

SF GATE

Oil wastewater dumped into shallow Central Valley



A private property sign hangs on the fence of a shut down injection well located next to an almond orchard owned by Palla Farms, Thursday, Jan. 15, 2015, in Bakersfield, Calif. Palla Farms filed suite blaming several oil companies for contaminating the local groundwater and killing cherry trees. (AP Photo/Jae C. Hong)

By David R. Baker

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California officials have identified 260 oil company wastewater injection wells that are so shallow or so close to wells used for drinking or irrigation that they could threaten the state's precious groundwater supplies, new data show.

All of the wells inject water left over from oil field operations into aquifers that were supposed to be protected by law. While most of those aquifers contain salty water that would need treatment before use, state and federal officials want them preserved as a potential supply for cities and farms in the future.

So far, no wells used for drinking or irrigation have been found to be tainted by the injections. But in a letter to the U.S. Environmental Protection Agency on Friday, the California office that oversees oil drilling said it would

seek water-sampling data from each of the wells. The office — the Division of Oil, Gas and Geothermal Resources — has ordered 23 wells shut down so far.

More than 200 of the injection wells are less than 1,500 feet deep. Residents of the state's parched Central Valley have been sinking new drinking water wells that deep, or deeper, as the water depletes.

"Continued vigilance and testing will be needed, but so far we haven't found a significant risk to water supplies," said Steven Bohlen, the division's supervisor.

Oil company documents released by an environmental group Monday, however, showed that one Kern County well closed by the state last year was injecting water tainted with the carcinogen benzene, in levels thousands of times higher than federal standards for safe drinking water.

The documents, obtained from the division through a public records request, included a water sample test from 2010 showing 13,000 parts per billion of benzene. The federal limit safety limit is 5 parts per billion. The test was commissioned by the well's operator, Macpherson Oil Co.

'Toxic, dangerous stuff'

"That's an example of what we're dealing with here — it's toxic, dangerous stuff," said Kassie Siegel of the Center for Biological Diversity, which obtained the documents. Her group sued the state last week, seeking to shut down all of the improperly permitted injection wells immediately.

"We're in a time of historic drought, there are all these water restrictions, and yet they're letting oil companies pump these chemicals underground," Siegel said.

As described in a Chronicle investigation in February, the division for years improperly issued hundreds of wastewater injection permits into aquifers that should have been protected by the federal Safe Drinking Water Act. An estimated 532 disposal wells went into aquifers whose water could have been used with treatment. Another 2,021 wells pumped wastewater or steam into aquifers that also contain oil, with the injections helping to squeeze more petroleum from the ground.

California oil fields typically contain large amounts of water that must be separated from the petroleum and disposed of, usually by pumping it back underground. But oil companies can inject their “produced water” only into aquifers that have been specifically approved for wastewater storage by the EPA.

Since the problem came to light, the EPA has pressured state officials to find out whether current drinking water supplies have been contaminated and put a stop to the injections. The division, in response, created a two-year schedule for closing down the wells. Those injecting into aquifers with relatively high-quality water must cease operations by Oct. 15. Other wells, however, can continue injecting oil field wastewater until February 2017.

That long timetable infuriates environmentalists and some state legislators. But it will give oil companies time to convince both the division and the EPA that some of the aquifers — particularly those that also contain oil — should be considered suitable places either to dump produced water or inject steam to extract the petroleum.

Records for wells reviewed

The division on Friday told the EPA that it had finished reviewing records for the estimated 532 injection wells sunk into potentially usable aquifers and had removed 80 wells from the list, either because the wells were never drilled or the aquifers were of lower quality than previously believed. In a few cases, a review of records showed that the aquifers had received EPA approval for the injections after all. But of the 532 wells that injected waste water into potentially useful aquifers, 260 were found to lie close to the surface, no deeper than 1,500 feet.

The division also reported that it would begin reviewing about 3,600 additional wells used for pumping steam underground to extract oil, wells that had received the

wrong form of permit from the division.

Those wells, however, will be considered a low priority compared with injection wells that lie close to the surface or within a mile of a drinking water well. The state has already ordered oil companies to send water samples from 155 of those high-risk injection wells to state-certified labs for testing, with the first round of results to be submitted to the division by the end of this month.

See the full article here: <http://www.sfgate.com/business/article/Oil-wastewater-dumped-into-shallow-Central-Valley-6272051.php>