

**DRAFT: PARTIAL LITERATURE AND WEB RESOURCES REVIEW OF
LEGAL AND REGULATORY ISSUES SURROUNDING HYDRAULIC FRACTURING OF
HYDROCARBON RESERVOIRS**

DRAFT DATE 5/12/14

The information in this document was compiled from Web resources as a request from the San Luis Obispo County Water Advisory Committee for the SLO Board of Supervisors (WRAC). It is intended as a general reference to existing information, and does not reflect any position taken by WRAC or any recommendations. Additional information and corrections are welcome and can be directed to David Chipping (dchippin@calpoly.edu).

[I] EXISTING REGULATION AVAILABLE TO SAN LUIS OBISPO COUNTY

(1) SLO COUNTY TITLE 22 LAND USE ORDINANCE

Article 4 of the SLO County Land Use Ordinance addresses Standards for Specific Land Use. The oil and gas industry is addressed in Chapter 22.34, of which the following sections are pertinent to oil production: 22.34.010 – Purpose; 22.34.020 – Applicability; 22.34.030 - Drilling Permit Requirements; 22.34.040 - Oil and Gas Well Development Standards. The final section 22.34.050 sets standards on petroleum refining and is not pertinent to oil production.

The entire Land Use Ordinance can be found at <http://www.slocounty.ca.gov/Assets/PL/Land+Use+Ordinances/Title+22+-+Land+Use+Ordinance/01+-+Title+22+-+Land+Use+Ordinance+-+Article+1+through+8.pdf>

Under 22.34.010 – Purpose, the LUO clearly states that it goes beyond statewide regulation. *This Chapter is intended to supplement regulations administered by the California State Division of Oil and Gas, to address particular problems in the County that do not apply generally throughout the state. These problems include a limited water supply for agricultural and domestic uses in a county that depends heavily on agriculture and tourism for its economic welfare. The fresh water supply must be fully protected from pollution by petroleum operations. [Amended 1989, Ord. 2409] [22.08.172]*

Under 22.34.020 – Applicability: Here we see that ALL extraction methods would be covered by the LUO. *All petroleum resource extraction operations shall be conducted in compliance with the standards of this Chapter. The extraction of petroleum from oil sands or shales by any method other than wells is subject to the standards of Chapter 22.36 for surface mining operations). [Amended 1989, Ord. 2409] [22.08.172]*

Under 22.34.030 – Drilling Permit Requirements: Drilling requires a Minor Use Permit for an exploratory well, and a Conditional Use Permit if it is within an urban or village reserve line, a Residential Suburban land use category, or a Sensitive Resource Area. For production wells, a Conditional Use Permit is needed if it is a new play, and a Minor Use Permit if it is in an existing field.

Permit applications must include *1. Location and dimensions of wells, well pads and earthen sumps, location of roads and associated improvements (including housing), locations of any pipelines or storage tanks and pump facilities. 2. Identification of the type of drilling equipment (e.g., portable or fixed) intended to be used in the drilling activities.* Note that this would enable the County to identify fracking, as the process requires specific equipment on site.

Under 22.34.040 - Oil and Gas Well Development Standards there are sections on Bonding.

However the Bonding only applies to the surface operations, and damages associated with damage to subsurface resources would not be covered under the bond. Bonding levels are fairly low, at \$5,000 per well.

Also under 22.34.040 there are regulations that expand on state regulation, as it addresses setbacks from residences (100 feet). The state regulations address a setback of 25 feet from any public road, street or highway, except where the Review Authority determines that separations are unnecessary or ineffective because of physical conditions of the drilling site or the vicinity.

22.34.040 contains regulations on the surface storage of fluids used in and produced from drilling. The section echoes the state's requirement that storage must be in "watertight receptors", with open pit storage being prohibited.

Comments Regarding the LUO and Regulation of Fracking.

In commentary, there is nothing in the LUO to address subsurface operations. Bonding does not apply to drilling impacts on the subsurface. The sections on drilling require no reporting of the chemicals stored on site, including the listing of toxic chemicals. Toxic chemical reporting is required for refining in LUO 22.34.050 - Petroleum Refining and Related Activities, but this does not appear to apply to well operations. There is no requirement that a well developer report to the County on the down-well processes being used, but it is possible an intended fracking project could be diagnosed from the inventory of equipment on site under 22.34.030.

(2) SLO COUNTY CONSERVATION AND OPEN SPACE ELEMENT

This document (COSE) has absorbed the older General Plan Energy Element, and represents County policy. It offers no guidance on subsurface operations. It does provide guidance on the handling of surface contamination and cleanup. (Chapter 5, Policies 19-23). None of the Implementation Strategies at the end of Chapter 5 address oil/gas field operations. COSE can be viewed at:

<http://www.slocounty.ca.gov/Assets/PL/Elements/COSE.pdf>

(3) THE DIVISION OF OIL, GAS, AND GEOTHERMAL RESOURCES (DOGGR)

DOGGR exists to regulate the Oil and Gas Industry through the application of California Laws for Conservation of Petroleum and Gas. These can be found at:

<ftp://ftp.consrv.ca.gov/pub/oil/laws/PRC01.pdf>

SB 4 Requirements of DOGGR

With the passage of SB 4 (Pavley) DOGGR is required to develop regulations governing fracking and other forms of well stimulation. SB 4, as chaptered, can be found at: <http://legiscan.com/CA/bill/SB4/2013>

The legislative summary states: *"The bill would require the Secretary of the Natural Resources Agency, on or before January 1, 2015, to cause to be conducted, and completed, an independent scientific study on well stimulation treatments, including acid well stimulation and hydraulic fracturing treatments. The bill would require an owner or operator of a well to record and include all data on acid treatments and well stimulation treatments, as specified. The bill would require the division, in consultation with the Department of Toxic Substances Control, the State Air Resources Board, the State Water Resources Control Board, the Department of Resources Recycling and Recovery, and any local air districts and regional water quality control boards in areas where well stimulation treatments may occur, on or before January 1, 2015, to adopt rules and regulations specific to well stimulation, including governing the construction of wells and well casings and full disclosure of the composition and disposition of well stimulation fluids, and would authorize the division to allow well stimulation treatments if specific conditions are met. The bill would require an operator to apply for a permit, as specified, with the supervisor or district deputy, prior to performing a well stimulation treatment of a well and would prohibit the operator from either conducting a new well stimulation treatment or repeating a well stimulation treatment without a valid, approved permit. The bill would prohibit the approval of a permit application that is incomplete. The bill would require the division, within 5 business days of issuing a permit to commence a well stimulation treatment, to provide a copy to specific boards and entities and to post the permit on a publicly accessible portion of its Internet Web site. The bill would provide that the well stimulation treatment permit expires one year from the date that a permit is issued. The bill would require the division to perform random periodic spot check inspections during well stimulation treatments, as specified. The bill would require the Secretary of the Natural Resources Agency to notify various legislative committees on the progress of the independent scientific study on well stimulation and related activities, as specified, until the study is completed and peer reviewed by independent scientific experts. The bill would require the operator to provide a copy of the approved well stimulation treatment permit to specified tenants and property owners at least 30 days prior to commencing a well stimulation treatment. The bill would require the operator to*

provide notice to the division at least 72 hours prior to the actual start of a well stimulation treatment in order for the division to witness the treatment. The bill would require the supplier, as defined, of the well stimulation treatment to provide to the operator, within 30 days following the conclusion of the treatment, certain information regarding the well stimulation fluid. The bill would require the operator, within 60 days of the cessation of a well stimulation treatment, to post or cause to have posted on an Internet Web site accessible to the public specified information on the well stimulation fluid, as specified. The bill would require the division to commence a process to develop an Internet Web site for operators to report specific information related to well stimulation treatments and would require the Internet Web site to be operational no later than January 1, 2016. The bill would authorize the division to direct reporting to an alternative Internet Web site, as prescribed, and would require the division to obtain the data reported to the alternative Internet Web site and make it available to the public, as specified. The bill would provide that where the division shares jurisdiction over a well with a federal entity, the division's rules and regulations apply in addition to all applicable federal law and regulations. The bill would require a supplier claiming trade secret protection for the chemical composition of additives used in a well stimulation treatment to disclose the composition to the division, in conjunction with a well stimulation treatment permit application, as specified, but would, with certain exceptions, prohibit those with access to the trade secret from disclosing it. Because this bill would create a new crime, it would impose a state-mandated local program. "

DOGGR's Interim Well Stimulation Regulations effective January 1, 2014

DOGGR published interim regulation and was challenged on issues concerning compliance with the intent of SB4, especially in regard to disclosure of chemicals, notification of nearby landowners. As a result a modified and final set of Interim Regulations was developed and can be read at:

<http://www.conservation.ca.gov/dog/Documents/Final%20Interim%20Regulations%20with%20Highlights.pdf>

Issues of Contention Regarding SB 4's Initial Interim Regulation *(note that this section is "water under the bridge" but may be useful in terms of historical perspective)*

(a) Chemical Disclosure

The greatest conflict concerns the reporting of chemicals used in the fracking process. SB 4 requires that all chemicals be reported, but that the proportions of chemicals would not be reported and would be considered a trade secret. However a company is allowed to have DOGGR withhold release of information on the presence of chemicals it considers a trade secret, and therefore the public might be denied information at the discretion of DOGGR.

(b) Moratorium

Environmental organizations had also asked for a moratorium for fracking until final regulations were in place, but this was dropped at the last minute and caused several of the organizations to withdraw support for the bill.

(c) Notification

Under the bill notification of impending fracking is limited to a radius of 500 feet from the underground reservoir being tapped and/or 500 feet from the well head.

(d) CEQA Review

Prior to passage of SB 4 several environmental groups had sued DOGGR for allegedly failing to conduct proper environmental review of fracking under CEQA, which requires a thorough environmental assessment process of projects that might damage the environment and public health. Under SB 4, DOGGR would be able to set "threshold levels" of chemical use in fracking projects that would trigger CEQA review. If projects don't meet that threshold, projects can proceed without CEQA scrutiny.

As Chris Clark of TV station KQED notes: "DOGGR would be required to examine and consider revising those threshold levels before 2020. In the meantime, though, critics charge that having the division establish its own thresholds for triggering CEQA review essentially legitimizes what had been an arguably unlawful practice. The same agency that had been charged with lax oversight of fracking now gets to determine what constitutes lax oversight."

In court filings (California Superior Court, Alameda County) in October 2013, the Western States Petroleum Association has asked the court to dismiss a suit by four environmental groups that CEQA evaluation of current fracking projects be performed. WSPA's argument is that a CEQA environmental report is required under SB 4, to be completed by July 15, 2015, and up to that time there should be no CEQA oversight as there has been no such oversight to date.

DOGGR's Proposed Final Regulations

As noted above the Interim Regulations must be converted to Final Regulations in 2015, in order to comply with SB4.

The proposed Final Regulations can be found at:

<http://www.conservation.ca.gov/index/Documents/Text%20of%20Proposed%20Regulations%20-%20SB%204%20Well%20Stimulation%20Treatment%20Regulations.pdf>

One key issue appears to be partly resolved in terms of trade secrets being used to block disclosure information on the composition of fracking fluids. The composition of every constituent must be reported to DOGGR, and while trade secrets may be

upheld in sheltering the well operator from immediate publication, they might be revealed as part of a public health issue. This does not appear to be spelled out and will probably be an issue of contention.

DOGGR Final Regulations EIR

An EIR for the Final Regulations will be issued in July 2015.

(4) REGIONAL WATER QUALITY CONTROL BOARD AND NPDES PERMITS

Any discharges from well drilling would be covered by a NPDES permit. This would include both reinjection and discharge to surface waters. However the 'Haliburton Loophole' exempts the injection of fracking fluids into the production well from EPA regulation. The industry source Fracking Insider anticipates that EPA will increase regulation when current studies are completed (see below):

With respect to NPDES permits, EPA notes that the effluent limitations guidelines, which must be applied in all NPDES permits for oil and gas operations, state that "there shall be no discharge of wastewater pollutants into navigable waters from any sources associated with production, field exploration, drilling, well completion, or well treatment (i.e., produced water, drilling muds, drill cuttings, and produced sand)." Thus, no NPDES permit may authorize on-site discharge of flowback drilling water to a water of the United States. Rather, existing effluent guidelines establish Best Practicable Control Technologies (BPT), including underground injection and the use of evaporative ponds. One direction the Agency might head, in light of the prohibition of direct on-site discharge, is to increase the stringency of the BPTs—particularly in the Marcellus region where re-injection is prohibited by the local geology. Such measures could include actual technology-based control requirements with effluent concentration-based discharge limits.

As for pretreatment standards, the guidance notes that total dissolved solids (TDS) in flowback water have been found at excessively high levels. The guidance also echoes recent concerns over potentially high levels of bromide in shale gas wastewater being sent to POTWs. It is likely that EPA will be developing specific pretreatment standards applicable to shale-gas wastewater introduced to POTWs, focusing on developing numerical standards for constituents like bromide, chloride, and certain metals.

<http://www.frackinginsider.com/water-related-issues-continue-to-take/>

REGIONAL WATER QUALITY CONTROL BOARD AND PORTER-COLOGNE ACT

The California Wetlands Information System provided this succinct summary of the Porter-Cologne Act.

"Under the Porter-Cologne Water Quality Control Act (Porter-Cologne), the State Water Resources Control Board (State Board) has the ultimate authority over State water rights and water quality policy. However, Porter-Cologne also establishes nine Regional Water

Quality Control Boards (Regional Boards) to oversee water quality on a day-to-day basis at the local/regional level.

Regional Boards engage in a number of water quality functions in their respective regions. One of the most important is preparing and periodically updating Basin Plans, (water quality control plans). Each Basin Plan establishes:

1) beneficial uses of water designated for each water body to be protected; 2) water quality standards, known as water quality objectives, for both surface water and groundwater; and 3) actions necessary to maintain these standards in order to control non-point and point sources of pollution to the State's waters.

Permits issued to control pollution (i.e. waste-discharge requirements and NPDES permits must implement Basin Plan requirements (i.e. water quality standards), taking into consideration beneficial uses to be protected.

*Regional Boards regulate all pollutant or nuisance discharges that may affect either surface water or groundwater. Any person proposing to discharge waste within any region must file **a report of waste discharge with the appropriate regional board. No discharge may take place until:** 1) the Regional Board issues waste discharge requirements or a waiver of the waste discharge requirements, and 2) 120 days have passed since complying with reporting requirements.*

Under the auspices of the U.S. Environmental Protection Agency, the State Board and nine Regional Boards also have the responsibility of granting Clean Water Act National Pollutant Discharge Elimination System permits, commonly known as NPDES permits, for certain point-source discharges. In summary, California routinely issues NPDES permits to selected point-source dischargers and either waste discharge requirements or conditioned water quality certification for other discharges. The nine Regional Boards differ somewhat in the extent they choose to apply waste discharge requirements and other regulatory actions. Project proponents should be careful to check with the appropriate Regional Board before proceeding with any action which may result in a discharge to State waters.

In commentary, we do not know if the Porter-Cologne Act could be used to override the Haliburton Loophole and treat fracking injection liquids as something that could be controlled to protect groundwater quality.. If an analogy is drawn to the conflicts between state and federal rules on drug regulation, the answer would seem to be that federal law trumps state law.

An interesting feature from public TV station KQED notes that the Porter-Cologne Act has been able to "modify people's existing water rights." As in: "To take rights back from people if they had to do so in order to achieve the state's water quality objectives." and cites United State v. State Water Resources Control Board (1986) 182 Cal.App.3d 82 ("Racanelli" decision) which challenged water diversions in the Bay Delta.

<http://www.kcet.org/socal/departures/landofsunshine/laws-that-shaped-la/when-it-comes-to-water-why-la-is-better-off-than-texas.html>

The Porter-Cologne Act has produced an anomaly in state law which prevents Regional

Water Quality Control Boards from referring civil cases to district attorneys and city attorneys. Under the current law, civil cases involving violations of the Porter-Cologne Act, can only be pursued by the Attorney General. Assemblymember Bob Wieckowski (D-Fremont) unsuccessfully introduced AB246 in the 2011-2012 session to allow district and city attorneys to bring cases under Porter-Cologne.

(5) EPA RULES AND ACTIONS

(a) New Air Rules Implemented

The new EPA rules primarily address air pollution from gases leaked from wells. The Final Rule can be found at: <http://www.gpo.gov/fdsys/pkg/FR-2012-08-16/pdf/2012-16806.pdf>

(b) Current Federal Regulatory Framework For Wastewater

EPA describes current regulation here, with a note that this will be subject to change when new rules appear in 2014:

<http://water.epa.gov/scitech/wastetech/guide/oilandgas/unconv.cfm>

Direct discharges from unconventional oil and gas extraction are subject to NPDES permit regulations ([40 CFR Parts 122](#) through [125](#)). Indirect discharges to Publicly Owned Treatment Works (POTWs) are subject to the General Pretreatment Regulations ([40 CFR Part 403](#)).

NPDES permits must include technology based effluent limitations. For direct dischargers of unconventional oil and gas wastewaters from onshore oil and gas facilities – with the exception of coalbed methane – technology-based limitations are based on the Effluent Limitations Guidelines (ELGs) for the [Oil and Gas Extraction Category](#) ([40 CFR Part 435](#)). Permits for onshore oil and gas facilities must include the requirements in Part 435, including a ban on the discharge of pollutants, except for wastewater that is of good enough quality for use in agricultural and wildlife propagation for those onshore facilities located in the continental United States and west of the 98th meridian. Part 435 does not currently include categorical pretreatment standards for indirect discharges to POTWs for wells located onshore (i.e., PSES or PSNS).

(c) New Rules Proposed For 2014

EPA has proposed new rules regarding disposal of fracking wastewater, but is still soliciting input:

<http://yosemite.epa.gov/opa/admpress.nsf/0/91E7FADB4B114C4A8525792F00542001>

(d) EPA Studies That May Produce Regulation in the Future

EPA in 2010 started a study of fracking on groundwater nationwide which will not be completed until 2014. <http://www.epa.gov/hfstudy/> and <http://www.epa.gov/hydraulicfracture/> The following issues are covered: scientific understanding, providing regulatory clarity and protections, address permitting of hydraulic fracturing using diesel fuels, address waste reinjection safety, fluids storage, wastewater recycling, air quality, and regulations compliance.

EPA has also entered into an MOU with the USGS and US Dept. Energy:

http://www.epa.gov/hydraulicfracture/oil_and_gas_research_mou.pdf which states

The DOE, DOI, and EPA will identify research priorities and collaborate to sponsor research that improves our understanding of the impacts of developing our Nation's unconventional oil and gas resources and ensure the safe and prudent development of these resources. Through enhanced cooperation, the Agencies will maximize the quality and relevance of this research, enhance synergies between the Agencies' areas of expertise, and eliminate redundancy. The Agencies remain responsible for implementing their own authorities and internal priority-setting processes.

(e) EPA and the Safe Drinking Water Act

In August 2005 Congress passed the so-called "Haliburton Loophole" that exempted fracking under the Safe Drinking Water Act, The Clean Water Act, and The Clean Air Act. This was the Energy Policy Act of 2005. In most other cases the law dictates what chemicals can be injected underground.

Congressional attempts to reverse the "Haliburton Loophole" such as *H.R. 1084: Fracturing Responsibility and Awareness of Chemicals Act of 2011* have not advanced through a highly partisan Congress.

EPA's Underground Injection Control Program, under which fracking would have been regulated prior to 2005, still requires that any service company that performs hydraulic fracturing using diesel fuel must receive prior authorization through the applicable UIC program.

The Clean Water Act still applies to disposal of liquids produced during the fracking process. Reinjection does invoke the Safe Drinking Water Act, and any discharge to a surface water would invoke the Clean Water Act and require an NPDES permit.

For analysis, see <http://www.law.unc.edu/documents/clear/vires.pdf>

A good web site charting federal actions on fracking can be found at ProPublica.

<http://www.propublica.org/special/from-gung-ho-to-uh-oh-charting-the-governments-moves-on-fracking>

(6) PUBLIC LANDS AND NEW BLM RULES

The Obama administration has developed new rules governing fracking on public lands. This requires companies to get approval before they apply the technique, and requires that they report on the chemicals being used and the treatment of flowback waters. However the reporting is done after the fact, departing from the language in an earlier draft of the regulations.

<http://www.reuters.com/article/2012/05/04/us-usa-fracking-regulations-idUSTRE84315N20120504>

The BLM proposes to revise its hydraulic fracturing regulations, found at 43 CFR 3162.3-2, and adding a new section 3162.3-3. Existing section 3162.3-3 would be retained and renumbered. As of November 2013, these sections do not appear to have been altered or refer to fracking.

<http://www.gpo.gov/fdsys/pkg/FR-2012-05-11/pdf/2012-11304.pdf>

Of particular note is a change of language, in which the term 'fresh water' has been replaced by 'usable water'. As an example, this improves protection of water that might be suitable for cattle, but not human consumption.

[III] COMPARISON BETWEEN STATES ON WELL COMPLETION AND FRACKING REGULATION

One of the best sites for reviewing and comparing state regulations concerning fracking and oil and gas dripping is provided by the Center for Energy Economics and Policy. The Center's website is at:

http://www.rff.org/centers/energy_economics_and_policy/Pages/Shale_Maps.aspx

They state "Experts in RFF's Center for Energy Economics and Policy are analyzing regulations and surveying regulators in the 31 states in the continental United States that have significant shale gas reserves or where industry has shown interest in shale gas development. The maps in this project show the preliminary results of these efforts for approximately 20 important regulatory elements in each state. As relevant regulations or statutes are adopted or passed, or other new information becomes available, the maps will be updated accordingly. A final report that includes all updated maps and additional analysis will be released in fall 2012."

They also list categories of regulation that have been independently broken down into a state-by state analysis These are:

Site Development and Preparation, with maps showing regulations regarding pre-drilling water well testing, water withdrawals, setback restrictions from residential and other buildings, and setback restrictions from municipal and other water sources.

Well Drilling and Production, with maps showing regulations regarding the number of natural gas wells and shale gas production, various casing and cementing regulations, venting and flaring restrictions, and fracking fluid disclosure.

Flowback/Wastewater Storage and Disposal, with maps showing regulations regarding fluid storage options, freeboard requirements, pit liner requirements, flowback/wastewater transportation tracking rules, and rules for underground injection wells.

Well Plugging and Abandonment, with maps showing regulations regarding well idle time and temporary abandonment.

Well Inspection and Enforcement, with maps showing each state's number of wells per inspector, number of regulating state agencies, and accident reporting requirements.

Other, with maps showing state and local bans and moratoria, and state severance taxes.

In summary of California's relative standing in terms of regulation:

- California regulates the distance between wells and public streets, roads, or highways, but not buildings including residences. In some other states 200-500 ft. setbacks from buildings are required.
- Almost a third of states surveyed (9) have such setback restrictions from some body of water or water supply source; six of those have setback restrictions from municipal water supplies (measured from the well) ranging from 350 to 2,000 feet, with an average of 885 feet. "Other setback restrictions" refers to states that either have setback restrictions from entities other than municipal or other water sources or measure setbacks from equipment other than the wellhead. California does not have any such restriction.
- Pre-drilling water well testing establishes the baseline water quality for an area prior to drilling activity. The majority of states' regulations do not mention baseline water well testing, including California. Some states do require testing within a specific distance from the proposed gas well, given as a radius from the wellhead (the average radius is about ½ mile). Most of these states require operators to test two wells within the specified radius.
- Most of the states surveyed (21) require general permits for surface water and/or groundwater withdrawals. This includes California.

- In cementing wells, the type of cement to be used is addressed in the permit for each well, rather than being a universal standard. As casing depth is a critical issue concerning escape of liquids from a well, it is addressed in most states, but requirements are highly variable. California and Alabama, Louisiana, Mississippi, and South Dakota regulate the minimum number of feet of casing that must be used, but not the depth below the water table. Some states (14) set the regulation based on depth below the water table. Among these, the average required depth below the water table is about 65 feet, with a range of 30 to 500 feet. Ten of the states surveyed rely on well-specific determinations. In these instances, instead of a specific mandate, regulations often specify that “casing must be set and cemented to protect all freshwater bearing zones.” California and most other states require cementing be completed to the surface, and also requires cementing of secondary casing and production casing for 500 ft. above the production zone. This is more cement than most other states require for secondary casing, and average for production casing.
- Unlike most states, California regulations do not address either venting or flaring from wells.
- Fracking fluid disclosure is required in 13 states, unregulated in 9 states, but California and Utah were considered “unable to classify” in the study. All states with chemical disclosure requirements provide trade secret exemptions for chemicals considered “confidential business information.” Wyoming requires prior approval for use of benzene, toluene, ethylbenzene, and xylene (BTEX) compounds.

[III] REGULATION FROM OTHER CALIFORNIA COUNTIES

Santa Barbara County

The county has created an ordinance on fracking. Santa Barbara County decided in December 2011 to use the county's Land Use Development Code and Coastal Zoning Ordinance that will require (a) Oil producers in the inland part of Santa Barbara County who want to conduct hydraulic fracturing on any well must get an oil drilling production plan from the Santa Barbara County Planning Commission, and (b) requires a new filing procedure within a business plan when hazardous chemical are used, with the plan being filed before any hazardous chemical go on-site.

The changes are in sections 35.52.040, 35.52.050, and 35.110.020 of the Code. However, as of this writing, the documents have not been updated on the web. The URL is:

<http://www.sbcountyplanning.org/pdf/forms/LUDC/County%20LUDC%20December%202011.pdf>

However their changes to their Coastal Plan detail the changes. These can be seen in this Coastal Commission document.

<http://documents.coastal.ca.gov/reports/2012/1/Th13a-1-2012.pdf>

Monterey County

There is no change to regulation, but the Planning Commission was to hear an appeal against a fracking project by Venoco by a land trust. Venoco withdrew the project from review.

http://ftp.sourcewatch.org/index.php?title=California_and_fracking#Regulations

However an April 2013 judicial ruling against BLM and for the Sierra Club and Center for Biological Diversity. According to the Monterey Herald:

The decision follows a federal judge's April ruling that the BLM violated environmental law by auctioning off the rights to extract oil on 2,500 acres of prime public lands in South Monterey County without reviewing the impacts of the controversial fracking process. The plaintiffs subsequently sued to protect an additional 17,000 acres in Monterey, San Benito and Fresno counties.

Development of all of that acreage will almost certainly be halted during BLM's environmental assessment.

The land is part of the Monterey shale formation, 1,750 square miles running from inland Monterey County to Southern California and containing the majority of the nation's shale reserves — an estimated 15.4 billion gallons of oil.

Extracting the oil was considered cost-prohibitive until the development of hydraulic fracturing, which uses millions of gallons of water and chemicals to break the shale and extract the prize. With the fossil fuel, industry experts say, will come thousands of jobs.

Environmentalists say it will bring environmental degradation to land where cattle ranchers, wine grape growers and row crop farmers rely on tight water supplies. The area is also some of the state's most seismically active and part of the historic range of the endangered California condor

Source Monterey Herald:

http://www.montereyherald.com/localnews/ci_23788720/monterey-county-fracking-blm-orders-environmental-review

Santa Cruz County

The Santa Cruz Sentinel reported noted on September 10, 2013 that Santa Cruz County Board of Supervisors has put a 45 day moratorium on fracking that would probably be extended to a year.

Los Angeles County

Several LA County supervisors have proposed a ban on fracking, but as of November 2013 no ban has been enacted. However the City of Beverly Hills voted to ban

fracking within city limits (<http://www.huffingtonpost.com/tag/california-fracking/>)

[IV] STATE vs. LOCAL REGULATION ON FRACKING BEYOND CALIFORNIA

In view of the general lack of fracking-specific guidance from the Federal Government (see above), particularly because of the “Haliburton Loophole”, several states have developed legislation to specifically address fracking.

The following examples are given as they represent issues that could develop if city or county laws and ordinances conflict with state regulation. They also illustrate issues such as property right issues between gas lease holders and surface property owners, human rights vs. commercial rights, the power of the bigger government unit over the smaller, and the complexity of making regulation. We can see some state governments bending to the needs of the oil and gas industry, and others to the citizens impacted by the industry.

Pennsylvania and Takings

Pennsylvania is locked in a battle between the State and several municipalities after passage of Act 13. The state is encouraging development of the Marcellus Shale, partly because it needs the money from a high severance tax on the gas wells. The Act 13 action does put 60% of this money back into the districts where the gas is produced. Act 13 also removes all local control, including any local land use regulation which might hinder gas production.

However in March 2012, seven municipalities, which included the southwestern towns of Cecil, Peters, South Fayette, Mt. Pleasant and Robinson, two towns in the state’s southeast, Yardley and Nockamixon of Bucks County, as well as environmental activists from the Delaware Riverkeeper Network, and municipal officials representing themselves sued the PA DEP, the Public Utility Commission and Attorney General’s office adducing the restrictions the new law places on the local governments’ ability to zone and regulate drilling.

According to these municipalities—and others that joined the repeal—Act 13 conveys special rights and privileges to the oil and gas industry, in detriment of the rights of each municipality and their residents. They eventually won the appeal, but the state wants to go back to the state’s Supreme Court with new judges.

As of November 2013, the Governor's office appears to be taking punitive action against any township that has ordinances that might exert some control over fracking by refusing to pay them severance taxes that are owed.

<http://www.voxxi.com/fracking-regulations-pennsylvania/>

South Fayette enacted its ban, but a few months later Range Resources, a Texas based gas drilling corporation with an LLC in Canonsburg, PA, filed a legal challenge to overturn the South Fayette ordinance on the grounds that it violates the corporation's constitutional rights, particularly its 5th amendment protections under the U.S. Bill of Rights. Along with seeking civil rights protections for the corporation, the complaint also argues that the corporation is protected from local regulation of corporate actions by the State Legislature's Oil & Gas Act, and that even the State's MPC doesn't let municipalities zone so creatively as to make the rules about where the corporations can frack inconvenient for the beneficiaries of corporate profit. Local government prevailed in court.

http://www.huffingtonpost.com/2012/07/26/pennsylvania-act-13-natural-gas_n_1706822.html

In October 2013 an oil company and a landowner opened a challenge to South Fayette by requesting a permit

The **City of Pittsburgh** on November 16, 2010, adopted a Local Bill of Rights Ordinance that bans corporations from extracting gas anywhere within the City.

<http://gp-wa.us/index.php/resources/85-taking-back-our-democracy/91-the-pittsburg-anti-fracking-ordinance>

The Council Members decided not to surrender any part of the City to the frackers, arguing that all residents of the City have equal rights, and the Council Members had each sworn to protect the health, safety and welfare of all of the residents equally. Critics of the Ordinance said it is illegal and unconstitutional because it makes people's rights trump corporate privileges recognized by the courts, and it challenges state laws that preempt local law-making and everybody knows state laws are superior to local ones. This community rights ordinance has the temerity to recognize the right to local self-government, the rights of natural communities and ecosystems, the right to water, and that corporate privileges are subordinate to the fundamental rights of members of the community.

<http://www.celdf.org/the-real-frackasaurus-coloring-book>

The document then goes on to discuss the fundamental differences in the legal approach taken by South Fayette and Pittsburgh. The former tried to regulate fracking locations in conflict with the state's definition of legal locations, while the latter used a broad Human Rights approach. In the end 'takings' issues is likely to defeat South Fayette, but will be more difficult to apply to the outright ban on activity that Pittsburgh proposes on the basis of human rights.

New York

New York placed a moratorium on drilling permits while it prepared a Generic Environmental Impact Assessment. This can be seen at: <http://www.dec.ny.gov/energy/75370.html> and the regulations on the industry can be <http://www.dec.ny.gov/regulations/77353.html>

In the end this means that drilling will be allowed, subject to regulation. Partly as a result, a number of local communities developed their own fracking regulations and bans. Analysis of these local actions by The Community Environmental Defense Fund predict that most will be overturned on both 'takings' grounds and the concept that state regulation trumps local regulation. See:

<http://www.celdf.org/non-rights-based-fracking-ordinances-ny>

The article points out that local government has had victories in lower courts that are unlikely to stand up in either higher state courts or federal courts.

An example of possibly temporary victory is **Dryden**, Tomkins County, N.Y. where a judge ruled in favor of Dryden when it banned gas drilling in city limits.

In a different case that went in favor of the local jurisdiction, a gas lease holder within the boundaries of the town of **Middlefield** sued the town on the basis of state law trumping local law. The judge ruled in favor of the town and against the lease holder.

Source-Wall Street Journal:

<http://online.wsj.com/article/AP00bb602563ec413caa01bbf8a9da6b61.html#articleTabs%3Darticle>

However, as of October 2013, the oil industry has taken both the Dryden and Middlefield cases to New York's highest court, the Court of Appeals. The cases hinge on the legality of zoning restrictions vs. property rights and will not be decided until 2014

Source New York Times: http://www.nytimes.com/2013/10/24/nyregion/court-case-on-fracking-ban-in-dryden-ny-may-have-wide-implications.html?_r=0

Texas

The National Law Review reports: <http://www.natlawreview.com/article/texas-commission-requires-public-disclosure-fracking-chemicals>

The Railroad Commission of Texas now requires the disclosure of chemicals used for hydraulic fracturing (fracking) of oil and natural gas deposits. The disclosure rule, adopted on December 13, 2011, and codified at Rule 3.29 of Title 16 of the Texas Administrative Code, implements fracking disclosure legislation that the state enacted

earlier in 2011. Arkansas, Colorado, Louisiana, Montana, Michigan, Pennsylvania and Wyoming likewise regulate fracking through legislation or regulation. Given the increasing use of fracking techniques worldwide and heightened public scrutiny of industry practices, an increasing number of states are expected to adopt comparable laws and regulations.

The rule applies to fracking treatments of wells in Texas for which the Railroad Commission has issued an initial drilling permit on or after February 1, 2012. The rule defines “fracking treatment” as the stimulation of a well by applying fracking fluid under pressure to create fractures in a target geologic formation in order to enhance oil and natural gas migration and production. The rule requires the supplier (the entity who provides additives for use in fracking treatments) or the service company (the entity that performs fracking treatments) to provide the well operator (the person responsible for the physical operation and control of a well) with the identity of each chemical ingredient intentionally added to the fracking fluid within 15 days of completing fracking treatments.

The rule also imposes new requirements on well operators. On or before the date a well completion report is submitted to the Railroad Commission, the operator must complete a Chemical Disclosure Registry form and upload it on the Chemical Disclosure Registry, known as FracFocus, a publicly accessible national fracking chemical registry website. This form includes information about the chemicals and volume of water used in a fracking treatment, as well as other well-related information. Not required to be disclosed are chemicals: (1) not disclosed to the supplier, service company or operator; (2) not intentionally added to the fracking treatment; (3) that occur incidentally or are otherwise unintentionally present; and (4) eligible for trade secret protection.

A supplier, service company or operator is generally not required to publicly disclose trade secrets unless the Texas Attorney General or a court determines that the information is not entitled to such protection. If an entity withholds information about a chemical ingredient, it must still disclose specific information to the Commission. Only certain individuals may challenge a claim of trade secret protection, and if any health professional or emergency responder is given trade secret information, that person must keep it confidential, with limited exceptions for diagnostic or treatment purposes.

Violations of the rule may subject a person to monetary penalty and/or other penalties or other sanctions and/or lead to revocation of a well’s certificate of compliance (a certificate from the Railroad Commission stating that the well operator has complied with applicable rules).

The Peculiar Case of **Colleyville**, Texas- First Chemicals, Then Earthquakes.

A citizens group in Colleyville has, through independent testing, shown that emissions coming from fracked wells contained “...twenty-six chemicals, also showed

carbon disulfide, a neurotoxin at twice the state level for short-term exposure. Benzene, a known carcinogen, and Naphthalene, a suspected carcinogen, were both over state long-term exposure levels by more than 9 times and more than 7 times, respectively. Carbonyl sulfide, dimethyl disulfide and Pyridine were all detected above safe limits for long-term exposure.” The City says it is “steam” even though it has a regulation “No person shall allow, cause or permit gases to be vented into the atmosphere or to be burned by open flame.” Later testing showed all chemicals were within acceptable levels. A similar charge of chemical pollution in Southlake, Texas was also found to be groundless after testing was done.

http://www.earthworksaction.org/media/detail/independent_test_results_show_fracking_flowback_emissions_are_dangerous_tox

A lawsuit has now been filed by landowners on the basis of damage to homes and real estate values. This is based in purported damage to homes caused by earthquakes that could have been caused by fluid injection. The Cleburne Times-Review stated on August 1, 2013:

A recent study conducted by England's Durham University and published in the journal Science has confirmed that seismic activity, and possibly major earthquakes, can be triggered by injection wells, according to a blog posted July 24 on the Christian Science Monitor website by guest blogger Llewellyn King.

King said that it is not the fracking that causes seismic activity but rather the method in which the brine used in fracking is disposed of and that fracking is banned in the United Kingdom and much of Europe.

According to an Oct. 2, 2012, article posted on the Mother Nature Network website, www.mnn.com, Cliff Frohlich, associate director and senior research scientist with the University of Texas at Austin's Institute for Geophysics, said a magnitude 3 earthquake had never been recorded in the Dallas area before Halloween 2008. United States Geological Survey data indicates that since then, the area has had at least one earthquake each year at or above a magnitude 3, except for 2010.

At least nine small earthquakes struck Johnson County between June 5 and July 13, 2012. A 2.7 quake hit March 10, centered about four miles northeast of Godley. It was the fourth small earthquake in North Texas since Feb. 24.

Cooke said Wednesday that the plaintiffs in the lawsuit filed Tuesday have “all had significant structural damage” to their property because of the earthquakes, and they believe the earthquakes are a direct result of fracking in the area.

“We believe the damage from these earthquakes is a lot more pervasive than just these two families. We think other folks may have suffered some damage, too,” Cooke said. “There are people have had damage to their property that they just thought was due to shifting soil and the drought. Those things are certainly a factor, but we think the fracking process plays a much bigger role than people have realized.

- See more at:

<http://www.cleburnetimesreview.com/local/x1664875143/Property-owners-sue-for-fracking-damages#sthash.TiAQD1gi.dpuf>

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Dallas is considering regulation of fracking within city limits, and such things as minimum setbacks and drilling in floodplains. The issue is highly contentious.

http://blogs.dallasobserver.com/unfairpark/2012/08/dueling_presentations_as_the_c.php

Colorado

The State of Colorado is actually weakening its regulations to accommodate fracking. The Sierra Club has mounted the proposed changes at:

<http://www.sierraclub.org/naturalgas/rulemaking/documents/CO.OGCC.Hydrofrack.Disc.ProposedAmndmnts.11-10-11.pdf>

Older rules required the reporting of all downhole chemicals through a log kept at the well, but the new regulations exempt fracking fluids from being reported. They follow the “Haliburton Loophole” and require reporting of fuels stored on site, as these are still subject to Safe Drinking Water Act regulation.

Colorado’s amended Drilling Regulations make no other mention of fracking and can be seen with the amendments at:

<http://www.sierraclub.org/naturalgas/rulemaking/documents/Colorado.Drilling.Rregs.pdf>

Loveland and Lafayette, CO

Citizen groups have mounted petitions to ban fracking in the cities of Loveland and Lafayette. As of November 2013 the Council is considering a two year moratorium on drilling in the town and is also considering a ban on the city selling water to fracking projects outside of town.

http://www.denverpost.com/ci_23628179/fracking-limits-sought-loveland-lafayette?source=pkg

<http://www.greeleytribune.com/news/8020182-113/loveland-vote-appeal-fracking>

Longmont, CO

Longmont is being sued over its fracking regulations The State of Colorado has joined the Colorado Oil and Gas Association in suing on the grounds that the state regulations trump the local ordinance , which bans fracking in residential areas. The ban was passed by a 60% majority in a ballot initiative. This is another battle in the legal war to determine the power of home-rule municipalities to regulate shale gas development. Longmont considers that it has a right to ban heavy industrial use in residential neighborhoods. As of November 2013 this case was still determining venue.

http://www.timescall.com/news/longmont-local-news/ci_21149717/state-sue-longmont-over-new-oil-and-gas

http://www.denverpost.com/ci_23643679/state-joins-suit-knock-down-longmont-fracking-ban

Wyoming

The town of Pavillion has been the subject of resident claims that their drinking water has been contaminated by fracking. EPA began studies and accepted comments, but claims that their findings are inconclusive and have withdrawn from the project. A draft report was issued:

<http://www.gpo.gov/fdsys/pkg/FR-2013-09-11/pdf/2013-22114.pdf>

This has the claimed justification that the State of Wyoming has a sufficiently rigorous program to complete the study. Funding for the state's work is paid partly by the owner of the gas field that is under investigation.

Pro-Publica has suggested that this is one of several 'pull-backs' by the EPA on fracking investigations and are suggesting the possibility of strong political pressures at play.

<http://www.propublica.org/article/epas-abandoned-wyoming-fracking-study-one-retreat-of-many>

Michigan

Michigan is proposing the following rules on fracking:

- Permit applicants to use the state's water-withdrawal assessment [tool](#). Withdrawals would not be approved if the tool or a site review indicates the withdrawal may harm rivers or streams.
- Installation of a monitor well and reporting of water levels if there is a water-supply well within 1,320 feet, or a quarter-mile, of a proposed water withdrawal.
- Oil and gas operators to collect water samples from up to 10 water-supply wells within 1,320 feet of gas and oil wells within six months before drilling begins.

- Operators to identify whether high-fluid-volume fracturing is expected to be utilized for new wells. Such a project has been approved in Conway Township, north of Fowlerville.
- Separate applications for high-volume hydraulic fracturing on existing wells.
- DEQ notification at least 48 hours before projects begin.
- Monitoring and reporting of fluid pressures and volumes for high-volume fracking projects.
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Other Places, Other Problems- Useful Tracking Sites

FracFocus maintains a data base of state regulations and also the chemicals used: <http://fracfocus.org/> This site has been proposed as a repository for California's fracking information filed under the requirements of SB 4.

The Sierra Club maintains a comprehensive site that links to state sources on fracking regulation and rule making. <http://www.sierraclub.org/naturalgas/rulemaking/>

OMB Watch has been tracking fracking issues, concentrating on local municipal actions. <http://www.omwatch.org>

The Community Environmental Legal Defense Fund has a complex of web pages that chart local political and regulatory action. <http://www.celdf.org/>