

# State declares thousands of oil field injection wells safe

**John Cox, Bakersfield Californian, 8-4-15**

A state review of nearly 6,000 oil field injection wells, almost 96 percent of them in Kern County, has concluded the vast majority pose little or no threat to groundwater, mainly because their operators treat the injected fluid to reduce potential contaminants.

The finding by California's Division of Oil, Gas and Geothermal Resources and the State Water Resources Control Board is the latest development in a continuing examination of the state's oversight of injection wells. Nearly two dozen such facilities have been shut in since June 2014 as a result of the investigation, and many more face the possibility of closure.

In the latest phase of the investigation, the two agencies reviewed 5,625 wells that had been permitted to inject into aquifers that had never been properly exempted from federal groundwater protections. All but 150 of those wells are known as thermal-enhanced oil recovery operations, meaning they inject steam underground to help with petroleum production.

The agencies wrote a letter Friday to the U.S. Environmental Protection Agency saying well operators treat the water to remove dissolved solids prior to injection. The letter said such operations inject much less fluid than wastewater disposal wells or enhanced oil recovery facilities known as "water flood" wells, and so the zone of potential contamination is small.

Also, 87 percent of the thermal wells are used for a process called "cyclic steaming," which consumes less than the other well type that was examined, called steam flooding.

"For these reasons, the state has determined that no further analysis of thermal wells is required at this time," said the letter, signed by State Oil and Gas Supervisor Steve Bohlen and Jonathan Bishop, the water board's chief deputy director.

Of the 150 non-thermal injection wells examined, the letter said, only 24 are capable of injecting fluids and, therefore, may present a contamination risk.

The letter said the agencies are considering ordering operators of those 24 wells to produce additional information. Whether those facilities are eventually shut in may depend on the quality of their target aquifer; whether the well's injection depth is less than 1,500 feet below the surface, which could heighten the risk; and whether the wells are located within 500 vertical feet and one mile horizontally of a water supply well.

"Based on data collected by the operator as a result of these orders, we will determine if there is a potential risk to groundwater with a current beneficial use, and will take appropriate action to address these risks," the letter states.