the proposed boundary of the aquifer exemption. Also, the Basal Sespe Zone aquifer proposed for exemption is not hydraulically connected to Sespe Creek. Oil production from and injection into the zone occurs 2,400-7,500 feet below the surface of the earth.

Does an aquifer exemption allow the oil operator to use hydraulic fracturing? No. An aquifer exemption doesn't permit an oil company to do anything; it simply ensures compliance with the SDWA and state law within a given area. So, for example, if a company wants to either use enhanced oil recovery or dispose of produced water in the future, it will have to go through a separate, comprehensive permitting process with DOGGR, with review and approval by the State Water Board and Regional Water Quality Control Board.

Who permits oil production to occur in this area? Much of the Sespe oil field is on federal land. Permission to produce oil on federal land is granted by the Bureau of Land Management (BLM) and the U.S. Forest Service (USFS). The role of state regulators is to ensure oil production does not threaten or harm the health and safety of the public and the environment.

Will an expansion of the aquifer exemption harm condors? The USFS and BLM have strong requirements in place to ensure oil production does not impact the environment and that condor habitat is protected.

Is there a potential for increased seismicity? No. DOGGR assesses seismicity and earthquake hazards early in the process when evaluating proposed injection projects. An approval means there is minimal risk for increased seismicity as a result of continued or expanded oilfield injection.

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