

Fracking, Federalism and Federal Environmental Law: Is the Oil & Gas Industry Exempt From Major Laws?

Energy Advisory Board Garfield County



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Federal Role in Oil and Gas



“Oil and gas industry exempt from many major environmental laws”

“Loopholes for Polluters” Earthworks™ OGAP

- What federal environmental laws apply to O&G?
- What are the exemptions?
- Where are federal regulations headed?
- Where do state laws fit in?

“I realize that the regulatory framework for fracking is still in the ‘Wild West’ phase where almost anything goes”



Representative Jared Polis

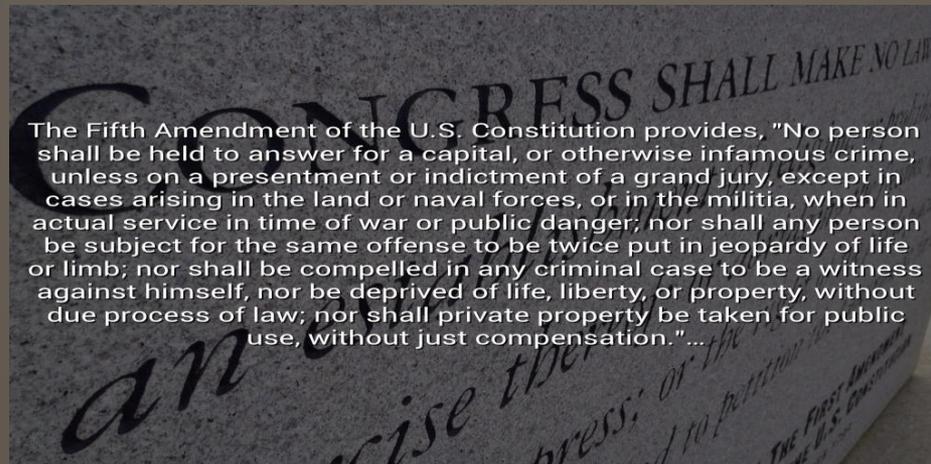
Roadmap: Federal Role in Oil and Gas Regulation



- Federalism Relationship: federal government/states
 - Constitution
- Federal role in oil and gas regulation
 - All lands – environmental laws
 - Federal lands – land use planning/leasing/NEPA/other lands
- State role in major environmental laws

Federalism and Oil and Gas

- US Constitution: Private Ownership of Property
 - In U.S. minerals can be held as private property: unique
- Fifth Amendment:
 - “No person shall . . . be deprived of life, liberty, or property, without due process of law, nor shall private property be taken for public use, without just compensation.”



Federalism and Oil and Gas

- U.S. Constitution: Limited government
 - **Tenth Amendment:** “The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.”



Federalism and Oil and Gas

10th Amendment confers
Police Power to States:
“Health, Safety and Welfare”
of Community



- Zoning, land use, fire, building codes, crime, liquor, gambling, discrimination, parking
- Exceeds police power: unconstitutional deprivation of life, liberty, property

Federalism and Oil and Gas



U.S. Constitution:

Supremacy of Federal Law

- **Supremacy Clause:** “This Constitution, and the Laws of the United States . . . shall be the supreme Law of the Land . . . any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.”

Federalism and Oil and Gas

➤ Cooperative Federalism

- Overlapping, interdependent regulation
- Federal standards and oversight, but state primacy in environmental regulation
- Ideal: cooperation among state, local, federal governments
- Reality: public confusion and agency turf battles

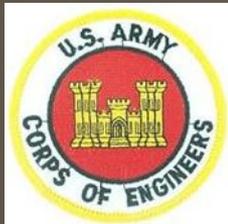


Federal Role in Oil and Gas

All Lands: Federal environmental law

Federal Regulatory Agencies:

- U.S. Army Corps of Engineers
- U.S. Environmental Protection Agency
- Advisory Council on Historic Preservation
- U.S. Fish and Wildlife Service



Federal Regulation of Fracking

- **Historic: Not much federal regulation**
 - States exercise authority over O&G operations
 - State Oil and Gas Conservation Commissions
 - Fracking/well stimulations, not specifically regulated
- **Current: Expanding federal and state regulation**



Safe Drinking Water Act “Fracking Loophole”

SDWA: Protect the quality of *drinking* water

- Endangerment standard
- Underground Injection Control (“UIC”) Program
 - No underground injections without UIC permit
 - Six classes of UIC wells
 - Class II – oil & gas disposal/enhanced recovery wells
 - UIC Program may be delegated by EPA to state
- Frack issue – 1995 EPA: SDWA does not regulate “*temporary*” frack injections for coalbed methane (“CBM”) development



Carol Browner
EPA Administrator
1993-2001

Safe Drinking Water Act Litigation

- “Leaders in Environmental Action for the Future” (“LEAF”) challenged EPA in Alabama
 - Court (11th Cir. 1997): EPA lost. Fracking is “underground injection” whether or not temporary.
 - Alabama/EPA resisted: fracking is not covered in SDWA UIC program, but as secondary recovery.
 - Second challenge: EPA won. Approved EPA’s interpretation (11th Cir. 2001)



Safe Drinking Water Act Litigation

Result of LEAF

- EPA study of CBM fracking (2004): “little to no threat;” diesel use a concern
- State Oil and Gas Conservation Commissions continue to regulate Class II/fracking
- **EPACT 2005:** SDWA amended to exclude “the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations” (aka “Fracking /Haliburton Loophole”)
 - 2014: EPA released Permitting Guidance for Oil and Gas Hydraulic Fracturing Activities Using Diesel Fuels



Carol Browner, Assistant to the President for Energy and Climate Change



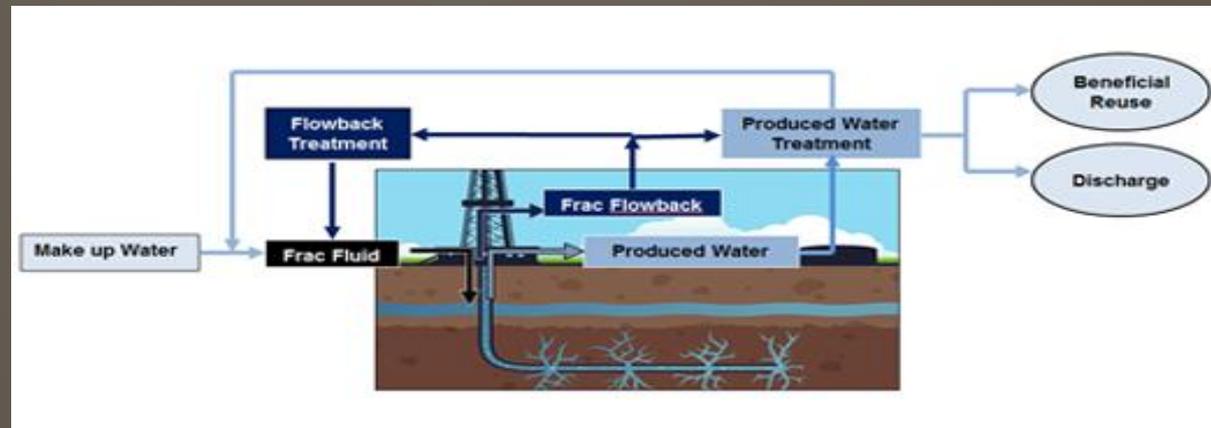
GW Bush signs EPACT 2005



Safe Drinking Water Act

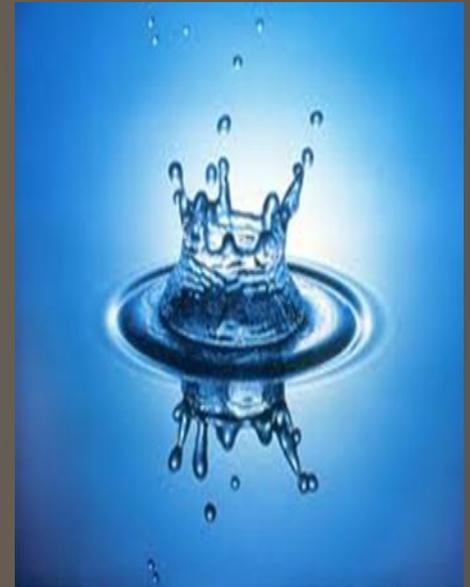
Disposal of Oil and Gas Waste Water

- Flowback water – fracking liquids returning to surface
- Produced water – underground water produced with oil and gas
 - Both high in total dissolved solids (“TDS”
- Treatment/Recycle/Reuse
- Disposal



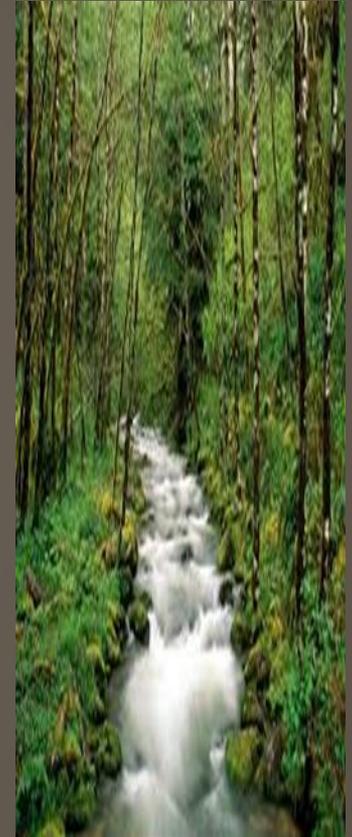
Safe Drinking Water Act

- Disposal of O&G produced/flowback water by injection wells regulated by SDWA
 - UIC permit required
 - Must not threaten drinking water aquifers
 - Demonstration of adequacy of cement/casing
 - Pass an integrity test – initially and every 5 years
 - Monitoring
- EPA retains SDWA “imminent and substantial endangerment” enforcement authority
- Current issue – water disposal and seismic “earthquake” events



Clean Water Act (“CWA”)

- **CWA prohibits “point source . . . discharge . . . of pollutants [into] waters of U.S.”**
 - “Pollutants” includes discharge of *unaltered* groundwater into surface water by CBM operators. (9th Cir. 2009)
- **National Pollutant Discharge Elimination System (“NPDES”) permits to meet water quality standards**
 - States with primacy implement CWA
- **EPA industry-specific, technology-based treatment standards Effluent Limitation Guidelines (“ELG”)**



Clean Water Act



- **Existing EPA ELGs for O&G**
 - No produced water direct discharge to surface water
 - SDWA Injections
 - Western U.S. – produced water for use by wildlife/agriculture if CWA standards are met
- **ELG underway for O&G**
 - Shale flowback pretreatment standards (2014)
 - Draft: April 2014
 - Final: December 2015
- **U.S. DOE Task Force: full disclosure of frack fluid (2014)**

Clean Water Act

- **Stormwater Exemption: 1987 O&G generally exempt from EPA stormwater (runoff) regulation**
 - 2005 EPACT expanded exemption to cover O&G construction sites
 - NPDES permit required for contaminated stormwater
 - States enact stormwater regulation for O&G
- **Spill Prevention Control and Countermeasure (“SPCC”) Rule:**
 - Prevent/report spills near water bodies
 - EPA directly implements SPCC



Clean Water Act

- **CWA § 404 “Wetlands”**

- U.S. Army Corps of Engineers issue Permits
EPA “veto” authority

- **CWA 404 Permits to impact Wetlands**

- General Permits
- Project Specific Permits

- **Upcoming: EPA redefines/expands “waters of the U.S.” for CWA jurisdiction**

- Comments close October 2014



Clean Air Act (“CAA”)

- **Regulates air pollution from mobile (cars/trucks) and stationary sources**
- **EPA sets National Ambient Air Quality Standards (“NAAQS”) for 6 criteria air pollutants**
 - States develop State Implementation Plans (“SIP”) to meet standards in permitting/policy decisions
- **EPA regulates Hazardous Air Pollutants (“HAP”)**
- **EPA requires reporting of Greenhouse Gases (“GHG”)**



Clean Air Act

- 2008 EPA O&G diesel engine rule
 - Reduce NO_x 95%/reduce particulates 90%
- 2012 EPA rule to regulate emissions and creation of ozone during gas well completions
 - New Source Performance Standards/National Emission Standards for Hazardous Air Pollutants (“NSPS/NESHAP”) for O&G Industry
 - Focus: natural gas wells and reduction of VOCs
 - Green completions
 - Processing Plant Compressor Controls
 - Dehydrator controls



Clean Air Act

Fracking and Methane

- Issue: How much methane is leaked during development?
 - EPA → 3% of production/accounts for 5% of GHG emissions
- Methane measurement argument:
 - University of Texas, industry and EDF Study says 97% lower than EPA emission estimates
 - EPA acknowledged inventory overestimated methane discharges
 - July 2014 NAS harmonization study says natural gas emits 50% less GHGs than coal over life – more study of methane
- 2011 GHG reporting: O&G reporting to EPA to get more precise (3/2014): 6 key greenhouse gases must be separately reported



Clean Air Act

Fracking and Methane

- NSPS/NESHAP Rules – co-benefit of 25% methane reduction
- Colorado – first to directly regulate O&G methane emissions (2/2014)
- Future Issues:
 - White House Climate Action Plan: Reduce Methane Emissions; BLM vent/flare regulation (2014) (federal wells only); DOE; EPA's methane white papers to lead to regulations by end of 2016.
 - O&G Minor Sources/"Aggregation": Major Sources and more regulation

Resource Conservation and Recovery Act (“RCRA”)

O&G and Hazardous Waste

- **RCRA – “cradle to grave” EPA/state regulation of “hazardous and solid waste”**
 - 1980 Bensten (D-TX) amendment *excluded* O&G drilling fluids, produced water and other E&P wastes from RCRA subtitle C (hazardous) unless EPA found a danger.
 - EPA study (1988) not necessary – adequate state/federal regulation
 - EPA guidance (2002) – unused frack fluids may be subject if hazardous
 - 2010 NRDC petition to EPA to reconsider 1988 study and exemption. Under EPA review
 - E & P waste subject to state waste management law/SDWA

Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”)

“SuperFund”

➤ **CERCLA –**

- Created tax on chemical and O & G industries;
- Broad federal authority to respond to releases of hazardous substances;
- Exemptions for O & G – “Potentially Responsible Parties (“PRPs”)”
- “Hazardous substances” – O&G must report release of “hazardous” substances but petroleum products are excluded: crude oil, natural gas liquids, natural gas
- Fracking fluid with non-petroleum, hazardous substances subject to CERCLA



Emergency Planning and Community Right-to-Know Act (“EPCRA”)

- **EPCRA: individuals/communities have access to information on storage/release of hazardous chemicals**
- **O&G requirements/exemptions:**
 - Release notification – 24-hour spill reporting to state/local committees
 - Storage reporting – annual inventory to state and local
 - O&G E&P sites exempt from Toxic Release Inventory reporting
 - Underway: November 2012 Petition to EPA to add oil & gas facilities to TRI industry groups



Toxic Substances Control Act ("TSCA")

- **TSCA: EPA regulates manufacture, processing, use, distribution and disposal of toxic chemical substances**
 - **2011: EarthJustice petition to EPA to issue TSCA testing/reporting rules for oil and gas.**
 - **2013: EPA issues response:**
 - No to testing under TSCA §4, but
 - **2014: EPA Rulemaking for frack fluid disclosure**
 - ANPR for comments on whether TSCA should regulate fracking chemicals
 - New reporting requirements for well service/operators
 - Comment period extended to September 2014



EPA Fracking and Drinking Water Study

- 2009 Congress – EPA to study fracking/drinking water
- EPA focus:
 - Water withdrawal for fracking
 - Discharge of frack fluid/flowback
 - Frack injections
 - Disposal and treatment of frack fluid
- Stakeholder/peer-reviewed process
- Interim status of research projects (12/2012)
- Completed EPA study (expected 2016)



Maurice Hinchey, U.S.
Rep., NY

U.S. GAO Report GAO-12-874 (Sept. 2012): States Fill the Gap

Table 4: Key Federal Environmental and Public Health Requirements and State Requirements for Oil and Gas Production Wells

Area of Regulation	EPA environmental and public health requirements	Requirements of six states reviewed
Siting and site preparation		
Identification or testing of water wells prior to drilling of production wells	No	1 of 6 (Wyoming) [identification alone] 2 of 6 (Colorado, Ohio) [identification and testing]
Required setbacks from water sources	No	5 of 6 (Colorado, North Dakota, Pennsylvania, Ohio, Wyoming)
Stormwater permitting	Effectively no	4 of 6 (Colorado, North Dakota, Pennsylvania, Wyoming)
Drilling, casing, and cementing		
Requirements relating to cementing/casing plans	No	6 of 6
Prescribed placement of surface casing relative to groundwater zones	No	6 of 6
Hydraulic fracturing		
Requirements to disclose information on fracturing fluids	No	6 of 6
Well plugging		
Requirements for notification, plugging plan or method, witnessing, and reporting	No	6 of 6
Programs to plug wells that are not properly plugged and have been abandoned	No	6 of 6
Site reclamation		
Requirements for backfilling, regrading, recontouring, and alleviating compaction of soil	No	6 of 6
Revegetation requirements	No	5 of 6 (Colorado, North Dakota, Ohio, Pennsylvania, Wyoming)
Waste management		
Pit lining requirements	No	5 of 6 (Colorado, North Dakota, Pennsylvania, Texas, Wyoming)
Options for waste disposal:	Yes (SDWA)	5 states have their own requirements (Colorado, North Dakota, Ohio, Texas, Wyoming); EPA implements the program in Pennsylvania
Underground injection		
Direct Discharge to surface water	Yes (CWA - certain discharges prohibited, others subject to conditions and permit)	Surface discharge are allowed in certain cases in 3 western states (Colorado, Texas, and Wyoming)
Requirements for discharge to POTWs or Centralized Waste Treatment (CWT)	Pretreatment standards for shale gas wastewater under development (CWA)	Disposal at POTWs is an option in two States (Ohio, Pennsylvania) Disposal at CWT facilities is an option in 3 States (Colorado, Pennsylvania, Wyoming)
Recycling or other reuse	Yes (CWA - certain produced water Discharges)	6 of 6 states allow recycling or other reuse
Solid waste disposal	Effectively no	Yes
Hazardous waste disposal	Effectively no	No
Managing air emissions		
Requirements for criteria pollutants	Certain CAA provisions apply	5 of 6 states have permitting or registration programs (Colorado, North Dakota, Ohio, Texas, Wyoming)
Requirements for hazardous air pollutants	Certain CAA provisions apply	State permitting or registration programs may address hazardous air pollutants
Requirements related to hydrogen sulfide gas	No specific requirements but CAA general Duty clause requires prevention of Accidental releases	6 of 6
Requirements related to flaring	Under new NSPS regulation, most hydraulically fractured gas wells must do green completions.	6 of 6

Colorado Example

Regulation of O&G Increases

- **2008** Gov. Ritter major re-write of O&G rules; COGCC membership changes to add environmental and other non-industry members; new wildlife and surface protections
- **2011** Gov. Hickenlooper first frack disclosure law
- **2012** State & industry voluntary baseline water testing
- **2013** Baseline water testing regulation; new 500' setback
- **2014** HB 1356 O&G fines increased by 1500 percent
- **8/2014** Hickenlooper/Polis “deal” for setback commission



Colorado Example

FRACK Regulation

- **SDWA frack exemption:** Colorado Oil and Gas Conservation Commission (COGCC) regulates (Rules 205, 317, 341, 608, 903, 904 and 906)
- **Fracking disclosure:** COGCC requires disclosure
- **No EPA drilling, casing & cementing requirement:** COGCC requires
- **RCRA solid waste disposal exemption:** COGCC requires
- **CAA no federal regulation of methane:** COGCC regulation No. 7
- **CWA Federal stormwater exemption:** Colorado stormwater permitting

<http://cogcc.state.co.us> – Hydraulic Fracturing Information

Federal Regulation: Federal Lands

- Land use plans – Forest Plans/BLM Resource Management Plans
- Leasing
- Exploratory Drilling
- Development
 - Each stage requires NEPA (public involvement) and compliance with environmental laws
 - *Plus* federal wildlife and cultural resource protection laws ESA; MBTA; BGEPA; NHPA; ARPA; NAGPRA; AIRFA
 - NEPA “Exemptions” – EPACT 2005 “Categorical Exemptions” for certain wells



Federal Regulation: Federal Lands

Current BLM Issues

- Master Leasing Plans – Post RMP/pre-leasing planning CO-BLM – no leasing during MLP process
- Inspection/Enforcement
 - 4 in 10 High Risk Wells not inspected
 - July 2014 – BLM wants an I & E Fee
- Regulations:
 - Frack Regulation – End of 2014
 - Venting/Flaring of Methane - 2014
- Sage – grouse RMP Amendments
 - Expanding areas of no leasing and restrictions on drill locations



Federalism and Oil and Gas Regulation

➤ What is the role of local government?

- Cooperating agency in federal land use planning/NEPA
- EPCRA spill information
- Work with state agencies
- Local land use plan

➤ When do state, local plans and regulations go too far?

- If it is “impossible to comply with both [local], state and federal laws . . . or where the [local] law stands as an obstacle to the . . . objectives of Congress.” U.S. Supreme Court (1984)
- *Colo. Oil & Gas Assoc. v. City of Longmont (July 24, 2014)*
 - COGCC does regulate Fracking
 - Local ban in *operational conflict* with state law



What is at Stake?

Fracking and Economic Renewal

“The discovery and development of North American shale resources has the potential to be the most remarkable source of economic growth and prosperity that any of us are likely to encounter in our life times.”

John Surma, US Steel
Testimony to Congress
March 2012

“Natural gas will create 600,000 new jobs by the end of the decade.”

President Obama, 2012
State of the Union

Domestic job growth from fracking to grow over 30% by 2015 with \$120 billion impact to economy

What is at Stake?

Fracking and U.S. Energy Security

2020

U.S. largest oil producer
in the world

Energy Information Agency

U.S. Energy Self-Sufficiency
“Dramatic reversal of trend seen
in most energy-importing
countries”

International Energy Agency

2017

U.S. will produce more oil than
Saudi Arabia

What is at Stake?

Fracking's Geopolitical Impact

- **Case Study: Russia's natural gas weapon**
 - **Crimea** - "Moscow Raises Pressure on Kiev with Gas Threat," *Wall Street Journal* (March 15, 2014)
 - **E.U.** - "Putin is dealer, Germany is the Junkie," *The Local, German News* (March 4, 2014)
- **News:**
 - "Shale gas boom hands US potent geopolitical weapon" – *Financial Times* (March 7, 2014)
 - "The U.S. Does Have a Weapon Against Putin: It's Energy" – *Wall Street Journal* (March 4, 2014)
 - "Natural Gas as a Diplomatic Tool" – *The New York Times* (March 7, 2014)

What is at Stake?

Natural Gas as Bridge Fuel

- Renewable energy growth significant
- But decades for total/significant replacement of fossil fuel
- Why? World-wide growth in energy demand.



What is at Stake?

Fracking and Clean Energy/GHG

“In the United States, GHG emissions have dropped off nearly 5 million tons in 5 years, more than any other country examined.”

International Energy Agency (2012)



2012 = lowest emissions of SO² and NO_x in 20 years
2012 = lowest CO² emissions since 1994

Energy Information Agency (2013)

Obama 2014 State of the Union

- “Natural gas, if extracted safely, it’s the bridge fuel that can power our economy with less of the carbon pollution that causes climate change.”
- “My administration will keep working with the industry to sustain production and job growth while strengthening protection of our air, our water, and our communities.”



Conclusion



- **Oil and gas exemptions from major environmental laws**
 - Less than advertised
 - State law, particularly in Colorado, fills the gap
 - Environmental laws governing oil & gas are becoming more, not less stringent
- **The President's balancing act: "sustain production/jobs" and "strengthen" regulation**
 - How "clean" do we go? What's the health/environmental/economic trade-off?

Know the Issues

GOVERNMENT

* Colorado Oil and Gas Conservation Commission

www.cogcc.state.co.us/Announcements/Hot_Topics/Hydraulic_Fracturing/Hydra_Frac_topics.html

* Environmental Protection Agency

www2.epa.gov/hydraulicfracturing

* “Exemption of Oil & Gas Exploration and Production Wastes from Federal Hazardous Waste Regulations

<http://www.epa.gov/osw/nonhaz/industrial/special/oil/oil-gas.pdf>

* Interstate Oil & Gas Compact Commission

<http://groundwork.iogcc.org/topics-index/hydraulic-fracturing>

* GAO “Unconventional Oil and Gas Development: Key Environmental and Public Health Requirements,” GAO-12-874 (Sept. 2012)

* GAO “Oil & Gas Updated Guidance, Increased Coordination and Comprehensive Data Could Improve BLM’s Management & Oversight,” GAO-14-238 (May 2014)

* Congressional Research Service

“An Overview of Unconventional Oil & Natural Gas: Resources and Federal Actions (January 2014)

“Hydraulic Fracturing. Selected Legal Issues” (Nov. 2013)

“Hydraulic Fracturing and Safe Drinking Water Act Issues (Ap. 2012)

UNIVERSITY

* University of Colorado, Center of the American West - “FrackingSENSE: Air, Water, Gas” AND FrackingSENSE 2.0 (2013-2014 lectures/podcasts)

<http://centerwest.org/events/airwatergas/>

* Colorado University Law School – “Intermountain Oil & Gas BMP Project: Federal Laws

http://oilandgasbmpps.org/laws/federal_law.php

INDUSTRY

* Colorado Oil and Gas Association

www.coga.org/index.php/Hydraulic%20Fracturing_policy#sthash.AeU9FJlw.dpbs

* IPAA, Energy in Depth

www.energyindepth.org/tag/hydraulic-fracturing/

NGO

* Environmental Defense Fund

www.edf.org/climate/what-is-fracing

* Resources for the Future – “Pathways to Dialogue: What the Experts Say about the Environmental Risks of Development

www.rff.org/centers/energy_economics_and_policy/Pages/Shale-Gas-Expert-Survey.aspx

Questions?

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