

Exceedingly Low Risk of Earthquakes from Hydraulic Fracturing

According to respected scientists from across the nation, the risk of hydraulic fracturing (“fracking”) inducing felt seismic activity is extremely low.



Seismological Society of America · January 2015

“It remains rare for hydraulic fracturing to cause larger earthquakes that are felt by humans.”



Paul Friberg, Seismologist, Instrumental Software Technologies · October 2014

“Earthquakes caused directly by fracking are mostly inconsequential magnitudes. Very few are even felt.”



U.S. Geological Survey · January 2014

“USGS’s studies suggest that the actual hydraulic fracturing process is only **very rarely** the direct cause of felt earthquakes. While hydraulic fracturing works by making thousands of extremely small ‘microearthquakes,’ they are, with just a few exceptions, **too small to be felt**; none have been large enough to cause structural damage.”



National Research Council · June 2012

“The process of hydraulic fracturing a well as presently implemented for shale gas recovery **does not pose a high risk for inducing felt seismic events.**”



Professor Richard Davies, Durham University · April 2013

“We have concluded that **hydraulic fracturing is not a significant mechanism for inducing felt earthquakes.** It is extremely unlikely that any of us will ever be able to feel an earthquake caused by fracking.”



Cliff Frohlich, Geophysicist, University of Texas at Austin · August 2013

“Although there is a considerable amount of hydraulic fracturing activity in the Eagle Ford, **we don’t see a strong signal** associated with that and earthquakes.”



U.S. Department of Energy · Website

“To our knowledge, hydrofracturing to intentionally create permeability **rarely creates unwanted induced seismicity that is large enough to be detected on the surface** – even with very sensitive sensors – let alone be a hazard or an annoyance.”



Dr. William L. Ellsworth, U.S. Geological Survey · July 2013

“More than 100,000 wells have been subjected to fracking in recent years, and the largest induced earthquake was magnitude 3.6, which is **too small to pose a serious risk.**”



Mark Zoback, Geophysicist, Stanford University · June 2012

“It is important to note that extremely small microseismic events occur during hydraulic fracturing operations. These microseismic events affect a very small volume of rock and release, on average, **about the same amount of energy as a gallon of milk falling off a kitchen counter.**”

DID YOU KNOW:

Many of the earthquakes you read about in the news – said to be linked to “fracking” – are actually being studied in relation to a process called wastewater disposal, a completely separate process from hydraulic fracturing.