

fracking fall under the Texas Water Code. This section will discuss the impact hydraulic fracturing is having on Texas' current oil and gas production; the quantity of groundwater used for frack wells; the interest of local GCDs in determining whether water wells for fracking have to be permitted; and the interest among other industries facing increasing competition for groundwater, based, at least in part, on continued drought and increased energy production.

A. Texas Oil and Gas Production and Hydraulic Fracturing

Advances in hydraulic fracturing since the 1940s have led to a modern-day energy revolution. Since 1997, there has been exponential growth in the U.S. natural gas production and reserves from shale plays.¹⁸ In 2000, shale gas production had started to increase, but it still represented only 2 percent of the natural gas produced domestically that year.¹⁹ By 2012, shale gas production had grown to 29 percent of the total U.S. natural gas production.²⁰ Shale gas production is estimated to continue to increase at a rate of growth such that domestic natural gas production will outpace domestic consumption by 2020.²¹ Even more promising are the estimates of oil shale reserves. The U.S. Geological Survey estimates that U.S. unconventional oil shale formations hold 2.6 trillion barrels of oil.²²

The Texas oil and gas industry is a primary contributor to these national statistics. Texas is the nation's number one oil and gas producer, with more than 270,000 active oil and gas wells statewide.²³ The number of oil wells completed in 2013 reached its highest level in over 40 years, with 19,249 wells completed during the year.²⁴ Total crude oil and natural gas production in Texas is also increasing. In 2013, over 750 million

18. John D. Furlow & Corinne V. Snow, *In the Wake of the Shale Revolution: A Primer on Hydraulic Fracturing Fluid Chemical Disclosure*, 8 TEX. J. OIL GAS & ENERGY L. 249, 251–52 (2013).

19. *Id.* at 252.

20. *Id.*

21. *Id.*

22. *Id.* at 253.

23. *Natural Gas Production and Well Counts (since 1935)*, R.R. COMM'N OF TEX., <http://www.rrc.state.tx.us/oil-gas/research-and-statistics/production-data/historical-production-data/natural-gas-production-and-well-counts-since-1935/> (last updated Oct. 20, 2014, 8:43 AM); *Crude Oil Production and Well Counts (since 1935)*, R.R. COMM'N OF TEX., <http://www.rrc.state.tx.us/oil-gas/research-and-statistics/production-data/historical-production-data/crude-oil-production-and-well-counts-since-1935/> (last updated Oct. 20, 2014, 9:02 AM).

24. *Texas Drilling Statistics*, R.R. COMM'N OF TEX., <http://www.rrc.state.tx.us/media/19846/txdrillingstats.pdf> (last updated June 4, 2014, 3:13 PM).

