

# **LOIS HENRY: Oilfield water injection nothing to fear**

**Lois Henry, The Bakersfield Californian, 11-15-16**

If I never hear the term “aquifer exemption” again, it’ll be too soon.

But since I had to dive down this rabbit hole, you’re going with me.

The whole aquifer exemption stink has to do with how oil companies dispose of water that comes up with every barrel of oil.

There is a lot of it. More water than oil, in fact.

In many cases, that water is injected back where it came from, deep underground. Hence the term “injection well.”

Injection wells came under scrutiny in 2011 after the state Division of Oil Gas and Geothermal Resources (DOGGR) realized it had been permitting them into aquifers that had not been properly “exempted” from the Federal Safe Drinking Water Act. Hence the term “aquifer exemption.”

Then in 2014 word got out that oil companies were injecting produced water into these aquifers (which were misconstrued as useable) and basically all hell broke loose.

I mean, it does sound scary, right? Nasty oil field water fouling our precious aquifers! YIKES!

No. It’s not scary at all if you understand that “aquifer” and “groundwater” are not interchangeable terms and if you have even a rudimentary grasp of geology.

But we’ll come back to that.

What is scary is how government agencies are dragging their feet on this issue, potentially putting Kern’s economy in jeopardy.

But we’ll come back to that as well.

First, let’s get our bearings.

Predictably, when news of the injection well permitting problems surfaced in 2014, anti-activists howled with gleeful indignation.

All injection well activity must stop, they demanded. Protect the water, they hollered.

Yeah, right. I think we all know by now they just want to stop oil production. Why can’t they be honest?

Anyhow, DOGGR and the State Water Resources Control Board began an exhaustive review process for injection wells outside the boundaries of already exempted aquifers.

It’s important to understand those boundaries were drawn using 1983 knowledge of the formations below.

Operators have, obviously, learned more about the formations through the years and have expanded oil production along those formations.

But the boundaries remained static.

That's why a lot of insiders have termed this a "paperwork" issue.

Because DOGGER was permitting injection wells that were still putting the water back into the same formations/aquifers. Regulators had just neglected to go through the process of expanding the boundaries for those formations on the map.

In other words, none of these aquifers are new or unknown. And they were never drinking water candidates.

DOGGR and the water board are reviewing huge amounts of current data to bring the boundaries in line with what's now known about the oil formations and aquifers.

They were supposed to be on track to meet a hard deadline of Feb. 15, 2017.

But things have gotten stuck as the process between DOGGR and the water board has taken a lot longer than anticipated, including expanded periods of public review.

So far, only two applications have been sent to the EPA for final approval. One for the Arroyo Grande oil field in San Luis Obispo County and the other is for the Fruitvale oil field in Bakersfield.

Meanwhile, another 35-38 applications are on the loading ramp and the clock is ticking.

If the exemptions aren't approved by that Feb. 15 deadline, oil companies will have to shut down injection operations.

If that happens, some industry experts have estimated that could choke back production of as much as 105,000 barrels of oil per day statewide.

Most of that, 60,000 barrels a day, comes from Kern County.

Activists may celebrate that outcome but I doubt any realists would.

Local job and tax losses would be horrific. Not to mention increased prices at the pump and more reliance on foreign oil.

I'm told extending the deadline is difficult because it was codified by regulations meant to make sure the state cleaned up its aquifer permitting snafu.

I guess this is where the rock and the hard place meet up.

But here's why I say the whole scare over injections into these aquifers is hooey.

It'll be easier to understand if you look up the aquifer exemption maps on DOGGR's website at: [http://www.conservation.ca.gov/dog/Pages/Aquifer\\_Exemptions.aspx](http://www.conservation.ca.gov/dog/Pages/Aquifer_Exemptions.aspx).

There isn't a single bowl of water beneath our feet.

Aquifers are layered throughout formations deep into the ground and can run for miles. They have water, yes, but can also be filled with oil, salt or other icky stuff.

That's what I discovered when I looked up the aquifer exemption application for the Fruitvale oil field.

Fruitvale's proposed boundary expansion includes my neighborhood and, more importantly, both of the wells I and my neighbors rely on for drinking water.

Hey now, I thought. Don't get your dirty oil water near my wells!

The Fruitvale maps, and maps of other aquifer exemption applications, show how misplaced those fears really are.

The bottom of my well is separated from the Fruitvale injection site by more than 2,000 vertical feet and a 10- to 50-foot thick shelf of impermeable shale.

Unless an injection well's casing fails, there's no way oilfield produced water injected so far underground is a threat to my drinking water.

And, by the way, approval of an aquifer exemption doesn't mean oil companies have a free pass for drilling injection wells. Each well still has to be approved independently and will come under the county's new environmental process, which includes public hearing and numerous mitigation requirements.

I understand the need to thoroughly review this information.

But considering agencies have, in some cases, had the information for nearly a year, it's time to get off the pot.