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INVESTIGATIONS

The oil and gas industry is polluting East Texas drinking water sources: 'A disaster waiting to happen'

By **Amanda Drane**, Staff Writer

Sep 14, 2026





Stacy Cranford, director of public works for the city of Joaquin, Texas, shows samples he took of water that caused the town to shut down its water supply.

Elizabeth Conley/Houston Chronicle

JOAQUIN — The ground is swelling under a small East Texas town along the state border, where oil and gas wastewater is flowing up from old oil and gas wells and bursting into an aquifer used for drinking water.

It's an outcome the Texas Railroad Commission took steps to prevent for more than a decade. The state's oil and gas regulator monitored as corporations and wastewater operators stuffed more of their polluted leftovers underground and into areas that were running out of space to contain them.

The looming pressure problem worried Stacy Cranford, who is in charge of Joaquin's municipal water supply, years before the first sign of trouble erupted to the surface in August 2025. He said he knew he was "sitting on a disaster waiting to happen."

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So when Cranford saw a geyser of water shooting from an old oil and gas site along Highway 84, he acted swiftly to protect the drinking water. He shut down the town's wells and activated emergency supplies by drawing water from Logansport, Louisiana. He was concerned the pressure could pollute the city's municipal wells roughly two miles away.

The geyser that Cranford spotted wasn't the only leaking water well. About a dozen freshwater wells in the Joaquin area sprung leaks that week, Railroad Commission records show. Some of them tested positive for contaminants like benzene, chlorides and natural gas — signs that pressure was carrying oil and gas fluids into the

Carrizo-Wilcox, a major aquifer that supplies water to homes and businesses along the Texas-Louisiana state line.

Yet no formal notices have been sent to nearby residents. State law requires the Railroad Commission to notify the Texas Commission on Environmental Quality of “documented cases of groundwater contamination” caused by oil and gas activities it regulates. The law obligates TCEQ to then notify the local community.

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The Railroad Commission said in a statement that the TCEQ had been notified of contamination in Joaquin.

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A TCEQ spokesperson said in a statement that the agency had not received notification from the Railroad Commission. Once the Railroad Commission “provides additional information,” the TCEQ would assess who needs to be notified — typically residents within one mile of the contamination.

More than a year has passed since Cranford reported the first saltwater blowout in Joaquin, an incident that he said took the town's water supply offline for about two weeks.

“They're all tight-lipped about it, and that's not the way a state agency should work,” he said. “Especially when you're dealing with drinking water, they should be an open book to us.”

Protecting groundwater and public safety is the Railroad Commission's primary concern as it regulates underground injection, said Bryce Dubee, a spokesman for the commission.

“The RRC has a long history of regulating various classes of injection wells and is committed to strong oversight while protecting underground sources of drinking water,” Dubee said in a statement.



Amos Edwards, 10, and Pace Edwards 8, play in a sprinkler outside their home in De Berry, Texas, near the Louisiana border on Wednesday, Aug. 12, 2026. Their mother, Sara Edwards, is the volunteer president of DeBerry Water Supply.

Elizabeth Conley/Houston Chronicle

The Railroad Commission is dealing with the same problem in the oil-rich Permian Basin in West Texas and New Mexico, where oil and gas wells bursting with the industry's toxic wastewater are now a common sight. But ongoing blowouts in Joaquin show the problem is manifesting more quietly along the Louisiana state line, much closer to the oil industry's home in Houston.

The proliferation of oil and gas waste disposal in Northeast Texas has alarmed rural water system managers, many of them volunteers running systems on tight

budgets. They fear contaminants could leach into their networks or into private wells in places where residents lack the funds to do testing.

Wastewater economics are driving the concentration of oil and gas waste disposal in the region. Comparatively loose regulation makes it cheaper to move it into Texas, resulting in a high volume of wastewater injection in Shelby, Harrison and Panola Counties.

Roughly 187,000 barrels a day of wastewater cross the state line from Louisiana into Texas, according to B3 Insight, a firm that tracks it.

STATEWIDE PROBLEM: 25K Texas oil and gas wells could soon be 'zombie wells,' watchdog group warns

If there is contamination from this waste, who will catch it? How quickly will it be reported? These are the questions that trouble Sara Edwards, the volunteer president of DeBerry Water Supply, which serves some 1,000 people about 25 miles north of Joaquin in Panola County.

Testing for oil and gas contaminants in the water system is expensive, she said, and the board is reluctant to raise fees on cash-strapped residents who rely on the network of pipes.

“That's a lot of responsibility to fall on rural water operators and volunteer board members to ensure that we're watching,” said Edwards, who works full time for an insurance company and has three young children.

As it is, Edwards said rural water board members already spend money out of their own pockets to preserve access to clean water. And they are increasingly finding themselves competing with oil and gas companies that are draining the same aquifers for use in fracking.

Swelling and shaking

Oil and gas wells in the Haynesville shale bed are deep, requiring huge amounts of water to frack. Water used to fracture each well flows back out and is then injected underground, often carried by pipeline or hauled by truck to Shelby, Harrison and Panola Counties.

And the earth beneath East Texas and Louisiana is showing signs of trouble.

Two earthquakes — a symptom of underground wastewater disposal building pressure underground — happened in Huxley, just south of Joaquin, in the days leading up to the first reported leaking well in August 2025.



Stacy Cranford, director of public works for the city of Joaquin, Texas, is shocked to find a well that has been sealed is still under pressure, on Tuesday, Aug. 11, 2026.

Elizabeth Conley/Houston Chronicle

Overwhelming pressure beneath the surface has been causing the earth under Joaquin to rise since at least 2020, when Interferometric Synthetic Aperture Radar (InSAR) data first measured the surface swelling as much as six centimeters a year, state records show.

The leaking water wells, all near disposal wells, align with this area of “uplift,” the Railroad Commission’s scientists said.

The commission has acknowledged the problem since at least 2011, when it nearly denied a disposal permit because of a high density of injection in Joaquin, the end point of a pipeline carrying wastewater from Louisiana into Texas.

Technical staff found at the time there were already 17 disposal wells within a 10-mile radius of the Joaquin area. They recommended denying the permit requested by Common Disposal, but examiners overruled them and approved it.

The Railroad Commission has not approved a new disposal permit near Joaquin since 2014, it said in a statement.

In 2012, the commission requested pressure data from disposal operators in those same three East Texas counties. It described this as an attempt to assess the extent to which pressure from wastewater injection “may present a predictable threat of pollution” to “usable quality water resources.”

Recognizing the threat again in 2015, the commission decreased the permitted injection pressure limits in the Joaquin area to address the threat to underground drinking water sources.

But the commission’s efforts may not have been enough.

Saltier than seawater

Some of the water wells in Joaquin are still flowing, showing the aquifer remains under pressure and contamination could be ongoing. During a site visit in August, the Houston Chronicle observed as dirty water belched from the original leaking well that Cranford reported last year.

Hundreds of pages of state records reviewed by the Chronicle show the Railroad Commission is investigating and responding to the pressure phenomenon that it determined has contaminated shallow groundwater in the area.

Flowing water wells in the area had chloride concentrations of up to 21,400 milligrams per liter — saltier than seawater — “indicating the shallow freshwater zones have been affected,” the commission said in a May 2026 letter that suspended disposal operations for five saltwater disposal wells in the Joaquin area operated by Select Water Solutions, a large publicly traded company.

INDUSTRY FALLOUT: Earthquakes are becoming more frequent in East Texas.
Is fracking to blame?

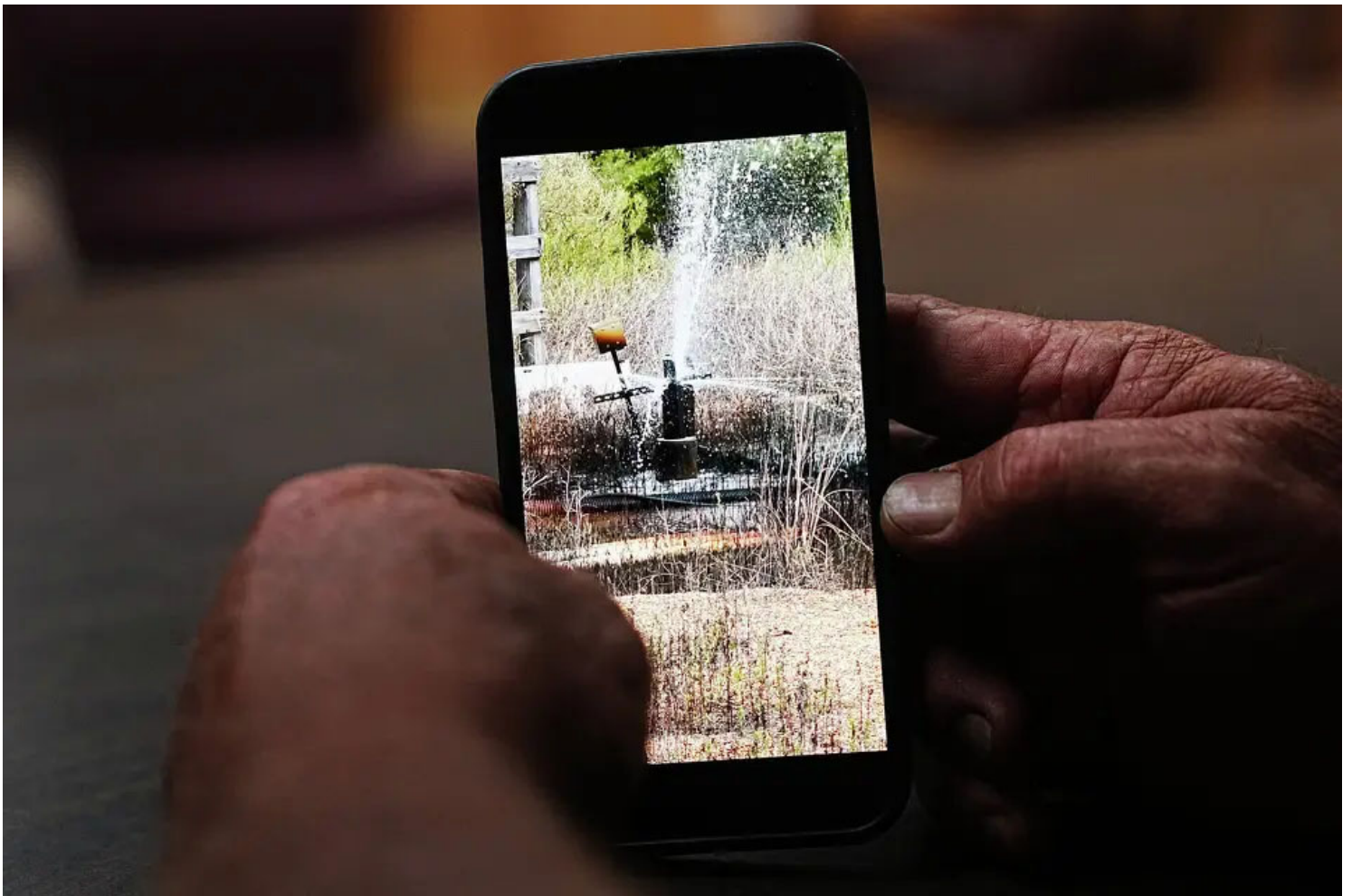
The commission also noted in the May letter that total dissolved solids, another measurement of salinity, had been “trending upward” since November 2025, when the agency had given Select permission to resume injection after the initial investigation concluded.

The commission further said it found high levels of the carcinogen benzene. Levels in some of the water wells had reached concentrations of 0.116 milligrams per liter — about 23 times the drinking water standard.

The commission cited the same chloride figure in an earlier letter in March that suspended operations at a disposal well in Joaquin operated by the oil and gas company EQV Operating. Select, EQV and a third company, Brookston Energy, which also operates wells near the blowouts, were directed by the Railroad Commission to drill groundwater monitoring wells and assess the extent of the contamination.

The seven disposal wells nearest the leaking water wells have been plugged or their permits suspended, the commission said in a statement.

The companies did not respond to requests for comment. Records show they were required to submit drilling and sampling plans to the Railroad Commission earlier this month.



Stacy Cranford, director of public works for the city of Joaquin, Texas, shows photos of a busted well from earlier in the year, on Tuesday, Aug. 11, 2026.

Elizabeth Conley/Houston Chronicle

In the dark

A year has passed since the wells began to leak to the surface and the public has received no notices of the threat to Joaquin's drinking water. More than four months have elapsed after the Railroad Commission's investigators warned colleagues of the groundwater contamination, records show. It's been more than two months since the commission directed the three companies to investigate the extent of groundwater contamination.

The TCEQ said it regularly monitors Joaquin's drinking water as the Safe Drinking Water Act requires but has not identified contaminants that exceed legal thresholds. Contractors for the agency last tested for benzene and other carcinogens in January

2025, seven months before the first leaking well erupted in Joaquin. It last checked for chloride contamination in 2024.

Cranford said the city of Joaquin did a full panel of testing after the leaks sprang to the surface in August of 2025. Those tests found no contamination.

The city’s water hasn’t been tested for contamination in over a year, Cranford said.

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“Those samples are very expensive,” he said, noting the city of Joaquin spent about \$5,000 on sampling, “which we did not get reimbursed for.”

The extent of the contamination and whether or not any of it has reached the city's water is unclear, but any amount of poison is too much, said Eric Garrett, pastor of the First Pentecostal Church of Joaquin.

"Why am I so worked up? When people ask that, I can show them a bottle of water and say this represents the Carrizo-Wilcox aquifer," he said, holding up a bottle of water. "I'm only going to put just a tiny bit of poison right over here. Which end do you want to drink out of? I think that's persuasive enough."

Sep 14, 2026



Amanda Drane

INVESTIGATIVE REPORTER, ENERGY



Amanda Drane is an investigative reporter for the Houston Chronicle.

Her work covering leaking oil and gas wells has won national recognition, including a first-place award for excellence in science reporting from the Online News Association in 2025.

Amanda's work on so-called "zombie wells" – long-dead oil and gas wells bursting with toxic water – received top honors in the Texas Managing Editors awards and helped inform a growing movement to reform how Houston's oil and gas industry is regulated.

Coverage that Amanda contributed to won national and local awards in 2025. A project highlighting lax enforcement of poisonous gas leaking from oil and gas wells won top honors from the Society for Advancing Business Editing and Writing and was a semifinalist for the 2025 Goldsmith Prize for Investigative Reporting. "Powerless," the Chronicle's package of stories that dug into how CenterPoint kept millions in the dark in the wake of Hurricane Beryl, was also a Goldsmith semifinalist and was recognized by The Headliners Foundation.

She enjoys yoga, strength training and eating well, thanks to her chef-husband.