

Meeting Date
March 15, 2016



AGENDA	
Section	Public Hearing
Item No.	TV.D.

AGENDA REPORT
BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS

SUBJECT:	ORDINANCE PROHIBITING ANY OIL AND GAS EXPLORATION THAT USES WELL STIMULATION WITHIN THE BOUNDARIES OF BREVARD COUNTY, FLORIDA
DEPT/OFFICE:	County Attorney's Office

Requested Action:
Pursuant to Resolution 2016-024 adopted March 1, 2016, the Board of County Commissioners requested creation of an ordinance prohibiting any oil and gas exploration that uses well stimulation within the boundaries of Brevard County, Florida.

Summary Explanation & Background:
LEGISLATIVE INTENT: It is the intent of this ordinance to prohibit any oil and gas stimulation, including hydraulic fracturing, acidizing and acid fracturing, that is performed by injecting fluid into a rock formation in order to increase production at an oil or gas well or use chemical combinations from a list of hundreds of chemicals, some of which are determined by the Center for Disease Control (CDC) to be carcinogenic or which could otherwise pose a widespread and significant risk to public health, safety and the environment.

Clerk to the Board Instructions:

Exhibits Attached: proposed Ordinance No. 2016-

Contract /Agreement (If attached): Reviewed by County Attorney Yes No PR

County Manager 	Assistant County Manager	Department Director / Extension Scott Knox/52090
Stockton Whitten	Assistant County Manager	



Tammy Rowe, Clerk to the Board, 400 South Street • P.O. Box 999, Titusville, Florida 32781-0999

Telephone: (321) 637-2001
Fax: (321) 264-6972
Tammy.Rowe@brevardclerk.us

March 16, 2016

MEMORANDUM

TO: Scott Knox, County Attorney

RE: Item IV.D., Permission to Advertise Legislative Intent for Ordinance Prohibiting any Oil and Gas Exploration that Uses Well Stimulation Within the Boundaries of Brevard County

The Board of Commissioners, in regular session on March 15, 2016, granted permission to advertise for legislative intent for an ordinance prohibiting any oil and gas exploration that uses well stimulation within the boundaries of Brevard County.

Your continued cooperation is always appreciated.

Sincerely,

BOARD OF COUNTY COMMISSIONERS
SCOTT ELLIS, CLERK

Tammy Rowe

Tammy Rowe, Deputy Clerk

/cm

ORDINANCE NO. 2016-_____

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, PROHIBITING ANY OIL AND GAS EXPLORATION THAT USES WELL STIMULATION WITHIN THE BOUNDARIES OF BREVARD COUNTY, FLORIDA; CREATING CHAPTER 46, ARTICLE IX. OIL AND GAS WELL STIMULATION PROHIBITED; CREATING SEC. 46-375 PURPOSE AND SCOPE; CREATING SEC. 46-376 DEFINITIONS; CREATING SEC. 46-377 WELL STIMULATION PROHIBITED; CREATING SEC. 46-378 ENFORCEMENT; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN THE CODE; PROVIDING FOR RESOLUTION OF CONFLICTING PROVISIONS; PROVIDING FOR AREA ENCOMPASSED; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Board seeks to protect the water resources of Brevard County from potential contamination by carcinogenic chemicals; and

WHEREAS, oil and gas well stimulation, including hydraulic fracturing, acidizing and acid fracturing, is performed by injecting fluid into a rock formation in order to increase production at an oil or gas well; and

WHEREAS, oil and gas well stimulations involve the use of chemical combinations from a list of hundreds of chemicals, some of which are determined by the Center for Disease Control (CDC) to be carcinogenic or which could otherwise pose a widespread and significant risk to public health, safety, and the environment; and

WHEREAS, use of these hydraulic fracturing mixes exposes air, aquifers and adjacent land and surface waters to the risk of contamination through spills and accidents, open pit storage, truck transport on roadways, and activities during well development; and

WHEREAS, well stimulation through hydraulic fracturing is exempt from important regulations meant to protect public health and the environment, specifically sections of the Clean Water Act, Clean Air Act, Safe Drinking Water Act,

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), and the National Environmental Protection Act; and

WHEREAS, much of Florida's water supply comes from aquifers in highly-permeable limestone formations which are vulnerable to contamination from hydraulic fracturing activities; and

WHEREAS, Florida's oil and gas regulations, Chapter 377, Florida Statutes, and Rules 62C-25 through 62C-30, Florida Administrative Code, make no reference to hydraulic fracturing or other well stimulation techniques; and

WHEREAS, fracking requires the use of hundreds of thousands to millions of gallons of water for each fracking event, and Florida Water Management Districts have declared an insufficient water supply for growth in the Central Florida region; and

WHEREAS, the residents of Brevard County have a reasonable expectation that their local governments will endeavor to protect their health and welfare, along with that of the community environment; and

WHEREAS, on March 1, 2016, the Board adopted Resolution 2016-024 urging the Florida Legislature to not enact laws preempting local authority to regulate oil and gas exploration practices, including hydraulic fracking and well stimulation; urging the Florida Legislature to enact a moratorium on the use of hydraulic fracking and well stimulation until scientific study and evaluation proves that they do not pose a significant and harmful risk to water supplies or to public health, safety or the environment; and urging the U.S. Environmental Protection Agency to intervene should the Florida Legislature fail to enact legislation that protects Florida residents and the environment from the harms associated with hydraulic fracking and well stimulation; and

WHEREAS, the Board has determined that the proposed amendment serves the public health, safety and welfare of the citizens of Brevard County, Florida.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA:

SECTION 1. Chapter 46, Article IX. Oil and Gas Well Stimulation Prohibited. is hereby created.

SECTION 2. Chapter 46, Article IX, Sec. 46-375. Purpose and scope, is hereby created as follows:

Sec. 46-375. Purpose and scope.

It is the purpose and intent of the Board to prohibit all oil and gas well stimulation activities within the boundaries of Brevard County, Florida.

SECTION 3. Chapter 46, Article IX, Sec. 46-376 Definitions, is hereby created as follows:

Sec. 46-376. Definitions.

The following words, terms, and phrases shall apply in the application, interpretation and enforcement of this Division:

Hydraulic fracturing means the process by which fractures in the earth's subsurface are widened by injection of water, chemicals, or both, under high pressure used in the extraction of oil and gas.

Matrix stimulation means the injection of any acid into a well to break up impediments without fracturing the well.

Well stimulation means any process of using vast amounts of water, chemicals, or both, injected into the ground as a means of oil and gas exploration, including but not limited to hydraulic fracturing and matrix stimulation. Well stimulation does not include routine well cleaning that does not affect the integrity of the well or formation.

SECTION 4. Chapter 46, Article IX, Sec. 46-377, Well stimulation prohibited, is hereby created as follows:

Sec. 46-377. Well stimulation prohibited.

(a) No person or entity may engage in any oil and gas exploration or production that utilizes well stimulation within the boundaries of Brevard County, Florida.

(b) No person or entity may engage in oil or gas exploration or production utilizing well stimulation techniques originating outside of the boundaries of Brevard County, Florida that in any way enters onto, into, or under the ground within the boundaries of Brevard County.

SECTION 5. Chapter 46, Article IX, Sec. 46-378 Enforcement, is hereby created as follows:

Sec. 46-378. Enforcement.

The Brevard County Attorney's Office, or special counsel as otherwise authorized, is authorized to pursue temporary or permanent injunctive relief or any other legal or equitable remedy authorized by law in courts of competent jurisdiction to cure, remove or end any activity which violates this Division.

Section 6. Severability. If any provisions of this ordinance or the application thereof to any person or circumstances is held invalid or unconstitutional, such invalid or unconstitutional portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the other portions of this ordinance, provided the remaining portions effectuate the purpose and intent of this ordinance.

Section 7. Inclusion in Code. It is intention of the Board of County Commissioners that the provisions of this ordinance shall become and be made a part of the Code of Ordinances of Brevard County, Florida, and that the sections of this

ordinances may be renumbered or re-lettered and that the word "ordinance" may be changed to "section," "article," or such other appropriate word or phrase in order to accomplish such intentions.

Section 8. Conflicting Provisions. In the case of a direct conflict between any provisions of this ordinance and a portion or provision of any other appropriate federal, state, or county law, rule, code or regulation, the more restrictive shall apply.

Section 9. Area Encompassed. This ordinance shall take effect throughout the incorporated and the unincorporated areas of Brevard County, Florida.

Section 10. Effective Date. This ordinance shall take effect upon adoption and filing as required by law. A certified copy of this ordinance shall be filed with the Office of the Secretary of State, State of Florida within ten (10) days of enactment.

DONE, ORDERED AND ADOPTED, in regular session, this 15th day of March, 2016.

ATTEST:

BOARD OF COUNTY COMMISSIONERS
OF BREVARD COUNTY, FLORIDA

Scott Ellis, Clerk

By: _____
Jim Barfield, Chairman

As approved by the Board on March 15, 2016



**Classified Ad Receipt
(For Info Only - NOT A BILL)**

Customer: B.O.C.C. COUNTY MANAGER'S OFF
Address: 2725 JUDGE FRAN JAMIESON WAY
MELBOURNE FL 32940
USA

Ad No.: 0001097952
Pymt Method: Invoice
Net Amt: \$178.04

Run Times: 1

No. of Affidavits: 1

Run Dates: 03/05/16

Text of Ad:

AD#1097952 **3/5/2016**
NOTICE OF PUBLIC HEARING
NOTICE IS HEREBY GIVEN that the Board of County Commissioners of Brevard County, Florida, on March 15, 2016 at 9:00 a.m., in the Commission Room at 2725 Judge Fran Jamieson Way, Building C, First Floor, Viera, FL, 32940, will hold a public hearing on the following ordinance:

ORDINANCE NO. 2016-
AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, PROHIBITING ANY OIL AND GAS EXPLORATION THAT USES WELL STIMULATION WITHIN THE BOUNDARIES OF BREVARD COUNTY, FLORIDA; CREATING CHAPTER 46, ARTICLE IX, OIL AND GAS WELL STIMULATION PROHIBITED; CREATING SEC. 46-375 PURPOSE AND SCOPE; CREATING SEC. 46-376 DEFINITIONS; CREATING SEC. 46-377 WELL STIMULATION PROHIBITED; CREATING SEC. 46-378 ENFORCEMENT; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN THE CODE; PROVIDING FOR RESOLUTION OF CONFLICTING PROVISIONS; PROVIDING FOR AREA ENCOMPASSED; AND PROVIDING FOR AN EFFECTIVE DATE.

All persons for or against said ordinance can be heard at said time and place. If a person decides to appeal any decision made by the Board with respect to such hearing or meeting, he will need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based.

The needs of hearing or visually impaired persons shall be met if the department sponsoring the Public Hearing is contacted at least 48 hours prior to the public meeting hearing by any person wishing assistance. The sponsoring department is the County Attorney Office, 633-2090.

A copy of the ordinance may be inspected at the following locations:
Brevard County Government Center,
Building C Clerk to the Board of County
www.brevardcounty.us/business
North, Central, South Libraries
By order of the Board of County Commissioners of Brevard County, Florida

NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that the Board of County Commissioners of Brevard County, Florida, on March 15, 2016 at 9:00 a.m., in the Commission Room at 2725 Judge Fran Jamieson Way, Building C, First Floor, Viera, FL, 32940, will hold a public hearing on the following ordinance:

ORDINANCE NO. 2016-_____

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, PROHIBITING ANY OIL AND GAS EXPLORATION THAT USES WELL STIMULATION WITHIN THE BOUNDARIES OF BREVARD COUNTY, FLORIDA; CREATING CHAPTER 46, ARTICLE IX. OIL AND GAS WELL STIMULATION PROHIBITED; CREATING SEC. 46-375 PURPOSE AND SCOPE; CREATING SEC. 46-376 DEFINITIONS; CREATING SEC. 46-377 WELL STIMULATION PROHIBITED; CREATING SEC. 46-378 ENFORCEMENT; PROVIDING FOR SEVERABILITY; PROVIDING FOR INCLUSION IN THE CODE; PROVIDING FOR RESOLUTION OF CONFLICTING PROVISIONS; PROVIDING FOR AREA ENCOMPASSED; AND PROVIDING FOR AN EFFECTIVE DATE.

All persons for or against said ordinance can be heard at said time and place. If a person decides to appeal any decision made by the Board with respect to such hearing or meeting, he will need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is based.

The needs of hearing or visually impaired persons shall be met if the department sponsoring the Public Hearing is contacted at least 48 hours prior to the public meeting hearing by any person wishing assistance. The sponsoring department is the County Attorney Office, 633-2090.

A copy of the ordinance may be inspected at the following locations:

Brevard County Government Center, Building C Clerk to the Board of County
www.brevardcounty.us/business
North, Central, South Libraries

By order of the Board of County Commissioners of Brevard County, Florida

March 15, 2016

From: Melissa Martin (Cocoa, Florida)

To: Brevard Board of County Commission (Attn: County Attorney's Office)

Subj: PROPOSED LANGUAGE TO ADD TO ORDINANCE PROHIBITING OIL AND GAS WELL STIMULATION

1. The following language is submitted for your review and consideration to amplify the protective coverage the subject ban will provide against inherently dangerous activities involved in hydraulic fracturing (fracking).
2. Insert between "WHEREAS, fracking requires the use of hundreds of thousands..." and "WHEREAS, the residents of Brevard County have a reasonable expectation that...":

"WHEREAS, government bodies and peer-reviewed science hold that the transportation, storage, and disposal of hydraulic fracturing wastewater can pose and has caused significant risk of harm to humans and ecosystems." (or words to that effect)

3. Include in the ordinance title, "...ordinance prohibiting oil and gas well stimulation ACTIVITIES." Clarify also throughout ordinance, to include Sec. 46-377, "Well stimulation ACTIVITIES prohibited."
4. Insert in Sec. 46-375. Definitions, "*Activities*, as descriptively used in well stimulation operations, includes the transportation [on roads within county jurisdiction], storage, ground injection, or treatment/disposal of wastewater produced by such well stimulation operations."
5. Thank you for your consideration of this matter.



M. MARTIN

Columbus, Ohio • Mar 15, 2016 • 54° Overcast

Search

The Columbus Dispatch

News Sports Opinion Life & Entertainment Services Contact Subscribe

E-Edition Weekly Ads Video Photos Data Obituarie

Hot Links: Joe's Egg Hunt Ted's Montana Grill Van hits bicyclist Thompson treasure update Mike Bowersock remembered Voters Guide Blue Jackets prizes

Home News Environment

Truck overturns, spills drilling wastewater that taints reservoir

OTHER NEWS

European, Russian agencies launch mission to Mars

Storms replenish key reservoirs

Why am I so tired after Daylight Saving starts?

Lockbourne neighbors dissatisfied with cleanup of old military landfill

An insect that masters water and air

Ice flowers bloom in dark of night

OSU Makeathon puts engineering students to the test

Archaeology: Hopewell used cross-cultural approach to build great monuments

HELPFUL LINKS

"Get Green Columbus" Official site

Environmental Protection Agency

The Green Guide

Columbus area recycling dropboxes

THE DISPATCH E-EDITION



The E-Edition includes all of the news, comics, classifieds and advertisements of the

By Laura Arenschiold

The Columbus Dispatch • Wednesday March 9, 2016 8:43 PM

A truck hauling drilling wastewater overturned in eastern Ohio early Wednesday, sending thousands of gallons of toxic water into a nearby creek and contaminating a reservoir in Barnesville in Belmont County.

The truck crashed along a curve just after 3 a.m. Wednesday, said Barnesville Fire Chief Bob Smith. The driver, Hiley Wogan of Chesterhill, Ohio, was flown by helicopter to a hospital in Columbus, Smith said. Wogan's injuries are not life-threatening.

About 5,000 gallons of drilling wastewater spilled into a field, then a creek and finally into one of Barnesville's three reservoirs, Smith said. Oil and gas drilling wastewater typically is loaded with salt, but also could contain sand and toxic chemicals.

Smith said the reservoir is closed while the Ohio Environmental Protection Agency tests the water.

"Cleanup crews are down there now starting to clean it up," Smith said. "It'll probably take a couple days because they have to clean the field, dig the dirt up, clean up along the creek."

He said the truck was hauling waste from a well in Monroe County owned by Gulfport Energy, an Oklahoma-based oil and gas company. Calls to Gulfport were not returned Wednesday.

James Lee, a spokesman for the Ohio EPA, said the agency is testing the reservoir and collecting information about possible chemicals or other toxins in the spilled wastewater.

Eric Heis, a spokesman for the Ohio Department of Natural Resources, said the agency is working to determine which of Gulfport's wells produced the spilled wastewater. He said no animals or fish were harmed.

Gulfport operates about 60 wells in Monroe County, though not all are active, according to ODNR records.

larenschiold@dispatch.com

@larenschiold

CLIMATE

Scientists: Fracking Wastewater Poses Threat To Drinking Water

BY [EMILY ATKIN](#)  SEP 25, 2014 2:21 PM



A jar holding waste water from hydraulic fracturing is held up to the light at a recycling site in Midland, Texas, Sept. 24, 2013.

Every year, hundreds of billions of gallons of wastewater are produced by fracking operations across America. Some of that water gets stored in manmade ponds, some of it is injected underground, and some of it is treated and put back into rivers.

For the people whose drinking water systems are downstream of those rivers, scientists have some bad news.

New peer-reviewed research from Stanford and Duke University scientists shows that even when fracking wastewater goes through water treatment plants, and is disposed of in rivers that are not drinking water systems, the treated water still risks contaminating human drinking water. That's because there are generally drinking water systems downstream of those rivers, and treatment plants aren't doing a good job of removing contaminants called halides, which have the potential to harm human health.

The scientists say halides — which are salts like bromide, chloride, and iodide — are often found in fracking wastewater, and the concern about them is that their presence in the water can

promote the formation of something called “disinfection byproducts,” or DBPs. These chemicals — trihalomethanes, haloacetic acids, bromate, and chlorite — are formed when the disinfectants used in water treatment plants react with halides, according to the Environmental Protection Agency.

Published in the journal *Environmental Science and Technology* and released by the American Chemical Society on Wednesday, the research showed that toxic compounds formed in water even when fracking wastewater made up only 0.01 to 0.1 percent of the waters’ volume. To prevent this from happening, the researchers recommended that fracking wastewater should not be discharged into surface waters, even when it is treated.

So why are we talking about water? I thought fracking was for oil and gas?

Fracking is a technique that makes it easier for companies to get more oil and gas from the ground, but one of the reasons it’s so controversial is because of how much water is needed for that to happen. Fracking works better than conventional drilling because, instead of just drilling down and trying to extract gas from shale rock, companies also inject a high-pressure mixture of water, sand, and chemicals miles-deep into that rock. That high-pressure brine effectively cracks, or “fractures,” the rock, and makes the gas easier to extract.

As fracking has boomed across the United States, so has the use of water to do it. A 2013 report from Environment America showed that fracking wells nationwide produced an estimated 280 billion gallons of wastewater in 2012 — a huge number considering more than 55 percent of fracked wells are in areas experiencing droughts.

How to manage that water, which is often radioactive, has also been a huge issue. Some consider

Table 2. Wastewater from Fracking in 2012**

State	Wastewater Produced (million gallons)
Arkansas	800
Colorado	2,200
Kansas	No estimate
Louisiana	No estimate
Mississippi*	10
Montana	360
New Mexico	3,000
North Dakota**	12,000
Ohio	30
Oklahoma	No estimate
Pennsylvania	1,200
Tennessee	No estimate
Texas	260,000
Utah	800
Virginia	No estimate
West Virginia	No estimate
Wyoming	No estimate
TOTAL	280,000

* Data for Mississippi are for 2012-2013.

** Data for North Dakota are cumulative to early 2013.

CREDIT: ENVIRONMENT AMERICA

it an even bigger issue than fracking's potential to leak drilling fluids or other contaminants, as detailed by a Yale Environment [report](#) on the problem.

What are some other problems with fracking wastewater?

Some of the most contentious issues surrounding fracking have been about wastewater. Drinking water contamination has always been one of them.

In addition to this most recent research on threats to drinking water supply from wastewater that's been treated and released into rivers, some have been concerned about whether wastewater injected underground can contaminate aquifers. Environment America's 2013 [report](#) said that pressure from those water injection wells can cause underground rock layers to crack, "accelerating the migration of wastewater into drinking water aquifers."

Storage ponds of wastewater are also prone to accident. In 2013, federal regulators [fined](#) ExxonMobil \$100,000 for a fracking wastewater pond leak in 2010 that contaminated a tributary of the Susquehanna River.

Perhaps the most high-profile concern with fracking wastewater, though, is that the process of injecting it underground may be [causing earthquakes](#). Scientists [increasingly believe](#) that the large amount of water that is injected into the ground after a well is fracked can change the state of stress on existing fault lines to the point of failure, causing quakes. The quakes have usually been too small to be felt, but scientists have also [warned](#) that they stand to get stronger as more wastewater injection happens — a likelihood considering the [growing expansion](#) of fracking.

TAGS Fracking Fracking Fluid Stanford

Oklahoma Admits Oil and Gas Industry Responsible for Dramatic Rise in Earthquakes

By EVAN SIMON

Apr 22, 2015, 4:48 PM ET



WATCH | Caught on Camera: Oklahoma's Rising Earthquakes

For the first time in the state's history, Oklahoma's state government officially recognized the long held scientific consensus linking the disposal of oil and gas wastewater with the record number of earthquakes plaguing it in recent years.

On Tuesday, the Oklahoma Geological Survey released a statement declaring it was "very likely that the majority of recent earthquakes, particularly those in central and north-central Oklahoma, are triggered by the injection of produced water in disposal wells."

Chile Earthquake, Tsunami Warnings: The Science of Disaster

6.1 Magnitude Earthquake Strikes Near Greek Island

The statement coincided with the launch of a website produced by Oklahoma's Energy and Environment Cabinet, featuring an interactive map and links to expert studies detailing the scientific evidence behind the link between Oklahoma's earthquakes and the disposal of oil and gas waste water. The website represents the first time Oklahoma lawmakers have recognized the link, after years of official skepticism.

1980-1999



PHOTO: Images show the number of earthquakes in Oklahoma during the period of 1980-1999 compared ...**more +**

Hydraulic fracturing, a controversial gas extraction process involving the injection of waste water into deep underground wells, has boomed in Oklahoma. In 2009, the state's landscape featured more than 32,000 oil wells, according to the U.S. Energy Information Administration.

Before Oklahoma's recent oil and gas boom, which began in the mid 2000s, the state experienced only about one and a half earthquakes exceeding magnitude 3.0 (the level at which most humans can detect an earthquake without scientific instruments) in an average year, according to the Oklahoma Geological Survey.

Last year, the state recorded 585 quakes of 3.0 or larger, about 600 times greater than the background seismic rate, according to the Oklahoma Geological Survey.

Another recent report by the U.S. Geological Survey claimed that the 5.6 magnitude quake that struck Prague, Oklahoma, in 2011, resulting in several injuries and damage to more than a dozen homes, appears to have been "waste water disposal induced."

"There may be a link between earthquakes and disposal wells," Chad Warmington, President of Oklahoma Oil and Gas Association, said in a statement released Monday, "but we -- industry, regulators, researchers, lawmakers or state residents -- still don't know enough about how waste water injection impacts Oklahoma's underground faults."

But William Leith, senior science advisor for earthquake hazards at the U.S. Geological Survey, claims that evidence for waste water induced earthquakes is "well established in theory,

laboratory, and field experiments."

"The earthquake rate in Oklahoma has increased so significantly that it raises the risk of a larger damaging earthquake," said Leith, who also warned that "Oklahomans should be concerned about this increased risk."



AP PHoto

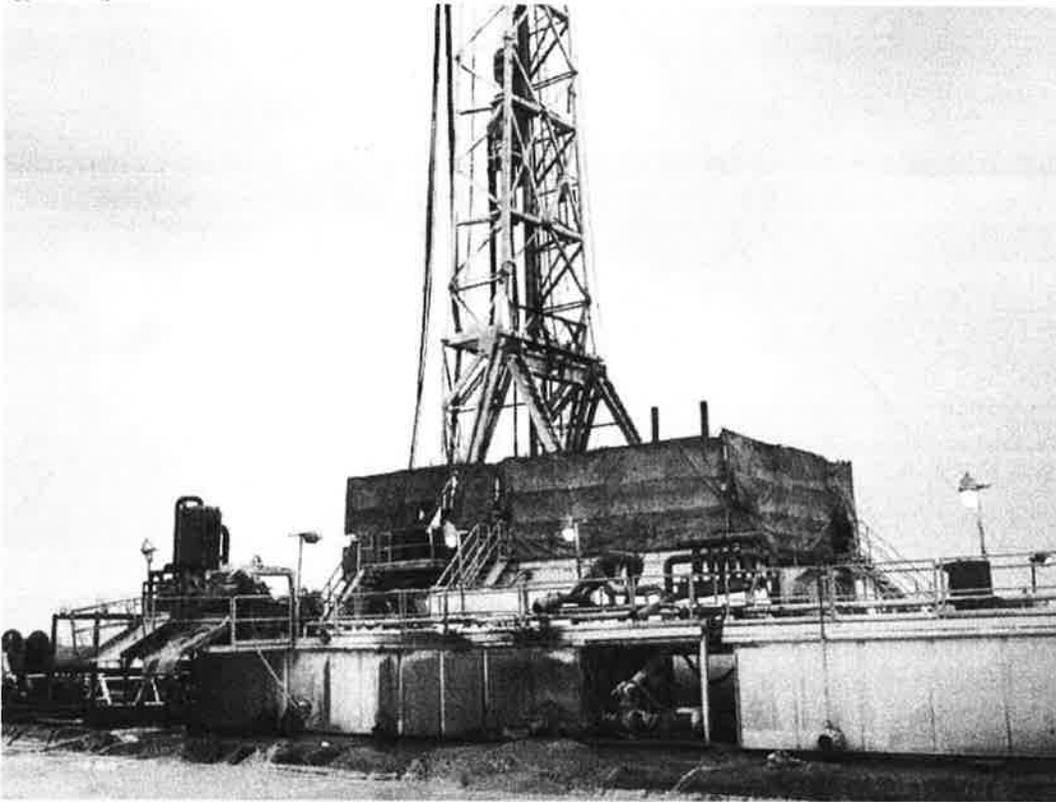
This Nov. 6, 2011 file photo shows earthquake damage in Sparks, Okla. on after two earthquakes hit the ar...more +

"Oklahoma state agencies are already taking action to address this issue and protect homeowners," Oklahoma Gov. Mary Fallin said in a statement released on Tuesday, referring to her efforts to assemble the Coordinating Council on Seismic Activity last year.

But critics were quick to point out that the Governor's announcement came late and does not impose any measures to curtail the injection of waste water.

"The word finally popped across my head," said Cory Williams, a Democrat and State Representative who has been an outspoken advocate for a moratorium on waste water injection and often points to scientific evidence of waste water induced earthquakes that he says has been available for years.

"I have been frustrated," Williams said. "We have a lot of bills that are all very much pro-industry, oil and gas related, yet we don't have a single bill in the process in regard to induced seismicity and oil and gas operations. I think that's a failure to act and a failure to protect our constituents."



MCT via Getty Images

A Sandridge Energy oil rig operates on the Oklahoma border in Harper County, Kan., in Feb. 2012.

Oklahoma isn't the only state experiencing a dramatic rise in earthquakes as vast swaths of central and eastern parts of the country have recorded an uptick in seismic activity during their region's oil and gas boom.

Between the years 1973-2008 there was an average of 21 earthquakes of magnitude 3.0 or larger in the central and eastern United States per year, according to the U.S. Geological Survey. Last year, there were 659 quakes of 3.0 or larger.

The increase in seismicity has been found to coincide with the injection of wastewater in deep disposal wells in states including Colorado, Texas, Arkansas, Ohio, and Oklahoma, according to the U.S. Geological Survey.