

Water Quality ^[1]



There are legitimate concerns about ensuring that oil and natural gas development do not contaminate ground and surface water, and that is why the industry is heavily regulated under the Clean Water Act, Safe Drinking Water Act, and Spill Prevention, Control and Countermeasures rule.

Wells are carefully constructed to ensure that any fluids pumped into them, as well as the oil or natural gas coming out, do not leave the wellbore and contaminate underground sources of drinking water. Two to three alternating layers of steel pipe and cement are constructed in the well bore to keep fluids from migrating into drinking water aquifers. Well construction is heavily regulated to protect drinking water during the drilling, fracking and production phases. Drinking water aquifers are also protected from contamination by the thousands of feet of rock between them and the formations that contain oil and natural gas.

The strict standards industry follows in its well construction, fracturing and flowback handling have led to an excellent environmental record, which has been scrutinized and confirmed again and again. In June 2015, EPA released its [study on hydraulic fracturing](#) ^[2]. The five-year study is by far the most comprehensive study on hydraulic fracturing to date; it draws from approximately 3,700 sources of scientific information and includes 20 new peer-reviewed studies. EPA looked at the entire life cycle of hydraulic fracturing, including related processes like water acquisition, chemical mixing, flowback and produced water management, and wastewater treatment and disposal. EPA concluded that there are no “widespread, systemic impacts on drinking water” from the hydraulic fracturing process.

EPA did identify processes that could lead to drinking water impacts but rightly concluded that the number of identified cases of water resource impacts was very small compared to the number of hydraulically fractured wells. Although there are risks associated with hydraulic fracturing, federal and state regulations are effectively protecting water quality, and regulators are continuously strengthening their rules.

In addition, the Interstate Oil and Gas Compact Commission (IOGCC) provides extensive support to state oil and gas commissions in the form of model legislation and other technical support. IOGCC enables sharing of innovative techniques and environmental protection strategies among states on all aspects of regulating oil and natural gas operations. With the fracking study, EPA has once again confirmed states’ exemplary health and safety records. In light of the states’ effective oversight of oil and natural gas operations, Western Energy Alliance continues to oppose redundant federal regulation.

Feature content:

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Quick Facts:

- A typical well is constructed with [three million pounds](#) ^[3] of steel and cement to ensure well integrity and protect groundwater resources.
- States require a variety of measures to ensure wells are constructed correctly such as mechanical integrity testing; petrophysical and casing cement bond well logging; casing and cement standards; surface casing pressure monitoring during hydraulic fracturing operations; fluids reporting; and submittal of geologic and hydrological data.
- Since the late 1940’s when the first well was commercially fracked until today, [over 2 million wells](#) ^[4] have been fracked without a case of contamination of underground sources of drinking water caused by fracking.

Related Content:

[An Integrated Framework for Treatment and Management of Produced Water](#) ^[5]

[EPA Fracking Study](#) ^[2]

[Western Energy Alliance Comments on EPA Fracking Study](#) ^[6]

[Overview of Groundwater Protection Regulations in Oil and Gas States](#) ^[7]

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Links:

[1] <https://www.westernenergyalliance.org/knowledge-center/water/water-quality>

[2] <http://www2.epa.gov/hfstudy>

[3] http://www.api.org/~media/Files/Policy/Exploration/HYDRAULIC_FRACTURING_PRIMER.ashx

[4] http://energy.gov/sites/prod/files/2013/04/f0/how_is_shale_gas_produced.pdf

[5] http://www.rpsea.org/media/files/project/33e65b3c/EVNT-PR-07122-12_2009_Integrated_Framework_Treatment_Management_Produced_Water-Drewes-4-14-09.pdf

[6] <http://cdn.westernenergyalliance.org/sites/default/files/Final%20Western%20Energy%20Alliance%20EPA%20HF%20Study%20Comments.pdf>

[7]

<http://www.gwpc.org/sites/default/files/Overview%20of%20Groundwater%20Protection%20Regulations%20in%20Oil%20and%20Gas%20States%20FINAL%204%209%202014.pdf>