## **HB 2641 Proponent Testimony of Cindy Hoedel**

Thank you, Chairman Sloan and committee members for holding this hearing today.

I live in Matfield Green in Chase County. I moved there 5 years ago from Kansas City. For the first two years, and for 20 years prior to that living in Johnson County, I never felt an earthquake in Kansas.

In late 2014, the word "Earthquake?" followed by several question marks began showing up in Facebook posts from my Chase County neighbors. The first several times, I felt nothing.

In 2015, several small quakes shook my home, causing the floor to vibrate and, once, the open front door to slam shut on a windless day.

On Sept. 3, 2016, at 7:03 a.m. I was awakened when sliding closet doors in my upstairs bedroom began banging in their tracks and the feet of my bed were thudding against the floor. The mattress was moving up and down so much, I moved towards the middle to avoid get bounced onto the floor. The strong shaking continued for more than 60 seconds. It was frightening.

That was when I started researching earthquakes in Kansas. I learned that before 2014, Kansas recorded on average zero to three earthquakes per year. According to the Kansas Corporation Commission's own website, in 2015, in a single 6-month period, there were 1,967<sup>1</sup>.

When I started asking questions in 2016, some scientists thought the earthquakes were caused by high-pressure injection wells. Others weren't sure.

In March 2017, the United States Geological Survey issued a report saying Oklahoma and southern Kansas now face the same risk of damaging earthquakes as California, but with the key difference that the quakes in Oklahoma and Kansas are manmade<sup>2</sup>, the result of injection wells. So, now we know.

In December 2017, Stanford University announced scientists have developed a technique that can distinguish manmade from natural earthquakes<sup>3</sup>, because they have different wave patterns.

I commend the Kansas Corporation Commission for ordering a limit on injection volumes in the hardest hit counties in 2015, at the height of the manmade earthquakes. They set a cap of 8,000 barrels per day, and the number of earthquakes dropped by 66 percent. That is a step in the right direction, but it is not enough. Basic fairness and stewardship tell us the oil & gas industry cannot be allowed to cause earthquakes as part of their business model.

Expanding the 8,000 barrel-per-day cap statewide is a necessary and prudent next step toward our shared goal of eliminating manmade earthquakes.

In addition to the unknown environmental risks posed by earthquakes, I am now faced with a need to purchase earthquake insurance. The premiums and deductibles amount to an unfair subsidy of the oil industry by homeowners. And, no claim settlement can remedy the decline in property values in areas where manmade earthquakes are common, or permanent damage to historic stone and brick structures that are part of our cultural heritage.

Thank you for allowing me to speak before you today and for considering supporting this bill.

<sup>&</sup>lt;sup>1</sup> http://www.kcc.state.ks.us/oil-gas/induced-seismicity

http://www.latimes.com/local/lanow/la-me-ln-oklahome-earthquake-20170301-story.html

<sup>&</sup>lt;sup>3</sup> https://news.stanford.edu/2015/12/16/natural-manmade-quakes-121615/