

September 30, 2015

Karen Hudon
4900 SE Hanson Circle
Stuart, FL 34997

State Representative Matt Caldwell
Chairman
Lee County Legislative Delegation
15191 Homestead Road
Building A
Lehigh Acres, FL 33971

Re: Legislative Delegation Meeting October 14, 2015
Request for Placement on Meeting Agenda
Subject of Presentation: Hydraulic Fracturing
("Fracking") in Florida

Dear Representative Caldwell:

I am writing to request placement on the above-identified meeting agenda. The subject of my presentation will be hydraulic fracturing also known as fracking.

Attached are links to background materials (paper copies of the attached material will follow this transmission by mail) to assist in understanding the presentation.

Sincerely,

Karen M. Hudon
(772)266-8896

Attachments:

- 1) The Florida Senate 2012 Statute Title XXIX Chapter 403.021
<http://www.flsenate.gov/Laws/Statutes/2012/403.021>
- 2) Hydraulic fracturing Linked to Increases in Hospitalization Rates in the Marcellus Shale Region According to Penn Study - Perelman School of Medicine/University of Pennsylvania Health System – July 15, 2015
http://www.uphs.upenn.edu/news/News_Releases/2015/07/panetteri/

3) Center for Health Engagement Fracking Increases Hospitalizations

<http://www.cyndynayer.com/fracking-hospitalization-costs/>

4) What's in the Recycled Oil Field Wastewater Sprayed on California Crops? By Mike Gaworecki,
May 7, 2015

<http://www.desmogblog.com/2015/05/07/what-s-recycled-oil-field-wastewater-sprayed-california-crops>

5) The Urgent Case for a Ban on Fracking – Food and Water Watch

[http://documents.foodandwaterwatch.org/doc/urgent case for ban on fracking.pdf#_ga=1.52602990.712988432.1439430837](http://documents.foodandwaterwatch.org/doc/urgent%20case%20for%20ban%20on%20fracking.pdf#_ga=1.52602990.712988432.1439430837)

The Florida Senate

2012 Florida Statutes

<p><u>Title XXIX</u> PUBLIC HEALTH</p>	<p><u>Chapter 403</u> ENVIRONMENTAL CONTROL</p> <p><u>Entire Chapter</u></p>	<p>SECTION 021 Legislative declaration; public policy.</p>
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403.021 Legislative declaration; public policy.—

(1) The pollution of the air and waters of this state constitutes a menace to public health and welfare; creates public nuisances; is harmful to wildlife and fish and other aquatic life; and impairs domestic, agricultural, industrial, recreational, and other beneficial uses of air and water.

(2) It is declared to be the public policy of this state to conserve the waters of the state and to protect, maintain, and improve the quality thereof for public water supplies, for the propagation of wildlife and fish and other aquatic life, and for domestic, agricultural, industrial, recreational, and other beneficial uses and to provide that no wastes be discharged into any waters of the state without first being given the degree of treatment necessary to protect the beneficial uses of such water.

(3) It is declared to be the public policy of this state and the purpose of this act to achieve and maintain such levels of air quality as will protect human health and safety and, to the greatest degree practicable, prevent injury to plant and animal life and property, foster the comfort and convenience of the people, promote the economic and social development of this state, and facilitate the enjoyment of the natural attractions of this state. In accordance with the public policy established herein, the Legislature further declares that the citizens of this state should be afforded reasonable protection from the dangers inherent in the release of toxic or otherwise hazardous vapors, gases, or highly volatile liquids into the environment.

(4) It is declared that local and regional air and water pollution control programs are to be supported to the extent practicable as essential instruments to provide for a coordinated statewide program of air and water pollution prevention, abatement, and control for the securing and maintenance of appropriate levels of air and water quality.

(5) It is hereby declared that the prevention, abatement, and control of the pollution of the air and waters of this state are affected with a public interest, and the provisions of this act are enacted in the exercise of the police powers of this state for the purpose of protecting the health, peace, safety, and general welfare of the people of this state.

(6) The Legislature finds and declares that control, regulation, and abatement of the activities which are causing or may cause pollution of the air or water resources in the state and which are or may be detrimental to human, animal, aquatic, or plant life, or to property, or unreasonably interfere with the comfortable enjoyment of life or property be increased to ensure conservation of natural resources; to ensure a continued safe environment; to ensure purity of air and water; to ensure domestic water supplies; to ensure protection and preservation of the public health, safety, welfare, and economic well-being; to ensure and provide for recreational and wildlife needs as the population increases and the economy expands; and to ensure a continuing growth of the economy and industrial development.

(7) The Legislature further finds and declares that:

(a) Compliance with this law will require capital outlays of hundreds of millions of dollars for the installation of machinery, equipment, and facilities for the treatment of industrial wastes which are not productive assets and increased operating expenses to owners without any financial return and should be separately classified for assessment purposes.

(b) Industry should be encouraged to install new machinery, equipment, and facilities as technology in environmental matters advances, thereby improving the quality of the air and waters of the state and benefiting the citizens of the state without pecuniary benefit to the owners of industries; and the Legislature should prescribe methods whereby just valuation may be secured to such owners and exemptions from certain excise taxes should be offered with respect to such installations.

(c) Facilities as herein defined should be classified separately from other real and personal property of any manufacturing or processing plant or installation, as such facilities contribute only to general welfare and health and are assets producing no profit return to owners.

(d) In existing manufacturing or processing plants it is more difficult to obtain satisfactory results in treating industrial wastes than in new plants being now planned or constructed and that with respect to existing plants in many instances it will be necessary to demolish and remove substantial portions thereof and replace the same with new and more modern equipment in order to more effectively treat, eliminate, or reduce the objectionable characteristics of any industrial wastes and that such replacements should be classified and assessed differently from replacements made in the ordinary course of business.

(8) The Legislature further finds and declares that the public health, welfare, and safety may be affected by disease-carrying vectors and pests. The department shall assist all governmental units charged with the control of such vectors and pests. Furthermore, in reviewing applications for permits, the department shall consider the total well-being of the public and shall not consider solely the ambient pollution standards when exercising its powers, if there may be danger of a public health hazard.

(9)(a) The Legislature finds and declares that it is essential to preserve and maintain authorized water depth in the existing navigation channels, port harbors, turning basins, and harbor berths of this state in order to provide for the continued safe navigation of deepwater shipping commerce. The department shall recognize that maintenance of authorized water depths consistent with port master plans developed pursuant to s. 163.3178(2)(k) is an ongoing, continuous, beneficial, and necessary activity that is in the public interest; and it shall develop a regulatory process that shall enable the ports of this state to conduct such activities in an environmentally sound, safe, expeditious, and cost-efficient manner. It is the further intent of the Legislature that the permitting and enforcement of dredging, dredged-material management, and other related activities for Florida's deepwater ports pursuant to this chapter and chapters 161, 253, and 373 shall be consolidated within the department's Division of Water Resource Management and, with the concurrence of the affected deepwater port or ports, may be administered by a district office of the department or delegated to an approved local environmental program.

(b) The provisions of paragraph (a) apply only to the port waters, dredged-material management sites, port harbors, navigation channels, turning basins, and harbor berths used for deepwater commercial navigation in the ports of Jacksonville, Tampa, Port Everglades, Miami, Port Canaveral, Ft. Pierce, Palm Beach, Port Manatee, Port St. Joe, Panama City, St. Petersburg, Pensacola, Fernandina, and Key West.

(10) It is the policy of the state to ensure that the existing and potential drinking water resources of the state remain free from harmful quantities of contaminants. The department, as the state water quality protection agency, shall compile, correlate, and disseminate available information on any contaminant which endangers or may endanger existing or potential drinking water resources. It shall also coordinate its regulatory program with the regulatory programs of other agencies to assure adequate protection of the drinking water resources of the state.

(11) It is the intent of the Legislature that water quality standards be reasonably established and applied to take into account the variability occurring in nature. The department shall recognize the statistical variability inherent in sampling and testing procedures that are used to express water quality standards. The department shall also recognize that some deviations from water quality standards occur as the result of natural background conditions. The department shall not consider deviations from water quality standards to be violations when the discharger can demonstrate that the deviations would occur in the absence of any human-induced discharges or alterations to the water body.

History.—s. 3, ch. 67-436; s. 1, ch. 78-98; ss. 1, 5, ch. 81-228; s. 4, ch. 84-79; s. 46, ch. 84-338; s. 11, ch. 85-269; s. 1, ch. 85-277; s. 8, ch. 86-186; s. 3, ch. 86-213; s. 143, ch. 96-320; s. 1004, ch. 97-103; s. 4, ch. 99-353.

Penn Medicine News

July 15, 2015

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This announcement is available online at
http://www.uphs.upenn.edu/news/News_Releases/2015/07/panetteri/

Hydraulic Fracturing Linked to Increases in Hospitalization Rates in the Marcellus Shale Region, According to Penn Study

PA residents in counties with high well density more likely to be admitted for suite of ailments

PHILADELPHIA - Hospitalizations for heart conditions, neurological illness, and other conditions were higher among people who live near unconventional gas and oil drilling (hydraulic fracturing), according to new research from the University of Pennsylvania and Columbia University [published this week in PLOS ONE](#). Over the past ten years in the United States, hydraulic fracturing has experienced a meteoric increase. Due to substantial increases in well drilling, potential for air and water pollution posing a health threat has been a concern for nearby residents.

To address this issue, researchers from two Environmental Health Science Core Centers (EHSCC) of the National Institute of Environmental Health Sciences -- the [Center of Excellence in Environmental Toxicology \(CEET\)](#) at Penn's [Perelman School of Medicine](#) and the Center for Environmental Health in Northern Manhattan at the Mailman School of Public Health, Columbia University, examined the link between drilling well density and healthcare use by zip code from 2007 to 2011 in three northeastern Pennsylvania counties.

Using databases that contained over 198,000 hospitalizations (which includes multiple hospitalizations for the same person), the team examined the top 25 specific medical categories for hospitalizations, as defined by the Pennsylvania Health Cost Containment Council. They associated these categories with residents' proximity to active wells. Two of the counties -- Bradford and Susquehanna -- saw a significant increase in drilling activity over this time period, while the control county, Wayne, experienced no drilling activity due to a ban on drilling in that county because of its proximity to the Delaware River watershed.

"This study captured the collective response of residents to hydraulic fracturing in zip codes within the counties with higher well densities," said senior author [Reynold Panettieri, Jr., MD](#), a professor of Medicine and CEET deputy director. "At this point, we suspect that residents are exposed to many toxicants, noise, and social stressors due to hydraulic fracturing near their homes and this may add to the increased number of hospitalizations. This study represents one of the most comprehensive to date to link health effects with hydraulic fracturing."

However, the authors caution that more study is needed to determine how specific, individual toxicants or combinations may increase hospitalization rates. For example, the increase in cardiology hospitalizations could be related to an increased exposure to air pollution such as diesel exhaust and fine particulate matter; however, this would require personal monitoring studies to measure exposure to specific toxicants, Panettieri notes. "Our findings provide important clues to design epidemiological studies to associate specific toxicant exposures with health end-points."

Their findings revealed that cardiology and neurologic inpatient prevalence rates (the proportion of a population found to have been hospitalized per 100 residents per year) were significantly higher in areas closer to active wells, as determined by the proximity of wells to a person's home and their density as defined by the number of active wells per square kilometer. In addition, increased neurologic inpatient prevalence rates were associated with higher well density. Hospitalizations for skin conditions, cancer, and urologic problems were also associated with the proximity of dwellings to active wells.

The team found that 18 zip codes had a well density greater than 0.79 wells per square kilometer, and residents living in these zip codes were predicted to have a 27 percent increase in cardiology inpatient prevalence rates for each year this specific active well density existed compared to Wayne County residents where there is no drilling. The researchers aim to look at specific types of health problems within these broad categories in the future.

While the study does not prove that hydraulic fracturing actually causes these health problems, the authors say, the hospitalization increases observed over the relatively short time span of observation suggests that healthcare costs of hydraulic fracturing must be factored into the economic benefits of unconventional gas and oil drilling.

This study was supported by the National Institute of Environmental Health Sciences (P30-ES013508, P30-ES009089). The EHSCCs belong to an inter-Center Working Group on Hydraulic Fracturing, which is a consortium of the nation's EHSCCs, chaired by co-author Trevor Penning, PhD, CEET director.

Co-authors are Thomas Jemielita, George L. Gerton, Marilyn Howarth, Pouné Saberi, Nicholas Fausti, Jason Roy, and Kathleen J. Propert, all from Penn, and Matthew Neidell, Steven Chillrud, Beizhan Yan, and Martin Stute, all from Columbia.

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***Penn Medicine** is one of the world's leading academic medical centers, dedicated to the related missions of medical education, biomedical research, and excellence in patient care. Penn Medicine consists of the Raymond and Ruth Perelman School of Medicine at the University of Pennsylvania (founded in 1765 as the nation's first medical school) and the University of Pennsylvania Health System, which together form a \$4.3 billion enterprise.*

The Perelman School of Medicine has been ranked among the top five medical schools in the United States for the past 17 years, according to U.S. News & World Report's survey of research-oriented medical schools. The School is consistently among the nation's top recipients of funding from the National Institutes of Health, with \$392 million awarded in the 2013 fiscal year.

The University of Pennsylvania Health System's patient care facilities include: The Hospital of the University of Pennsylvania -- recognized as one of the nation's top "Honor Roll" hospitals by U.S. News & World Report; Penn Presbyterian Medical Center; Chester County Hospital; Lancaster General Health; Penn Wissahickon Hospice; and Pennsylvania Hospital -- the nation's first hospital, founded in 1751. Additional affiliated inpatient care facilities and services throughout the Philadelphia region include Chestnut Hill Hospital and Good Shepherd Penn Partners, a partnership between Good Shepherd Rehabilitation Network and Penn Medicine.

Penn Medicine is committed to improving lives and health through a variety of community-based programs and activities. In fiscal year 2013, Penn Medicine provided \$814 million to benefit our community.

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Fracking Increases Hospitalizations

A Volunteer Offer of Help to Local Advocates Results in an Economic Revelation

Volunteering to turn a new fracking study to potential economic costs has led to revelations of increased hospitalizations, with the unintended consequences of business and personal cost burdens for health care. In this volatile period, in which the stock market is reacting to global pressures of Europe, South America, China, potential Fed rate hikes, state and community pension obligations, and politics writ large, the evidence is clear. Finally, there is a study that followed communities before and during the expansion of "unconventional oil drilling" (fracking) in order to determine potential health care increases.

In the recently published research, three counties in Pennsylvania were studied to determine if fracking had a measurable relationship to health care costs over four years. The top line results show the following unexpected increases in costs from the first year (2007) through the last (2011) [i].

While 25 conditions were analyzed by the researchers, five are highlighted here.

CARDIOLOGY \$583,483

\$500,000 direct costs \$13,000 business absence

ONCOLOGY \$2,503,826

\$3.5 million direct costs
\$85,000 business
absence

NEUROLOGY \$9,904,988

\$9.72 million direct



costs \$200,000 business
absence

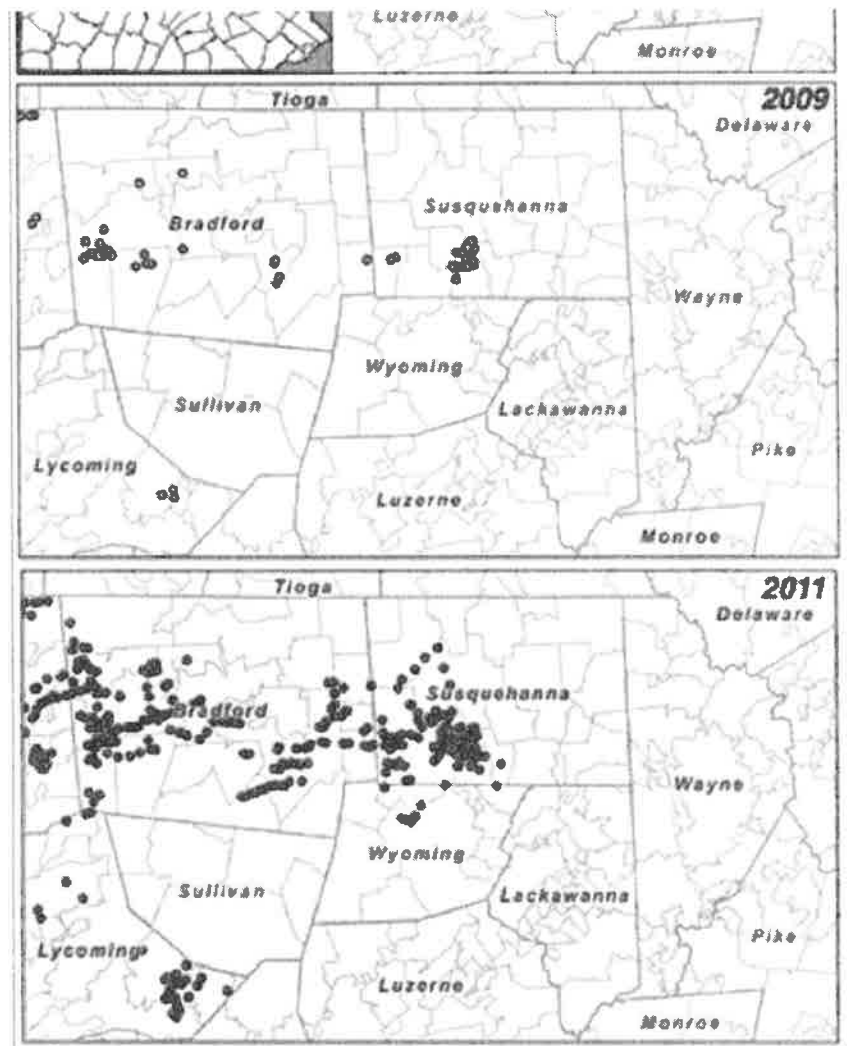
NEONATOLOGY \$18.3

million \$18 million direct
costs \$201,000 business
absence

OBSTETRICS \$2.02 million

\$1.6 million direct costs
\$101,000 business
absence

The counties included two with the most number of well drilling and activity from 2007-2011 (Bradford and Susquehanna) and one with no wells (Wayne) as a benchmark. The expansion of the wells can be seen in this picture.



As an example of how the study was constructed, one would not expect to see a rise in cardiology hospitalizations of 41% in just 4 years, which the study authors confirmed in the original research. While we can't tell which of the fracking issues caused the increase (chemicals, stress, pollution, or a combination of these), the inpatient days rose as the number or density of wells rose.

DO YOU NEED A ONE-PAGE HANDOUT FOR YOUR LEGISLATOR? HERE IT IS! **Health Costs of Fracking ONE PAGE**

A Deeper Dive into the Data

The first chart shows some of the conditions with the highest increases in prevalence rates over the four years. As the number of active wells increased in 67 zip codes in Bradford and Susquehanna, the rates of hospitalizations increased.

The excess costs for hospitalizations were found with the formula Excess Hospitalizations x Average Cost of Inpatient Stay. The Business Replacement Costs were found with the formula Daily Income x Excess Hospitalizations x Average Length of Stay (LOS).

Neurology	Actual number of inpatient visits	29% Excess patient visits	Average cost of inpatient stay	Excess costs for inpatient stay
Bradford	498	144	\$31,022	\$4,480,197
Susquehanna	313	91	\$57,678	\$5,235,432
	Daily Income	Average LOS	Excess patient visits	Business Replacement Costs
Bradford	\$180.63	4.1	144	\$106,642.14
Susquehanna	\$185.50	4.9	91	\$82,716.17
TOTAL Avoidable Costs for Neurology Hospitalizations				\$9,904,987.60
Neonatology	Actual number of inpatient visits	54% Excess patient visits	Average cost of inpatient stay	Excess costs for inpatient stay
Bradford	656	354	\$31,022	\$10,989,233
Susquehanna	229	124	\$57,678	\$7,132,461
	Daily Income	Excess patient visits	Average LOS	Business Replacement Costs
Bradford	\$180.63	354	2.1	\$134,278.05
Susquehanna	\$185.50	124	3.2	\$73,607.93
TOTAL Avoidable Costs for Neonatology Hospitalizations				\$18,329,580.74
Obstetrics	Actual number of inpatient visits	27% excess of inpatient visits	Average cost of inpatient stay	Excess costs for inpatient stay
Bradford	686	185	\$7,716	\$1,429,158
Susquehanna	235	63	\$7,717	\$489,644
	Daily Income	Excess patient visits	Average LOS	Business Replacement Costs
Bradford	\$180.63	185	2.2	\$73,602.58
Susquehanna	\$185.50	63	2.7	\$31,779.59
TOTAL Avoidable Costs for Obstetrics Hospitalizations				\$2,024,183.34



7/26/15

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Comparing To Other Communities

The evidence from Pennsylvania mirrors evidence in other communities near fracking sites:

- Colorado: 75% of chemicals used during natural gas operations affect skin and respiratory systems, as well as other systems [i]
- Colorado: Being within 10 miles of a gas well significantly increased odds of congenital heart defect by 1.3, and odds of having neural tube defects by two-fold [iii]
- Living close to busy traffic is associated with increase in C-reactive protein (CRP), a known risk factor for cardiovascular disease [iv]

For many of the states in the US, budgeting is a zero-balance endeavor. Therefore, if states and local communities will be impacted by business development, the impact has to be offset by budget cuts or tax increases. Or, for daring politicians, perhaps there could be business development tax for large and, now, predictable increases in costs to the communities in which businesses expand.

The good news is that this is first publication to study consistent populations over time. The data studied, over 150,000 consistent residents, included only those who lived in the counties for the sequential four years.

The Need for Accountability for Hospitalizations

The Affordable Care Act was created with the goal of opening the avenue to health care through broader and more affordable coverage. While there may be disagreement on the positives and negatives of the implementation of the Act, few argue that health costs must be contained and predictable. While some of the costs are borne through the federal government, still more are born by communities and state-level efforts.

Attention must be paid to the development of industry that raises the state and community levels of new health care costs, as these are not usually factored into the total costs of health care. As states and communities recover from the Great Recession, dealing with pension liabilities and educational issues, avoidable health care costs will loom large in budgets and taxes.

America's greatness is built on the opportunity and entrepreneurship of local business and middle class growth. We must take care to not stifle the growth lest we lose the very foundation of our democratic enterprise.

DON'T FORGET: HERE'S YOUR ONE PAGE SUMMARY FOR YOUR LEGISLATOR! Health Costs of Fracking ONE PAGE

Many thanks to Michelle Gale for the attention to the study release. She is a tireless advocate in Florida for restricting fracking, particularly in the Everglades National Forest, the unique and only such dedicated land in the US and the most valuable of watersheds in our state.

[i] Pennsylvania Health Care Cost Containment Council. <http://www.phc4.org/countyprofiles/CountyProfileResults.aspx?CID=008&B=20011&F=20131>. Census.gov <http://www.census.gov/quickfacts/table/INC910213/00>

[ii] Colburn T, Kwiatkowski C, Schultz K, Bachran M. Natural gas operations from a public health perspective. *Hum Ecol Risk Assess.* 2011; 17: 1039-1056. doi: 10.1080/10807039.2011.605662

[iii] McKenzie LM, Guo R, Witter RZ, Savitz DA, Newman LS, Adgate JL. Birth outcomes and maternal residential proximity to natural gas development in rural Colorado. *Environ Health Perspect.* 2014; 122: 412-417. doi: 10.1289/ehp.1306722. pmid:24474681

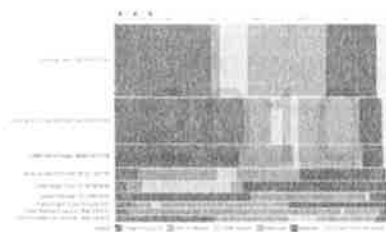
[iv] Lanki T, Hampel R, Tittanen P, Andrich S, Beelen R, Brunekreef B, et al. Air pollution from road traffic and systemic inflammation in adults: a cross-sectional analysis in the European ESCAPE Project. *Environ Health Perspect.* 2015, Advance Publication 27 March 2015. doi: 10.1289/ehp.1408224



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What's In The Recycled Oil Field Wastewater Sprayed On California Crops?

Mike Gaworecki (/user/14309) | May 7, 2015



"You can't find what you don't look for," UC Berkeley researcher Seth B.C. Shonkoff recently [told the LA Times](http://www.latimes.com/local/california/la-me-drought-oil-water-20150503-story.html#page=2) (<http://www.latimes.com/local/california/la-me-drought-oil-water-20150503-story.html#page=2>), referring to the chemicals that state regulators don't know to test for in the recycled wastewater the California oil industry sells for use on crops here in the [top agricultural producing state](http://www.ers.usda.gov/faqs.aspx#10) (<http://www.ers.usda.gov/faqs.aspx#10>) in the US.

Chevron produces [more than 10 times as much water as it does oil](http://www.nytimes.com/2014/07/08/us/california-drought-chevron-oil-field-water-irrigation.html?_r=0) (http://www.nytimes.com/2014/07/08/us/california-drought-chevron-oil-field-water-irrigation.html?_r=0) at its Kern River oil field in California's Central Valley, for instance — 760,000 barrels of water a day versus 70,000 barrels of oil. Half of that water is treated and sold to the Cawelo Water District in Bakersfield, which mixes it with fresh water and sells it exclusively to farmers.

Nobody knows if that water contains chemicals from fracking or other extreme oil extraction techniques, because the companies aren't required to test for them before selling the water. Nobody knows what those chemicals are, anyway, because companies aren't required to make that information public.

And that's just a fraction of the lucrative new market in recycled oil field water Chevron is pioneering as the [climate-exacerbated drought](http://www.desmogblog.com/2015/01/29/no-end-sight-california-s-climate-exacerbated-drought) (<http://www.desmogblog.com/2015/01/29/no-end-sight-california-s-climate-exacerbated-drought>) gripping the American West show no signs of abating any time soon.

According to the [LA Times](http://www.latimes.com/local/california/la-me-drought-oil-water-20150503-story.html#page=2) (<http://www.latimes.com/local/california/la-me-drought-oil-water-20150503-story.html#page=2>), the company recycles 21 million gallons of produced water every day in California, selling it to farmers who use it on about 45,000 acres of cropland in Kern County, the nation's "No. 2 crop county" since 2013.

Farmers [rely on government regulators to guarantee that the recycled oil water they buy is safe](http://www.desmogblog.com/2015/05/07/what-s-recycled-oil-field-wastewater-sprayed-california-crops), the Times reports, but give [site regulators don't even know what those chemicals are, let alone if we'll be testing for them](http://www.desmogblog.com/2015/05/07/what-s-recycled-oil-field-wastewater-sprayed-california-crops). But that could change soon.



<http://www.desmogblog.com/2015/05/07/what-s-recycled-oil-field-wastewater-sprayed-california-crops&title=What's>

The California legislature [passed a law in 2013 \(http://www.cafrackfacts.org/policy/california-regulations/\)](http://www.cafrackfacts.org/policy/california-regulations/) that establishes a regulatory framework for fracking, acidization and other unconventional well stimulations techniques, including mandatory air quality and groundwater monitoring and public disclosure of all chemicals used. The full regulations go into effect July 1, 2015 (six months before the scientific study and environmental impact study ordered by the law will be completed, but that's another story).

Last month, state water authorities announced that all recycled oil field water would have to be tested for every chemical companies report using in the extraction process, and [set a June 15, 2015 deadline \(http://thinkprogress.org/climate/2015/05/05/3654388/california-drought-oil-wastewater-agriculture/\)](http://thinkprogress.org/climate/2015/05/05/3654388/california-drought-oil-wastewater-agriculture/) for companies to report the results of those tests. Currently, the only tests required by the state are for naturally occurring toxins.

Environmental advocacy group [Water Defense has already done its own test \(https://waterdefense.org/content/water-defense-reveals-oil-waste-used-irrigate-crops/\)](https://waterdefense.org/content/water-defense-reveals-oil-waste-used-irrigate-crops/) of the water Chevron is selling to California farmers, however, and says, "Our findings are appalling: laboratory analysis of irrigation water in the Cawelo Water District found not only oil, but known toxins and potential carcinogens including methylene chloride. Are these chemicals in the food we eat? We need to be investigating our waterways for the full range of contaminants that are going into them."

David Ansolabehere, general manager of the Cawelo Water District, criticized Water Defense's methods, per [the LA Times \(http://www.latimes.com/local/california/la-me-drought-oil-water-20150503-story.html#page=1\)](http://www.latimes.com/local/california/la-me-drought-oil-water-20150503-story.html#page=1), but at the same time announced that his agency and Chevron would voluntarily contract a third party to conduct tests in accordance with the new requirements.

The biggest question that needs to be answered in all this, of course, is whether or not there has been significant contamination of our food supply. At present, it's not clear whether or not oil contamination in water used on crops could ever actually make its way into an almond or cherry or any other California-grown produce you might ever consume. But it certainly will help when we know what to look for.

Of course, this is just one of many [issues the oil industry has with water \(http://www.desmogblog.com/2015/04/26/how-much-water-does-california-oil-industry-actually-use\)](http://www.desmogblog.com/2015/04/26/how-much-water-does-california-oil-industry-actually-use) that needs to be resolved. California oil wells coughed up some [3.1 billion barrels of water \(http://www.naturalgasintel.com/articles/99848-water-water-everywhere-in-california-oil-production\)](http://www.naturalgasintel.com/articles/99848-water-water-everywhere-in-california-oil-production) along with 200 million barrels of oil in 2014, much of it too salty or chemical-laden to be treated in a cost-effective manner.

Some 831 million barrels of that wastewater was injected into disposal wells last year, even as evidence was coming to light that California regulators had improperly allowed as many as [2,500 injection wells to operate in groundwater aquifers \(http://www.desmogblog.com/2015/02/11/not-hundreds-thousands-oil-industry-injection-wells-dumping-wastewater-protected-california-aquifers\)](http://www.desmogblog.com/2015/02/11/not-hundreds-thousands-oil-industry-injection-wells-dumping-wastewater-protected-california-aquifers) that should have been protected under the federal Safe Drinking Water Act.

In response to the drought — and the fact that California has only one year of water left in its reservoirs — Governor Jerry Brown [announced emergency urban water use restrictions \(http://www.desmogblog.com/2015/04/08/urban-water-use-restricted-california-regulators-give-oil-industry-two-more-years-operate-injection-wells-groundwater\)](http://www.desmogblog.com/2015/04/08/urban-water-use-restricted-california-regulators-give-oil-industry-two-more-years-operate-injection-wells-groundwater) earlier this year. Those restrictions were heavily criticized for not including the oil and agricultural industries.

State regulators, meanwhile, gave oil companies [another two years to continue injecting wastewater \(http://www.desmogblog.com/2015/04/08/urban-water-use-restricted-california-regulators-give-oil-industry-two-more-years-operate-injection-wells-groundwater\)](http://www.desmogblog.com/2015/04/08/urban-water-use-restricted-california-regulators-give-oil-industry-two-more-years-operate-injection-wells-groundwater) into protected aquifers while they seek the proper exemptions from the Safe Drinking Water Act.



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