



The day-to-day process of oil and natural gas production typically generates large amounts of water. In fact, some formations in Oklahoma can generate as much as ten times more water than the volume of oil and natural gas produced. The generated water is classified one of two ways: “produced water”, is water that naturally accompanies oil and natural gas, and “flowback water”, is the water that flows back to the surface after being safely injected during the completion process.

Both types of water contain high amounts of saline (brine), so it is first treated and then either recycled and reused, or injected deep into porous rock formations.

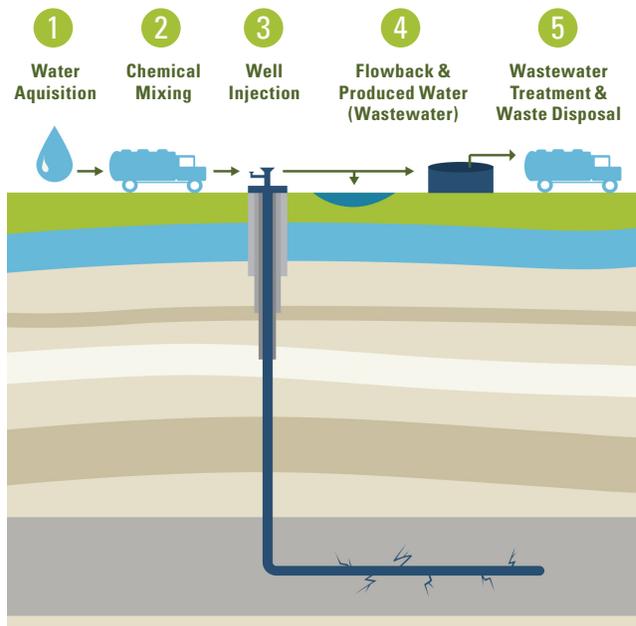
Injection wells are considered by industry professionals, as well as federal and state regulators, to be the most effective and economically feasible method of eliminating both types of water. They are classified by the EPA as “Class II” wells, which simply means they are specific to the injection of fluids associated with oil and natural gas production. To further

ensure safety and monitor the integrity of the wells, The Oklahoma Corporation Commission (OCC) has authority to issue permits and provide oversight.

INCREASED ENERGY PRODUCTION, INCREASED WASTEWATER

Over the past decade, Oklahoma’s oil and natural gas producers have more than doubled our state’s energy production. The current monthly average stands at more than ten million barrels equivalent, as opposed to an average of five million in 2005. Naturally, with increased oil and natural gas production, wastewater production increases as well.

The industry is actively working with regulators and researchers to develop solutions to address this increase in generated water.



LEARN MORE

USGS Investigations of Water Produced During Hydrocarbon Reservoir Development
<http://pubs.usgs.gov/fs/2014/3104/pdf/fs2014-3104.pdf>

EPA Classes of Wells
<http://water.epa.gov/type/groundwater/uic/wells.cfm>

EIA Independent Statistics and Analysis, Petroleum and Other Liquids
<http://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MCRFP0K1&f=M>

Rall Walsh III and Mark D. Zoback, Research Article “Oklahoma’s recent earthquake and saltwater disposal”
<https://pangea.stanford.edu/researchgroups/stress/sites/default/files/Walsh%20Zoback%202015%20Saltwater%20disposal.pdf>

Earthquakes in Oklahoma, The Office of the Oklahoma Secretary of Energy and Environment
<http://earthquakes.ok.gov/what-we-are-doing/oklahoma-corporation-commission/>