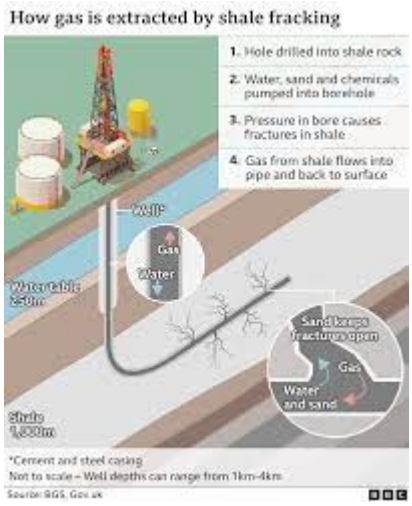


Diagram of Hydraulic Fracturing (Credit: BBC News)

Recently, the New York Times published an important and disturbing expose’ titled, [“‘Monster Fracks’ Are Getting Far Bigger. And Far Thirstier.”] The Times article focuses on the alarming intersection of three current environmental crises–water supply shortages, groundwater contamination, and excessive greenhouse gas emission levels–that threaten California and other states across the nation.

Fracking (the shorthand term for “hydraulic fracturing”) is a petroleum industry drilling practice designed to extract more oil and gas from underground wells than is possible through conventional drilling practices. Currently, fracking is done by injecting massive amounts of water–mixed with sand and often-toxic chemicals–underground to fracture the bedrock, thereby forcing even more subsurface oil and gas deposits to the surface. And newly-developed drilling technology allows operators to first drill downward and then horizontally for thousands of feet. Application of these “monster fracking” technologies has in recent years made the United States the largest oil and gas producing nation in the world.

Currently, nearly 60% of America’s 110,000 fracking wells are located in arid southwestern states facing chronic and growing water shortages, including Texas, Colorado, New Mexico, Oklahoma…and California.

And therein lies a threefold environmental crisis:

First, “monster fracking” requires massive amounts of often-scarce water.

According to the Times article, since 2011 U.S. oil and gas operators have consumed about 1.5 *trillion* gallons of water to support their fracking operations. Fracking a single oil or gas well can require 40 million gallons of water or more. And most of that supply is in the form of *fresh* water, largely pumped by drillers from already overdrafted groundwater aquifers in America’s southwestern states.

Even aside from monster fracks, many groundwater basins have for years been overdrafted and pumped unsustainably by agricultural and urban users. The water crisis affecting the massive but dwindling Ogallala aquifer underlying Texas, Oklahoma and adjoining Great Plains states has been well-documented. So too have the overpumped groundwater aquifers in California’s San Joaquin and Salinas Valleys that belatedly prompted state political leaders to enact California’s first-ever groundwater regulatory program in 2014.

The prodigious amounts of water the petroleum industry is now taking to service its fracking operations simply makes the American West’s groundwater supply crisis that much more severe–another huge “straw” draining U.S. aquifers. And remarkably, in large fracking states like California and Texas, water the petroleum industry uses for fracking is largely exempt from regulation under those states’ water rights laws that limit agricultural, industrial and domestic uses. (In California, this creates a huge loophole in implementing the state’s Sustainable Groundwater Management Act, which requires pumping from California’s groundwater aquifers to be reduced in order to ensure their long term sustainability.)

Second, an alarming byproduct of monster fracking is groundwater contamination from the toxic chemicals left underground.

Loose state laws governing fracking operations result in a significant fraction of the toxic chemicals injected underground by the petroleum industry remaining there long term. (In some cases, a portion of the toxic fracking fluids are recovered by drillers and stored aboveground.) And that means that in addition to depleting aquifers, any remaining groundwater is likely to become contaminated.

This is a glaring example of an industry practice that externalizes the environmental and economic costs of its operations, foisting them onto the public. Even more egregious is the fact that the fracking industry’s toxic byproducts wind up poisoning a common water resource and threatening public health in the process.

Third–& perhaps most important–monster fracking is antithetical to the critical need to reduce America’s–and global–greenhouse gas emissions.

The modern emergence of monster fracking operations in California and other states has perpetuated America’s reliance on fossil fuels–at a time when we must transition as quickly as possible to renewable energy resources in order to head off a global climate crisis. The exceedingly loose state regulatory regime over 21st century hydraulic fracturing operations in the United States represents a major impediment to achieving the goal of dramatically reducing America’s greenhouse gas emissions.

California is a prominent example of this policy dilemma but also perfectly situated to fix the monster fracking problem–while simultaneously serving as a model for other states and nations to do the same.

California Governor Gavin Newsom recently returned from an important diplomatic trip overseas. Another recent New York Times article profiles Governor Newsom’s visit to China and his meetings there with high-level Chinese government officials. Newsom’s trip was part of his ongoing campaign to export California’s aggressive climate change laws to China and worldwide. The Times article praises California’s Governor for having “signed a raft of laws and regulations to speed the nation’s most populous state away from fossil fuels.”

But California’s lax treatment of state oil and gas fracking practices is a disappointing exception to that record.

As I reported in a recent Legal Planet post, several years ago voters in Monterey County, California passed an initiative measure that sought to ban all oil and gas fracking operations in the county. Oil and gas companies operating in Monterey County immediately sued to invalidate the county initiative, asserting that it was preempted by state law. Earlier this year, the California Supreme Court ruled in favor of the industry, finding that the initiative contradicts and is inconsistent with the state’s century-old, comprehensive scheme of regulating oil and gas operations in California and is therefore invalid.

Critically, however, the Court never said or implied that the *state* couldn’t ban fracking in California. And that presents a commonsense path to fracking reform.

Hopefully, Governor Newsom is truly committed to an enlightened and fully

consistent climate change policy in California. Assuming that’s the case, he can and should issue an Executive Order directing his Geologic Energy Management Division (“CalGEM”)–the state entity responsible for overseeing oil and gas operations in California–to impose a prospective ban on fracking operations in the state. That would be a key step in pivoting California away from the water-consumptive, polluting environmental disaster that fracking represents, and toward a clean, carbon-free economy.

If the Governor fails to do that, the California Legislature should take up and enact legislation in its 2024 session to ban fracking. While the Governor could still veto the measure, doing so would reflect badly on Newsom’s claimed leadership on the climate change front. And if he were to do so, the Legislature can and should override that veto.

The dark industry that the New York Times aptly labels “monster fracking” consumes enormous amounts of scarce California water resources, leaves a toxic legacy in state aquifers that endangers public health, and is antithetical to California’s claimed leadership in the movement to reduce greenhouse gas emissions and preserve our climate. California should ban monster fracking in the state, thereby serving as a positive example to other states and nations.