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Oklahoma has been and is a seismically active state. However, seismologists agree that – based on the limited data available - the recent increase in seismic activity is very unusual.

While a direct, definitive link of oil and gas activity to the current major seismic events in Oklahoma has not been established, the Oklahoma Corporation Commission (OCC) is not waiting for one.

As relates to oil and natural gas exploration and production activity, the primary area of interest of researchers regarding the strong recent earthquakes in Oklahoma has been injection wells used for wastewater disposal. The vast majority of the wastewater disposed of in these wells comes from pre-existing water in the produced formation that comes up with the oil and natural gas.

The (OCC) has an ever-evolving and proactive approach to the issue of seismic activity in Oklahoma. This approach currently includes:

- **Adoption of the “traffic light” system as recommended by the National Academy of Sciences. Using the latest data, staff reviews proposed disposal wells for proximity to faults, seismicity in the area, and other factors in determining whether the wells should be permitted, permitted only with special restrictions and requirements, or not permitted. The system is also applied to existing wells in seismically active areas.**
- **For existing wells, issues that may once have been considered minor now must be addressed immediately, even if that requires well shut-down.**
- **For those wells injecting into the state’s deepest formation (the Arbuckle), any question regarding the well’s actual depth must be addressed using modern technology to determine true depth. Any issue with depth must be corrected before restart, and permission for restart must be received from the oil and gas division.**
- **Daily volume and pressure recording is required of wells in “yellow light” areas.**
- **New rules that take effect September 12, 2014 will increase pressure and volume recording requirements for disposal wells that dispose into the Arbuckle formation (the state’s deepest injection formation).**

- **Under the new rules, Mechanical Integrity Tests for wells disposing of volumes of 20,000 barrels a day or more will increase from once every five years to every year, or more often if so directed by the Commission.**
- **The designated “area of interest” around earthquakes of magnitude 4.0 or greater has been expanded to 10 kilometers (6 miles). All disposal well operations within that area are examined.**
- **Data is shared with Oklahoma Geological Survey seismologists and other researchers. Key to the effort is determining whether there is data supporting a possible correlation between a well’s activity and seismic events in the area.**
- **OCC has provided matching funds necessary for OGS to secure a large Federal grant to further earthquake research and monitoring**
- **OCC is working with OGS, Stanford University (Dr. Mark Zoback) and the oil and gas industry in developing more detailed fault maps, as well as maps showing faults under the greatest stress.**
- **The OCC has been part of the “StatesFirst” initiative since its beginning. The program focuses on the issue of seismicity in energy states, and brings together regulators and researchers from all over the country in a collaborative effort.**