

Induced quakes rattle less than tectonic quakes, except near epicenter

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Induced earthquakes generate significantly lower shaking than tectonic earthquakes with comparable magnitudes, except within 10 km of the epicenter, according to a study to be published online August 19 in the *Bulletin of the Seismological Society of America*.

Within 10 km of the epicenter, the reduced intensity of shaking is likely offset by the increased intensity of shaking due to the shallow source depths of injection-induced earthquakes.

Using data from the USGS "Did You Feel It?" system, Seismologist Susan Hough explored the shaking intensities of 11 earthquakes in the central and eastern United States (CEUS) considered likely caused by fluid injection.

"Although moderate injection-induced earthquakes in the CEUS will be widely felt due to low regional attenuation," writes Hough, "the damage from earthquakes induced by injection will be more concentrated in proximity to the event epicenters than shaking from tectonic earthquakes."

More information: "Shaking from Injection-Induced Earthquakes in the Central and Eastern United States," *Bulletin of the Seismological Society of America*, 2014.

Provided by Seismological Society of America

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