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## Hydraulic Fracturing in Texas: The Changing Legal Landscape

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An oil and gas extraction technique called hydraulic fracturing has dominated media reports as discoveries about the impacts of this technology have continued to emerge. Last month, the International Energy Agency declared that the United States was experiencing a [“renaissance” in energy](#), largely due to drilling and fracturing in unconventional formations; indeed, the Agency believes that the United States will be nearly “self-sufficient” in energy by 2035 due to our abundant domestic fossil fuels, renewable resources, and, to some extent, our energy efficiency efforts. Perhaps most strikingly, oil from shales and other formations might make the United States the world’s largest oil producer within the next few decades.

Texas pioneered one of the modern fracturing techniques most commonly used in shales — slickwater (or [slick water](#)) fracturing. With the help of [federal research](#), energy companies discovered in the late 1990s that injecting large quantities of water and smaller quantities of chemicals down wells, along with “proppant” such as sand, could induce and expand fractures in shales; using the proppant to keep the fractures open, this technique allowed gas to flow from the shale. This technique has since [expanded](#) in several regions around the country and has contributed substantially to the modern energy renaissance identified by the IEA.

Although it has pioneered extraction technologies, Texas has lagged somewhat in terms of modifying laws in response to the shale gas boom. While other states experiencing expanding shale or tight sandstones development have made relatively comprehensive changes to their laws—with [Colorado](#), [Ohio](#), [Pennsylvania](#), and [West Virginia](#) leading the pack—Texas has been relatively slow to respond. This is changing. In 2011, the state [legislature](#) directed the Railroad Commission to require the disclosure of fracturing chemicals, which the [Commission](#) promptly did. The Commission also has [proposed](#) but has not yet finalized regulations that would improve the casing and cementing of wells, and the [83<sup>rd</sup> Legislature](#) recently suggested that more might be on the table, including “incentivizing the recycling or reuse of flowback water.”

The Commission already has recognized [concerns about water use in fracturing](#) and has begun to push operators toward recycling or reuse. Recycling and reuse of fracturing wastewater can contribute to two important changes. First, it can reduce the volume of water withdrawn from surface or underground sources for fracturing. Second, it can shrink the amount of waste—water and chemicals that flow back up out of fractured wells—that must be sent to underground injection control wells. These are both important developments. Although the overall volume of water required for fracturing [pales in comparison to domestic and agricultural uses](#), water withdrawals for fracturing can cause problems—particularly in areas experiencing droughts; daily overwithdrawals from streams can impact [aquatic life](#) by reducing streamflow, for example. In Pennsylvania last summer, a regional regulatory agency prohibited [more than sixty fracturing operations](#) from withdrawing water from streams during a period of drought.

Reducing the amount of flowback that must be disposed of would also have important consequences. Oil and gas operators or fracturing companies typically dispose of flowback either through a publicly-owned treatment works (POTW), which treats the water and discharges it to surface waters, or by injecting it into a federally-regulated underground injection control (UIC) wells. UIC wells are more common in Texas, and they are not a perfect disposal option. They can occasionally cause small [earthquakes](#) — including, possibly, those recently experienced in [Dallas](#). And one UIC well that appeared to accept waste from conventional (not fractured) wells leaked into a Midland aquifer, contaminating billions of gallons of water. (See *Heritage Consolidated*, case no. 10-36464-hdh-11).

If the legislature and Railroad Commission take up the issue of reuse and recycling of flowback this year, progress on the public law front could have important impacts. Indeed, other states provide useful examples that could be helpful to Texas. After the [Environmental Protection Agency](#) worried that POTWs in Pennsylvania were not adequately treating fracturing waste before discharging it to rivers, the state [requested](#) that operators abandon this disposal option. Even before this EPA action, the state had strongly encouraged—almost mandated—reuse and recycling of flowback through its regulations. Pennsylvania requires a “wastewater source reduction strategy” in 25 Pa. Code § 95.10, under which operators “must identify the methods and procedures the operator shall use to maximize the recycling and reuse of flow back or production fluid.” Like Pennsylvania, West Virginia has also anticipated flowback waste handling problems, noting that the state has only [two permitted UIC wells for “brine and fluid disposal”](#) and that “[o]perators should seriously consider options for the recycling of fracturing treatment flowback fluid.” The state requires operators to record the quantity of produced water from drilling and flowback from fracturing and to describe the “method of management or disposal” of these wastes. West Va. Code State Regs. R. § 22-6A-8(i).

The Railroad Commission already has begun to encourage wastewater recycling, issuing [authorizations](#) for at least two recycling units that treat wastewater from fracturing and allow for reuse of about eighty percent of the fluids that they process. The Commission also has allowed disposal of certain drilling wastes through cities’ [wastewater treatment systems](#) in lieu of underground injection. But further potential developments, as hinted at by the Legislature, might make an important difference: surface issues associated with drilling, fracturing, and waste disposal may ultimately be one of the most important new risks of this expanding practice, and states—which control waste handling and disposal due to a federal exemption—must fully address it.

Considered collectively, Texas’s efforts to respond to the rise in drilling and fracturing in shales have begun to gain force, and this is particularly significant in light of Texas’s long history of drilling and fracturing. It appears that despite the fact that the state likely has experienced fewer demands for regulation of expanded development than, say, New York, it is slowly addressing some of the changes caused by growing development of shales.

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