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THE OIL & GAS INDUSTRY: FAILING TO PROPERLY REGULATE HYDRAULIC FRACTURING & PLACING PROFITS OVER SAFETY

ELLERY GORDON*

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* J.D., May 2017, Pepperdine University School of Law.

ABSTRACT

This Note will evaluate the regulations and environmental implications surrounding hydraulic fracturing, or “fracking,” on state, federal, and Indian lands, focusing on the recent and still undecided case of Wyoming v. United States Dep’t of the Interior.² Additionally, it will address the regulatory gap in federal regulations governing hydraulic fracturing, the current issues the industry faces, and advocate for a more stringent set of regulations that ought to be applied on a uniform basis throughout the United States. In the aforementioned case, Wyoming, Colorado, North Dakota, Utah, and the Ute Indian Tribe brought suit against the Bureau of Land Management (BLM) for finalizing rules that govern hydraulic fracturing on federal and Indian lands. The court issued a preliminary injunction asserting that the BLM had no authority to promulgate rules regulating hydraulic fracturing. This Note argues that the court relied on incorrect information regarding the dangers of fracking, and despite the court being limited by case precedent and statutory interpretation, strict regulation must be enforced in the industry. If Congress does not pass laws regulating the practice of hydraulic fracturing, the industry will continue to pump toxic chemicals into the earth, causing earthquakes, negatively effecting air quality, contaminating fresh water supplies, and posing risks to public health and safety.

I. INTRODUCTION

The oil and gas industry receives *trillions* of dollars in subsidies despite the evidence of its harmful effects on the environment.³ The natural resource recovery techniques being used in the industry spark debates concerning risks to our environment, health, and freshwater supply.⁴ Of particular note is hydraulic fracturing or “fracking.”⁵ Fracking is a process that fractures rock formations to ex-

² 136 F. Supp. 3d 1317 (D. Wyo. 2015), *vacated and remanded sub nom. Wyoming v. Sierra Club*, No. 15-8126, 2016 WL 3853806 (10th Cir. July 13, 2016).

³ See generally David Coady, Ian Parry, Louis Sears & Baoping Shang, *How Large Are Global Energy Subsidies* (Int’l Monetary Fund, Working Paper No. 15/105, 2015), <http://www.imf.org/external/pubs/ft/wp/2015/wp15105.pdf> (suggesting that ending oil industry entitlements alone would cut the number of deaths attributed to outdoor air pollution in half and save about 1.6 million human lives each year).

⁴ Yessenia Funes, *Two New Studies Emphasize the Health Risks of Fracking*, COLORLINES (Aug. 26, 2016, 11:45 AM), <https://www.colorlines.com/articles/two-new-studies-emphasize-health-risks-fracking>. See also *infra* Part II.B.

⁵ See *The Process of Hydraulic Fracturing*, U.S. ENVTL. PROT. AGENCY, <https://www.epa.gov/hydraulicfracturing/process-hydraulic-fracturing> (site last visited on Jan. 21, 2017). Hydraulic fracturing is the process of injecting a mixture of fresh water and chemicals for purposes of recovering oil and gas capable of being extracted from fissures in the source rock. *Id.*

tract underground resources such as oil, gas, and geothermal energy.⁶ When used for the recovery of oil or gas, the process stimulates the flow of tightly trapped resources in small pours of shale by injecting a mixture of propping material like “sand, ceramic pellets or other small incompressible particles,” which essentially hold open the shale to allow a free flow of resources back to the surface for recovery.⁷ Large amounts of this mixture are pumped at “high pressure down the wellbore and into the target rock formation.”⁸ In short, this process allows for efficient recovery of resources, but one important question remains—is it safe?

Fracking has been the cause for lively debate between lawmakers, state agencies, the oil industry, and environmental groups—particularly, the issue of whether and to what extent the process has damaged the environment and created health risks over the previous thirty years.⁹ Some commentators argue that high-pressure oil and gas well activity can create weaknesses in the subsurface rock, which incidentally creates a connection between the chemical-infused fracking water and freshwater aquifers.¹⁰ Mixing the chemicals used in fracking with underground sources of freshwater has been linked to cancer and a whole host of other deadly diseases.¹¹ One study published in the *Journal of Endocrinology* highlighted some of these negative health effects.¹² On August 25, 2016, University of Missouri professor, Susan C. Nagel, said “adverse developmental and reproductive health outcomes might be expected in humans and animals exposed to chemicals in regions with oil and gas drilling activity.”¹³ Professor Nagel concluded that exposure to chemicals released during fracking may have an adverse effect on fertility.¹⁴ These are just a few of the issues that are correlated with the process of fracking—the list goes on.¹⁵

⁶ *Id.*

⁷ *Id.*

⁸ *Id.*

⁹ See *infra* Part II.B. See also John Manfreda, *The Real History of Fracking*, OILPRICE.COM (Apr. 13, 2015, 4:10 PM), <http://oilprice.com/Energy/Crude-Oil/The-Real-History-Of-Fracking.html> (indicating modern day fracking started in the 1990s).

¹⁰ See generally Heather Cooley & Kristina Donnelly, *Hydraulic Fracturing and Water Resources: Separating the Frack from the Fiction*, PAC. INST. (June 2012), http://www2.pacinst.org/wp-content/uploads/2013/02/full_report35.pdf.

¹¹ See *infra* Part II.B.

¹² See Christopher D. Kassotis, et al., *Adverse Reproductive and Developmental Health Outcomes Following Prenatal Exposure to a Hydraulic Fracturing Chemical Mixture in Female C57B1/6 Mice*, 157 J. OF ENDOCRINOLOGY 3469 (2016), <http://press.endocrine.org/doi/10.1210/en.2016-1242>.

¹³ Jeff Sossamon, *Exposure to Chemicals released During Fracking May Harm Fertility*, U. OF MO. NEWS BUREAU (Aug. 25, 2016), <http://munews.missouri.edu/news-releases/2016/0825-exposure-to-chemicals-released-during-fracking-may-harm-fertility/>.

¹⁴ *Id.*

¹⁵ See *infra* Part II.B.

In the United States, fracking operations that do not utilize diesel fuel remain unregulated under federal law.¹⁶ Despite recent studies that demonstrate the negative effects on our health and environment in regions with oil and gas activity, the Safe Drinking Water Act (SDWA) and other relevant legal authorities exclude hydraulic fracturing from federal and uniform regulation.¹⁷ As long as the fracking method is not properly and consistently regulated in all fifty states, Americans have a right to be concerned. Furthermore, individuals should be afforded the opportunity to speak out against the deceptive and harmful practices the industry engages in on a daily basis. Put simply, harmful chemicals being pumped into the earth at high pressures near communities and fresh water reservoirs create health concerns and have the potential to create negative global effects.¹⁸ Something must be done.

With these concerns, what are the appropriate techniques for oil and gas recovery that will minimize environmental impact while remaining efficient? What are the true effects of fracking? Most importantly, how will the process be regulated? How is it currently being regulated? And is it enough?

Part II of this Note begins by addressing the background and origins of hydraulic fracturing regulation in the United States, including foundational case law and the current fracking exemption under the SDWA.¹⁹ Part III discusses the relevant statutes that the Bureau of Land Management (BLM) claims delegate authority to regulate fracking on federal lands, and provides an in-depth analysis of the Tenth Circuit case involving the BLM's proposed regulation.²⁰ Part IV discusses the political forces at play and the potential solutions.²¹ Part V concludes that Congress must uniformly regulate hydraulic fracturing on a national scale and prevent the industry from maximizing private profits and special interests at the expense of public health.²²

¹⁶ See The Energy Policy Act of 2005, Pub.L. No. 109-58, 119 Stat. 594 (2005) § 322 (codified at 42 U.S.C. § 300h(d)(1)(B)(ii)).

¹⁷ See *infra* Part II.B.

¹⁸ See generally Thomas H. Darrah, et al., *Noble gases identify the mechanisms of fugitive gas contamination in drinking-water wells overlying the Marcellus and Barnett Shales*, 111 PNAS 14076 (2014), <http://www.pnas.org/content/111/39/14076.full.pdf> (discussing how horizontal drilling and hydraulic fracturing have resulted in drinking-water contamination and negative environmental impacts due to faulty production casings and underground well failure in the Marcellus and Barnett Shales).

¹⁹ See *infra* Part II.

²⁰ See *infra* Part III.

²¹ See *infra* Part IV.

²² See *infra* Part V.

II. BACKGROUND INFORMATION & LAW

A. Protection of Water

1. Safe Drinking Water Act

In 1974, Congress enacted the Safe Drinking Water Act (SDWA), which gave the Environmental Protection Agency (EPA) the authority to establish federal standards for the maximum level of contaminants that may be present in a “public water system.”²³ Public water systems are defined as systems that transport “water for human consumption through pipes or other constructed conveyances.”²⁴ The purpose of the Act was to protect underground sources of drinking water (USDW), in turn providing protection to the public at large from harm by consuming contaminated water.²⁵ Within the Act, “contaminants” are defined as “any physical, chemical, biological, or radiological substance or matter in water.”²⁶ The Act requires that the EPA’s Administrator regulate any contaminant that may have an adverse effect on human health.²⁷ Additionally, the EPA is required to regulate “underground injection control” (UIC), which is defined as “the subsurface emplacement of fluids by well injection.”²⁸

If state standards are at least as stringent as the federal standards of safety regarding drinking water, they may obtain primary enforcement authority of UIC.²⁹ If states so choose, they can obtain this authority by creating and implementing a program that meets EPA requirements.³⁰ If a state does not meet the minimum EPA requirements or does not choose to adopt regulations for UIC under section 300h-1, that state must defer to the EPA and either adopt the EPA’s plan for implementation or lose its primary enforcement authority.³¹ Part C of the SDWA prohibits “any underground injection” without a permit and requires that a state’s program have “inspection, monitoring, recordkeeping, and reporting requirements” for underground injection.³² Accordingly, if states have the proper regulations in place, the EPA will allow them to monitor and control all forms of UIC—including hydraulic fracturing.³³ With that said, the regulation of fracking has a very unique history.

²³ Safe Drinking Water Act of 1974, 42 U.S.C. §§ 300f–300i (2006).

²⁴ *Id.* § 300f(4)(a).

²⁵ *Id.*

²⁶ *Id.* § 300f-6.

²⁷ *Id.* § 300f-1(b)

²⁸ *Id.* § 300h(d)(1).

²⁹ *Id.* § 300h-1(b)(1)(A)(i).

³⁰ *Id.*

³¹ *Id.* § 300h-1(c); § 300h-1(b)(3). The minimum requirements for a state UIC program can be found at 40 C.F.R. Part 145.

³² 42 U.S.C. § 300h(b)(1)(A) & (C).

³³ *Id.*

2. History of the EPA and Fracking

Interestingly, hydraulic fracturing was excluded from the meaning of underground injection control within the regulations set forth under the SDWA.³⁴ Initially, the Eleventh Circuit's decision in *Legal Environmental Assistance Found., Inc. v. U.S. E.P.A.*³⁵ (*LEAF*) included fracking in the definition of underground injection.

In *LEAF*, the Legal Environmental Assistance Foundation petitioned the EPA to revoke Alabama's UIC primary enforcement authority because of unregulated hydraulic fracturing activity that harmed underground water resources.³⁶ The EPA argued that hydraulic fracturing did not fall within the definition of "underground injection" because the wells being used for fracking were primarily used for gas production, which did not involve the underground emplacement of fluids.³⁷ The *LEAF* court decided against the EPA and included hydraulic fracturing within the meaning of the statute under the "*Chevron* doctrine," which is applied when an administrative agency attempts to interpret a statute to exercise authority.³⁸ The court in *Chevron, U.S.A., Inc. v. Natural Resources Defense Council, Inc.*,³⁹ proposed a two-part test. First, courts must ask whether "Congress has directly spoken to the precise question at issue."⁴⁰ Second, if the intent of Congress is clear, the court and agency must give effect to the statute's plain meaning.⁴¹ If it is determined that Congress has not spoken on the issue, the court does not impose its own interpretation; instead, the agency's interpretation of the statute must be a reasonable and "permissible construction of the statute."⁴² In applying the *Chevron* framework, the *LEAF* court asserted that it was clear Congress meant to regulate all UIC, including hydraulic fracturing.⁴³

Despite the court's clear and unambiguous ruling, the issue of fracking regulation was cleverly revived thereafter.⁴⁴ Before the court could revoke Alabama's primary enforcement authority for UIC and fracking, the state proposed

³⁴ See MARY TIEMANN & ADAM VANN, CONGRESSIONAL RESEARCH SERV., R41760, HYDRAULIC FRACTURING AND SAFE DRINKING WATER ACT REGULATORY ISSUES 6, n. 24 (2015), <https://www.fas.org/sgp/crs/misc/R41760.pdf> (discussing the exemption of fracking under the Safe Drinking Water Act). See also *infra* note 53.

³⁵ 118 F.3d 1467 (11th Cir. 1997).

³⁶ *Id.* at 1471 n.4. See also 42 U.S.C. § 300h(b)(1)(B) (2000) (requiring proof that "underground injection will not endanger drinking water sources" before the EPA may grant a permit to any state).

³⁷ *LEAF*, 118 F.3d at 1471.

³⁸ See Charles H. Koch, Jr., § 10:27. Review of amendment or repeal, 3 Admin. L. & Prac. § 10:27 (3d ed.).

³⁹ 467 U.S. 837, 842–43 (1984).

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.* at 843.

⁴³ *LEAF*, 118 F.3d 1467.

⁴⁴ *LEAF II*, 276 F.3d 1253, 1256 (11th Cir. 2001).

a revised program in 2001.⁴⁵ This revised program allowed Alabama to circumvent the issue by claiming intent to regulate hydraulic fracturing more strictly as a “Class II-like underground injection activity,” which fell within the ambit of the SDWA.⁴⁶ Moreover, under the Class II construction, section 1425 of the SDWA allowed for a much more lax standard for approval by the EPA.⁴⁷ So, although Section 1425 did not specifically include hydraulic fracturing, the EPA made efforts to classify fracking wells as “Class II-like underground injection activity.”⁴⁸ Despite this tactic, the Eleventh Circuit agreed with LEAF in that “Class II-like” UIC was not in line with the original intent of Congress.⁴⁹ Thus, the U.S. Court of Appeals for the Eleventh Circuit determined that fracturing to facilitate the collection of methane gas in Alabama constituted underground injection and required SDWA regulation.⁵⁰ Around the same time, Vice President Dick Cheney appointed a special governmental committee on energy policy designed to recommend that “Congress exempt hydraulic fracturing from the Safe Drinking Water Act.”⁵¹ This sequence of events eventually brought rise to the Energy Policy Act of 2005 (EPAAct), which created an exemption in the SDWA for fracking.⁵²

3. EPAAct of 2005

The EPAAct completely and unambiguously excluded hydraulic fracturing from the SDWA by amendment.⁵³ The Act addressed many energy resources, and was put in place to create jobs “with secure, affordable, and reliable energy.”⁵⁴ This exemption was based on an EPA study conducted in 2004, which some question for its veracity and accuracy.⁵⁵ In fact, the “study has been called

⁴⁵ *Id.*

⁴⁶ *Id.* See also 42 U.S.C. § 300h-4 (2000) (defining Class II wells as “wells which inject fluids: (1) which are brought to the surface in connection with natural gas storage operations, or conventional oil or natural gas production . . .”).

⁴⁷ See 42 U.S.C. §§ 300h(b)(1)(A)-(D) (2000) (mandating state UIC requirements such as, recordkeeping and reporting and proof that underground sources of water will be protected).

⁴⁸ *LEAF II*, 276 F.3d at 1262.

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *The Halliburton Loophole*, EARTHWORKS, https://www.earthworksaction.org/issues/detail/inadequate_regulation_of_hydraulic_fracturing#.WNiC5bRYXww (last visited Sept. 22, 2017).

⁵² *Id.*

⁵³ Energy Policy Act of 2005 § 322, Pub. L. No. 109–58, 119 Stat. 594 (2005) (codified at 42 U.S.C. § 300h(d)(1)(B)(ii)) (excluding from UIC programs the need to regulate “the underground injection of fluids or propping agents (other than diesel fuels) pursuant to hydraulic fracturing operations related to oil, gas, or geothermal production activities.”); see also *Western Energy Alliance v. Salazar*, No. 10–CV–237–F, 2011 WL 3738240, (D.Wyo. Aug. 12, 2011) (standing for the proposition that the EPAAct was intended to facilitate oil and gas development).

⁵⁴ See Energy Policy Act of 2005, *supra* note 53.

⁵⁵ See EARTHWORKS, *supra* note 51.

‘scientifically unsound’ by EPA whistleblower Weston Wilson.”⁵⁶ Moreover, Wilson recommended that the EPA further investigate fracking and appoint a new, unbiased panel instead of a panel filled with interested members of the oil and gas industry.⁵⁷ In March of 2005, the EPA’s Inspector General Nikki Tinsley found that there was enough information to conclude that the 2004 study had been mishandled, creating a necessity to further investigate Wilson’s allegations.⁵⁸ A review of the study by Lisa Sumi of The Oil and Gas Accountability Project (OGAP) revealed that the EPA “removed information from earlier drafts that suggested unregulated fracturing poses a threat to human health, and that the Agency did not include information that suggests fracturing fluids may pose a threat to drinking water long after drilling operations are completed.”⁵⁹ Sumi came to three main conclusions in evaluating the 2004 EPA study: (1) it presented information that demonstrated hydraulic fracturing poses a threat to USDWs;⁶⁰ (2) the EPA prematurely concluded that hydraulic fracturing does not pose a threat to drinking water and human health,⁶¹ and (3) based on EPA’s own

⁵⁶ *See id.*

⁵⁷ *See id.*

⁵⁸ *See id.*

⁵⁹ Lisa Sumi, *Our Drinking Water at Risk*, EARTHWORKS (April 2005) <https://www.earthworksaction.org/files/publications/DrinkingWaterAtRisk.pdf>.

⁶⁰ *Id.* This conclusion is based on the following facts:

Some of the chemicals present in hydraulic fracturing fluids can lead to serious health problems, ranging from eye and respiratory disorders to cancer. Many hydraulic fracturing fluids chemicals in their pure form are toxic to humans. In the final version of the study, EPA only calculated the point-of-injection concentration for one fracturing fluid: diesel. EPA’s calculations show that when diesel is injected it can introduce the carcinogen benzene into USDWs at levels that are 880 times the acceptable level in drinking water.

Id.

⁶¹ *Id.* This conclusion is based on two issues:

First, there are many gaps in the data presented by EPA: EPA does not know the identity of all hydraulic fracturing fluid chemicals. Toxicological data do not exist for many fracturing fluids or their individual chemical components. While it is known that the pure form of many fracturing chemicals produce health effects, EPA does not present data on the toxicity of these chemicals when they are diluted. Thus, EPA does not prove that diluted chemicals are safe to inject into USDWs. No information is presented on the potential for increased toxicity when fracturing fluid chemicals are mixed together (or when they react with naturally occurring substances in coal formations). EPA relies on a single study to determine the quantity of injected fluid that remains stranded in coal formations. No scientific evidence is provided to show that fracturing fluids stranded in or injected into USDWs do not pose a threat to human health. EPA does not know to what extent regional groundwater recharge will mobilize stranded fracturing fluid chemicals. EPA does not prove that vertical fractures do not present a conduit for hydraulic fracturing fluids into USDWs (because no direct measurements of vertical fractures are presented).

criteria, there is a need to conduct Phase II of the EPA study.⁶²

Nevertheless, despite issues with the methodology and conclusions of the 2004 study, Congress removed fracking operations that did not use diesel fuels from EPA regulation under the SDWA's UIC program.⁶³ With that said, fluids containing diesel fuel in UIC programs are regulated under the EAct.⁶⁴ This specific exclusion for diesel fuel resulted from debates between environmental groups, the oil and gas industries, and the EPA spanning almost a decade.⁶⁵ As a result, the imposition of the EAct meant that underground injection only included "the subsurface emplacement of fluids by well injection," and excluded "(i) the underground injection of natural gas for purposes of storage; and (ii) the underground injection of fluids or propping agents . . . pursuant to hydraulic fracturing operations."⁶⁶ Thus, hydraulic fracturing remained unregulated at the federal level.

4. Clean Water Act

The Clean Water Act (CWA) and its history also provide little clarity on the issue. Congress passed the CWA in 1972 as an amendment to the Federal Water Pollution Control Act in efforts to eliminate pollution in public water systems.⁶⁷ The main purpose and driving force behind the Act was to prevent pollutants from entering into navigable waters by requiring permits for all methods of discharge.⁶⁸ Fracking "flowback" and oil and gas production byproducts may not be discharged into public water systems, except under the National Pollutant Discharge Elimination System (NPDES) or an equivalent permit.⁶⁹ In 1987, Congress amended the Act.⁷⁰ The amendment mandated the EPA to enforce a

Id.

⁶² *Id.* at 58 (describing that the inaccuracies of the study obviate the need for a follow-up study).

⁶³ *Id.*

⁶⁴ 42 U.S.C. §322 (2017).

⁶⁵ See Hannah Wiseman, *Untested Waters: The Rise of Hydraulic Fracturing in Oil and Gas Production and the Need to Revisit Regulation*, 20 FORDHAM ENVTL. L. REV. 115, 142-46 (2009) (discussing the debate between environmental groups, the oil and gas industries, and the EPA regarding the federal regulations surrounding hydraulic fracturing).

⁶⁶ *Id.*

⁶⁷ Clean Water Act, 33 U.S.C. § 1251, Pub. L. 92-500; see also *History of the Clean Water Act*, EPA, <https://www.epa.gov/laws-regulations/history-clean-water-act> (last visited Sept. 22, 2017).

⁶⁸ See *History of the Clean Water Act*, *supra* note 67.

⁶⁹ NPDES Permit Basics, EPA, <https://www.epa.gov/npdes/npdes-permit-basics> (last visited Sept. 22, 2017).

The permit will contain limits on what you can discharge, monitoring and reporting requirements, and other provisions to ensure that the discharge does not hurt water quality or people's health. In essence, the permit translates general requirements of the Clean Water Act into specific provisions tailored to the operations of each person discharging pollutants.

Id.

⁷⁰ Water Quality Act of 1987, Pub. L. 100-04, Feb. 4, 1987.

permitting program for runoff; however, it made no mention of oil and gas exploration.⁷¹ Notably, the EPA Act created an exemption for runoff from oil and gas activities.⁷² Notwithstanding these requirements, the EPA is still acquiescing to companies in the oil and gas industry's illegal dumping and injection activities.⁷³

B. Dangers of Fracking

Manifestly, there is an issue surrounding the regulation of hydraulic fracturing. To highlight the necessity for federal and uniform regulation, it is important to understand the dangers associated with fracking. This section will discuss the hardships, harms, and problems within the hydraulic fracturing industry. While it may be argued that the SDWA imposes regulations on fracking with diesel fuel and the states adequately regulate the rest, the following are examples of how fracking continues to threaten our health, environment, and political ethics.

To gain a basic understanding of the threats posed by fracking—and oil and gas exploration generally—it helps to examine the statistics. Each year, eight million gallons of water per fracking well and 40,000 gallons of chemicals at each site, including 600 undisclosed chemicals,⁷⁴ are pumped 10,000 feet underground.⁷⁵ With that in mind, most states' oil and gas companies are not required to publicly disclose the types and amounts of chemicals that are injected underground in the fracturing process.⁷⁶ Furthermore, there is no requirement of proof “that fractures have stayed within the target formations.”⁷⁷ Nor is there any requirement to “monitor water quality when there are drinking water formations” near fracking sites.⁷⁸ In other words, nearby residents or landowners have no way of learning what kinds of chemicals are being injected underground that may: (1) contaminate their drinking water; (2) be a detriment to crop irrigation; and/or (3) cause cancer or deadly disease.⁷⁹

A fracking well can produce “a million gallons of wastewater that is often laced with highly corrosive salts, carcinogens like benzene and radioactive ele-

⁷¹ Clean Water Act, 33 U.S.C. § 1342(p) (2006); *see also* U.S. EPA, NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES): OIL AND GAS STORMWATER PERMITTING (2016), <https://www.epa.gov/npdes/oil-and-gas-stormwater-permitting#undefined>.

⁷² *See* EPA Act of 2005, *supra* note 53.

⁷³ *See infra* Part II.B.

⁷⁴ Reynard Loki, *Eight Dangerous Side Effects of Fracking That the Industry Doesn't Want You to Hear About*, ALTERNET (Apr. 28, 2015), <http://www.alternet.org/environment/8-dangerous-side-effects-fracking-industry-doesnt-want-you-hear-about>. Some of the known chemicals are: lead, benzene, uranium, radium, methanol, mercury, hydrochloric acid, ethylene glycol, and formaldehyde. *Id.*

⁷⁵ *Id.*

⁷⁶ *See The Halliburton Loophole*, *supra* note 51.

⁷⁷ *See id.*

⁷⁸ *See id.*

⁷⁹ *See id.*

ments like radium . . . ”⁸⁰ Contamination of groundwater has been found in over a thousand documented cases in areas where fracking wells are present, causing “sensory, respiratory[,] and neurological damage due to ingested contaminated water.”⁸¹ Further, in 2011, documents leaked from the EPA, regulators, and members of the industry revealed that wastewater containing radioactive components was dumped into rivers that supplied public drinking water.⁸² In California, the Department of Oil, Gas and Geothermal Resources (DOGGR) admitted to “allowing thousands of oil industry wells to inject fluids, including wastewater, directly into protected aquifers, in clear violation of the law.”⁸³ On this topic, Bill Allayaud of the Environmental Working Group expressed the opinion that the EPA made a mistake by giving California the primary enforcement authority of underground injection in 1982.⁸⁴ According to Allayaud, California’s UIC program handled by DOGGR has engaged in “questionable practices that have endangered drinking water, and it has been run without transparency . . . essentially ignor[ing] fracking for decades.”⁸⁵ California is no exception, as the leaked documents from 2011 referred to multiple states nationwide.⁸⁶

Water contamination is not the only concern associated with fracking. Recently, the United States government confirmed that fracking causes earth-

⁸⁰ Ian Urbina, *Regulation Lax as Gas Wells’ Tainted Water Hits Rivers*, N.Y. TIMES (Feb. 26, 2011), http://www.nytimes.com/2011/02/27/us/27gas.html?_r=0.

⁸¹ See Loki, *supra* note 74.

⁸² *Id.* See also *Drilling Down: Documents: Natural Gas’s Toxic Waste*, N.Y. TIMES (Feb. 26, 2011), <http://www.nytimes.com/interactive/2011/02/27/us/natural-gas-documents-1.html#document/p1/a9895>.

⁸³ *Halting Illegal Dumping of Oil Waste Into California’s Imperiled Water Supplies*, EARTHJUSTICE, <http://earthjustice.org/cases/2015/halting-illegal-dumping-of-oil-waste-into-california-s-imperiled-water-supplies> (last visited Sept. 22, 2017). See also DEPARTMENT OF CONSERVATION, *Class II Oil and Gas Underground Injection Control* (Feb. 6, 2015), ftp://ftp.consrv.ca.gov/pub/oil/UIC%20Files/FINAL_Dual%20Letterhead_US%20EPA%20Letter.pdf. “The Division acknowledges that in the past it has approved UIC projects in zones with aquifers lacking exemptions.” *Id.*; see also *Enclosure B: Breakdown of Wells Potential Injecting into Nonexempt USDW Zones*, EPA (Feb. 5, 2015), <https://www.desmogblog.com/sites/beta.desmogblog.com/files/Enclosure%20B%20-%20Breakdown%20of%20Potential%20Wells%20Injecting%20into%20NonExempt%20Zones%202-5-15.pdf> (finding data suggesting that nearly 2,500 wells were incorrectly permitted to inject into fresh water aquifers—a violation of the Safe Drinking Water Act).

⁸⁴ Mike Gaworecki, *California’s Wastewater Injection Problem Is Way Worse Than Previously Reported*, DESMOG (Feb. 11, 2015), <https://www.desmogblog.com/2015/02/11/not-hundreds-thousands-oil-industry-injection-wells-dumping-wastewater-protected-california-aquifers>.

⁸⁵ *Id.*

⁸⁶ Urbina, *supra* note 80, at 2. “Gas has seeped into underground drinking-water supplies in at least five states, including Colorado, Ohio, Pennsylvania, Texas and West Virginia, and residents blamed natural-gas drilling. . . . Hydrofracking impacts associated with health problems as well as widespread air and water contamination have been reported in at least a dozen states” *Id.*

quakes.⁸⁷ Significantly, earthquakes in Bakersfield, California in 2005 were tied to wastewater disposal and fracking.⁸⁸ Additionally, Alabama, Arkansas, Colorado, New Mexico, Oklahoma, Ohio, and Kansas have exhibited an increased level of seismic activity over the last decade, all correlated with fracking.⁸⁹ Oklahoma in particular experienced 585 earthquakes in 2014, “more than in the last 35 years combined.”⁹⁰ The Oklahoma state government has been reluctant to admit the correlation between fracking and the record-breaking seismic activity.⁹¹ However, on April 21, 2015, an Oklahoma state agency said it is “very likely that the majority of recent earthquakes, particularly those in central and north-central Oklahoma, are triggered by the injection of produced water in disposal wells.”⁹² Two days after this admission, Oklahoma lawmakers passed two bills, which were supported by the oil and gas industry and designed to prevent Oklahoma natives from taking action to limit fracking in their area.⁹³

Generally speaking, exposure to some of the chemicals emitted from fracking have been linked to heart disease, cancer, high blood pressure, anemia, and asthma.⁹⁴ In fact, researchers at John Hopkins University discovered that areas with fracking have a 39% higher concentration of radon in the air.⁹⁵ Although radon is completely odorless and unseen by the human eye, it “moves through the ground and into the air, while some remains dissolved in groundwater where it can appear in water wells.”⁹⁶ Unfortunately, radon is the second leading cause of lung cancer after smoking, and according to the EPA, “radon is responsible

⁸⁷ T.H.W. Goebel et al., *Wastewater disposal and earthquake swarm activity at the southern end of the Central Valley, California*, 43 *GEOPHYSICAL RES. LETTERS* 1092 (Feb. 4, 2016), <http://onlinelibrary.wiley.com/doi/10.1002/2015GL066948/abstract>; see also Loki, *supra* note 74. (“On April 20, the U.S. Geological Survey released a long-awaited report that confirmed what many scientists have long speculated: the fracking process causes earthquakes.”); Samantha Page, *New Study Ties Fracking Water Disposal to California Earthquakes*, THINK PROGRESS (Feb. 5, 2016), <https://thinkprogress.org/new-study-ties-fracking-water-disposal-to-california-earthquakes-8b2f8f81cd1#.1zdglc60u>.

⁸⁸ Page, *supra* note 87.

⁸⁹ See Loki, *supra* note 74.

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² *Id.*

⁹³ *Id.* See also Randy Krehbiel, *Bills limiting local regulation of oil and gas drilling get Oklahoma House approval*, TULSA WORLD (Apr. 23, 2015), http://www.tulsaworld.com/news/capitol_report/bills-limiting-local-regulation-of-oil-and-gas-drilling-get/article_e6694c9a-3657-532d-b0ff-6a8849a29c8a.html.

⁹⁴ *Id.* (“It can also have a damaging effect on immune and reproductive systems, as well as fetal and child development. A 2014 study conducted by the Colorado Department of Environmental and Occupational Health found that mothers who live near fracking sites are 30 percent more likely to have babies with congenital heart defects.”).

⁹⁵ See Loki, *supra* note 74. “The study included almost 2 million radon readings taken between 1987 and 2013 done in over 860,000 buildings from every county, mostly homes.” *Id.*

⁹⁶ See *id.*

for about 21,000 lung cancer deaths every year.”⁹⁷ In Wyoming, air pollution due to natural gas drilling is also a threat.⁹⁸ Indeed, in 2009 the state failed to meet federal air quality standards partly due to “fumes containing benzene and toluene from roughly 27,000 wells.”⁹⁹ Sublette County in Wyoming, which has a high concentration of wells, contributed to levels of ozone “higher than those recorded in Houston and Los Angeles.”¹⁰⁰ Technology in the industry is becoming more powerful as time goes on.¹⁰¹ Thus, it logically follows that with increasingly advanced technology and a lack of improvements in regulation and waste disposal techniques, more waste will be created with no means of disposal.¹⁰² We are sinking our own ship. As John H. Quigley, the former secretary of Pennsylvania’s Department of Conservation and Natural Resources, put it, “We’re burning the furniture to heat the house[.]”¹⁰³

Not only is the water used in fracking mixed with chemicals that can be deadly, but there is also a concern over the amount of water that is used in the process.¹⁰⁴ Over ninety percent of the water used in fracking operations is never recovered, which creates problems for states that are under high water-stress.¹⁰⁵ This effectively does two things: it creates a spike in water prices and leaves less water for crop irrigation.¹⁰⁶ Throughout the nation, almost half of the shale oil and gas wells are in regions under high water-stress.¹⁰⁷ With that in mind, governmental entities and agencies argue that the amount of water used in the process is negligible.¹⁰⁸ According to others, that information may be misleading.¹⁰⁹

⁹⁷ *Health Risks of Radon*, EPA, <https://www.epa.gov/radon/health-risk-radon#head> (last updated Apr. 19, 2017).

⁹⁸ Urbina, *supra* note 80, at 2.

⁹⁹ *Id.*

¹⁰⁰ *Id.*

¹⁰¹ *Id.*

¹⁰² *Id.* at 1. “[W]e’re producing massive amounts of toxic wastewater with salts and naturally occurring radioactive materials, and it’s not clear we have a plan for properly handling this waste.” *Id.*

¹⁰³ *See id.* at 2.

¹⁰⁴ *See* Loki, *supra* note 74.

¹⁰⁵ *See id.*

¹⁰⁶ *See id.* *See also* Stephen Stock, Liza Meak, Mark Villarreal & Scott Pham, *Waste Water from Oil Fracking Injected into Clean Aquifers* (Nov. 14, 2014),

<http://www.nbcbayarea.com/investigations/Waste-Water-from-Oil-Fracking-Injected-into-Clean-Aquifers-282733051.html>. “State officials allowed oil and gas companies to pump nearly three billion gallons of waste water into underground aquifers that could have been used for drinking water or irrigation.” *Id.*

¹⁰⁷ *See* Loki, *supra* note 74.

¹⁰⁸ *Impacts: Water*, CAL. FRACKING, <http://www.cafrackfacts.org/impacts/water>, n.4 (last visited Sept. 17, 2017).

¹⁰⁹ *See* Bobby Magill, *Study: Water Use Skyrockets as Fracking Expands*, CLIMATE CENTRAL (July 1, 2015), <http://www.climatecentral.org/news/fracking-water-use-skyrockets-19177>. “In Pennsylvania, Ohio, south and eastern Texas, Arkansas, northern Colorado and Montana, fracking can use more than 9 million gallons of water.” *Id.* *See generally* Edith Honan, *Water Waste a Kink in New York Shale Gas Future*, REUTERS (Feb. 19, 2010, 4:18 PM EST), <http://www.reuters.com/article>

In fact, some have argued that each fracking well uses millions of gallons of water each year.¹¹⁰ Therefore, not only is fracking creating a risk of contamination in our fresh water supply, but additionally, it is wasting water that could be used for other beneficial endeavors, such as crop irrigation or human consumption.¹¹¹

Putting aside the environmental issues, one major concern is the money that legislators receive as a result of contributions. According to a 2013 report, contributions by supporters of the fracking movement rose from \$4.3 million in 2004 to about \$12 million in 2012.¹¹² The Citizens for Responsibility and Ethics in Washington's executive director Melanie Sloan said, "[t]he fracking boom isn't just good for the industry, but also for congressional candidates in fracking districts."¹¹³ Significantly, Joe Barton, an advocate for fracking, has received the most in contributions in the industry.¹¹⁴ Unsurprisingly, Barton sponsored the Energy and Policy Act of 2005, which exempted fracking from federal regulation.¹¹⁵

The Energy and Policy Act of 2005 has been called the "Dick Cheney Energy Bill," and the exclusion of fracking from the Safe Drinking Water Act has been called the "Halliburton loophole"¹¹⁶ as well as the "Cheney loophole."¹¹⁷ As previously discussed, the 2004 EPA study that paved the way for the Cheney loophole has been called into serious question.¹¹⁸ As Joshua Dorner of the Center for American Progress put it:

Cheney not only offered permanent regulatory relief and rolled back existing environmental laws to help the oil industry [but the 2004 study] also demonstrates the administration's willingness to distort science to benefit Big Oil and others . . . thus paving the way for Congress to pass the Cheney loophole.¹¹⁹

e/us-energy-shale-waste-idUSTRE61I52D20100219.

¹¹⁰ See Honan, *supra* note 109. For comparison purposes, the United States uses an average of 106,163,900 million gallons of water per year. *U.S. Water Use from 1950–Present*, USGS, <https://wi.usgs.gov/vizlab/water-use/> (last visited Feb. 6, 2018).

¹¹¹ Stock et al., *supra* note 106.

¹¹² Molly Redden, *These members of Congress Are Bankrolled by the Fracking Industry*, GRIST (Nov. 21, 2013), <http://grist.org/climate-energy/these-members-of-congress-are-bankrolled-by-the-fracking-industry/>.

¹¹³ Farron Cousins, *88% of Congress On Gas Industry Payroll As Campaign Donations Hit Record Level*, OCCUPY (Dec. 6, 2013), <http://www.occupy.com/article/88-congress-gas-industry-payroll-campaign-donations-hit-record-level#sthash.pLZjKKRs.dpbs>.

¹¹⁴ Loki, *supra* note 74.

¹¹⁵ *Id.*

¹¹⁶ Halliburton being the company that invented hydraulic fracturing.

¹¹⁷ Joshua Dorner, *Cheney's Culture of Deregulation and Corruption*, CENT. FOR AM. PROGRESS (June 9, 2010), <https://www.americanprogress.org/issues/green/news/2010/06/09/7900/cheney-culture-of-deregulation-and-corruption/>.

¹¹⁸ See Sumi, *supra* notes 59–62. See also *supra* notes 56–58 and accompanying text.

¹¹⁹ Dorner, *supra* note 117.

The EPA has been hiding the negative effects of fracking for years—2004 was no fluke.¹²⁰ In fact, a recent EPA study on the practice of fracking invoked by Obama still downplayed the risk of drinking water pollution by making changes in the language of the report just six weeks before its release.¹²¹

Nevertheless, regardless of all the money pouring in from contributions, oil and gas exploration is still a driving economic force for every state that has its hand dipped in the business, especially those experiencing rapid and large-scale development like North Dakota, Montana, select cities in Texas, and some local governments in Colorado and Wyoming.¹²² Notably, in Wyoming, the industry has significantly impacted the economy, creating jobs, contributions, and tax revenue.¹²³ But of course, those locations aren't the only ones making money. In California, oil and gas activity on its own accounted for federal, state, and local tax revenue of over \$37 billion—that's right, billion!¹²⁴ Therefore, it should come as no surprise that federal and state legislators are complacently allowing environmental responsibilities to fall by the wayside. So why would states opt to discard the easy money being generated from this cash cow? The answer is simple: they wouldn't.

These are only a few key examples of how the oil and gas industry has blinded congressmen and state and federal legislators with dollar signs. Of course, the mass amount of revenue generated from the oil and gas industry is enticing; however, responsibility and safety should always trump money and power. In any event, the dangers in the fracking industry are readily apparent.

¹²⁰ See Urbina, *supra* note 80. See also *Natural Gas's Toxic Waste*, N.Y. TIMES (Feb. 26, 2011), <http://www.nytimes.com/interactive/2011/02/27/us/natural-gas-documents-1.html#document/p1/a9895> (EPA admits to issues with fracking in confidential documents).

¹²¹ Dorner, *supra* note 117. See also Scott Tong & Tom Scheck, *EPA's late changes to fracking study downplay risk of drinking water pollution*, MARKETPLACE (Nov. 30, 2016), <http://www.marketplace.org/2016/11/29/world/epa-s-late-changes-fracking-study-portray-lower-pollution-risk> (concluding that the six weeks before the release of the study EPA officials edited language in the report to divert attention from the risks of water contamination as a result of hydraulic fracturing).

¹²² See generally Daniel Raimi & Richard G. Newell, *Oil and Gas Revenue Allocation to Local Governments in Eight States*, DUKE U. ENERGY INITIATIVE (Oct. 2014), <https://energy.duke.edu/sites/default/files/attachments/Oil%20Gas%20Revenue%20Allocation%20to%20Local%20Government%20FINAL.pdf> (“We find that in most cases, existing policies appear to provide adequate revenue for local governments to manage increased costs associated with growing oil and gas activity. However, additional revenue may be warranted for some local governments in highly rural regions experiencing rapid, large-scale development, notably the Bakken region of North Dakota and Montana, select counties in Texas, and select local governments in Colorado and Wyoming.”). *Id.*

¹²³ See generally *Economic Impacts of Oil and Gas Development on BLM Lands in Wyoming*, SWCA (May 2011), <https://www.westernenergyalliance.org/wp-content/uploads/2011/10/SWCA-Report-Wyoming-NEPA-delay-impacts.pdf>.

¹²⁴ *Oil & Gas Industry Fuels California's Economy*, THE CALIFORNIA OIL AND GAS REPORT (Sept. 2, 2015), <http://www.caloilgas.com/industry-fuels-california/> (“In 2013, the most recent period for which data are available, the oil and gas sector accounted for \$38 billion in wages and salary, \$204 billion in output and \$72 billion in value added. It produced tax revenues to federal, state and local government of well over \$37 billion.”). *Id.*

The question becomes: are there any agencies or governmental entities in the United States with the right intentions for fracking regulation?

III. WYOMING V. JEWELL

A. Legal Authority

Although the foregoing history and bodies of law provide direct authority—or lack thereof—regarding federal regulation of hydraulic fracturing, *Wyoming v. United States Department of the Interior* (hereinafter *Wyoming*) presents a novel issue: the regulation of fracking on federal and Indian lands not owned by states.¹²⁵ This area of the law effectively creates an even more interesting regulatory gap in hydraulic fracturing.

In *Wyoming*, the BLM claimed the authority to regulate hydraulic fracturing under multiple Acts, including: the Federal Land Policy and Management Act of 1976, the Mineral Leasing Act of 1920, the 1930 Right-of-Way Leasing Act, the Mineral Leasing Act for Acquired Lands, the Federal Oil and Gas Royalty Management Act of 1982, the Indian Mineral Leasing Act of 1938,¹²⁶ and the Indian Mineral Development Act of 1982.¹²⁷ Each of these Acts will be discussed in detail to provide an overview of the authority granted to the BLM. The Acts that provide the most relevant authority concerning oil and gas activity will be explored further in conjunction with the court's analysis below.¹²⁸

1. Federal Land Policy and Management Act of 1976

Congress enacted the Federal Land Policy and Management Act (FLPMA) to provide “a comprehensive statement of congressional policies concerning the management of the public lands” controlled by the United States and overseen by the BLM.¹²⁹ The Act creates authority in the BLM to manage federal and Indian lands in a way that “will best meet the present and future needs of the American people”¹³⁰ This includes accounting for “the long-term needs of future generations for renewable and nonrenewable resources, including, but not limited to, recreation, range, timber, *minerals*, watershed, wildlife and fish, and natural scenic, scientific and historical values”¹³¹ Minerals are defined in

¹²⁵ *Wyoming v. U.S. Dep't of the Interior*, 136 F. Supp. 3d 1317, 1327 (D. Wyo. 2015), *vacated Wyoming v. Sierra Club*, No. 15-8126, 2016 WL 3853806 (10th Cir. 2016).

¹²⁶ 25 U.S.C. §§ 396a–396g.

¹²⁷ *Id.* §§ 2101–2108.

¹²⁸ *See infra* Part III.C.

¹²⁹ *Rocky Mountain Oil & Gas Ass'n. v. Watt*, 696 F.2d 734, 737 (10th Cir. 1982).

¹³⁰ 43 U.S.C. § 1702(c) (2015).

¹³¹ *Id.* (emphasis added); *see also* 30 U.S.C.A. § 21a (West) (“For the purpose of this section ‘minerals’ shall include all minerals and mineral fuels including oil, gas, coal, oil shale and uranium.”). *Id.*

section 21 of title 30 as including “oil, gas, coal, oil shale[,] and uranium.”¹³² Significantly, the Act gives the BLM the power to promulgate rules “necessary to prevent unnecessary or undue degradation of the lands,” and “to carry out the purposes of this Act and of other laws applicable to the public lands.”¹³³ In this way, these specific powers under the Act provide broad authority to the BLM for oil and gas activity on federal and Indian lands.

2. Mineral Leasing Act of 1920

The Mineral Leasing Act of 1920 (MLA) has a “necessary and proper” clause similar to that of the FLPMA, which empowers the BLM to accomplish the goals of the Act.¹³⁴ Among other things, the MLA establishes lease and royalty terms while mandating that the lessee “use *all reasonable precautions* to prevent waste of oil or gas developed in the land”¹³⁵ Arguably, any waste that is the consequence of fracking would then fall under the regulatory power of this Act.

3. 1930 Right-of-Way Leasing Act & Mineral Leasing Act for Acquired Lands

Both the Right-of-Way Leasing Act (RWL) and Mineral Leasing Act for Acquired Lands (MLAAL) provide general rulemaking authority to the BLM and essentially expand their ability to lease out and manage federally owned land.¹³⁶ The extent of this authority is for monetary dispensation and the control of like activities by the BLM.¹³⁷ It seems that this power would not extend to the general welfare of the public.¹³⁸ However, to the extent that the United States is entitled to payment or required to lease land that involves fracking and oil and gas exploration, the BLM has authority to regulate.¹³⁹

¹³² 30 U.S.C.A. § 21a (2015).

¹³³ 43 U.S.C. §§ 1732(b), 1740 (2015).

¹³⁴ See 30 U.S.C. § 189. The Act was designed to allow for the successful development of oil and gas resources found on lands owned by the United States that are being utilized by private enterprises. See *Geosearch, Inc. v. Andrus*, 508 F.Supp. 839, 842 (D. Wyo. 1981); *Harvey v. Udall*, 384 F.2d 883, 885 (10th Cir. 1967).

¹³⁵ 30 U.S.C. § 225 (emphasis added).

¹³⁶ 30 U.S.C. §§ 301, 306, 351, 352, 359 (2017); see also *Watt v. Alaska*, 451 U.S. 259, 269 (1981).

¹³⁷ *Watt*, 451 U.S. at 270.

¹³⁸ *Id.* at 269.

¹³⁹ *Id.*

4. Federal Oil and Gas Royalty Management Act of 1982

The Federal Oil and Gas Royalty Management Act of 1982 (FOGRMA) also provides broad and uninhibited authority for the BLM.¹⁴⁰ However, FOGRMA directly targets the collection and accounting processes used to administer federal royalties.¹⁴¹ FOGRMA is not likely to provide any authority over oil and gas exploration—only collection of royalties.¹⁴²

5. Indian Mineral Leasing Act of 1938 & Indian Mineral Development Act of 1982

Both the Indian Mineral Leasing Act of 1938 (IMLA) and Indian Mineral Development Act of 1982 (IMDA) provide general regulatory authority to the Secretary of the BLM to administer broad regulations on Indian land.¹⁴³ This power provides the Secretary broad authority to create future revisions regarding the regulatory aspects of the oil and gas leases that are managed by the BLM and thus owned by the United States.¹⁴⁴ This broad authority vests the Secretary with power that ought to grant control of oil and gas exploration on Indian and federal land, including fracking.¹⁴⁵

Accordingly, the *Wyoming* court analyzed whether and to what extent the BLM is afforded power to regulate fracking under these authorities.¹⁴⁶ In addition to a basic understanding of these Acts and the regulatory authority that BLM claimed, it is important to fully comprehend the case's underlying facts.

B. Factual Background

In *Wyoming*, Wyoming, Colorado, North Dakota, Utah, and the Ute Indian Tribe brought suit against the BLM for promulgating rules governing hydraulic fracturing on federal and Indian land.¹⁴⁷ The BLM is responsible for the management and oversight of about “700 million subsurface acres of Federal mineral estate and . . . 56 million acres of Indian mineral estate across the United States.”¹⁴⁸ Moreover, approximately ninety percent of wells drilled on Indian

¹⁴⁰ 30 U.S.C. § 1751.

¹⁴¹ *See id.* §§ 1758–1759; *see also* *Shell Oil Co. v. Babbitt*, 125 F.3d 172, 174 (3d Cir. 1997).

¹⁴² *Shell Oil Co.*, 125 F.3d 172.

¹⁴³ 25 U.S.C. §§ 396(d), 2107. The Secretary shall “consult with national and regional Indian organizations and tribes with expertise in mineral development both in the initial formulation of rules and regulations and *any future revision* or amendment of such rules and regulations.” *Id.* at 2107 (emphasis added).

¹⁴⁴ *See Id.*

¹⁴⁵ *See Shell Oil Co.*, 125 F.3d at 176.

¹⁴⁶ *See generally id.*

¹⁴⁷ *Wyoming v. Sierra Club*, No. 15-8126, 2016 WL 3853806 (10th Cir. July 13, 2016).

¹⁴⁸ Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16128-01, 16129 (proposed Mar. 26, 2015) (to be codified at 43 C.F.R. pt. 3160 (Westlaw)).

and federal lands are hydraulically fractured.¹⁴⁹ Hydraulic fracturing has contributed to the stimulation of U.S. wells for at least sixty years.¹⁵⁰ Attempting to extract hydrocarbons from shale began around the 1970s, and the prevalence of the activity has increased since then.¹⁵¹ In more recent years, hydraulic fracturing has been used with newer horizontal drilling techniques, which have allowed access to increasing amounts of shale oil and gas resources across the country.¹⁵² In short, hydraulic fracturing is a large part of oil and gas exploration on federal and Indian lands, and it is not going away anytime soon.¹⁵³

On June 24, 2015, the BLM instituted a final set of rules surrounding hydraulic fracturing on Indian and federal lands.¹⁵⁴ The imposed rules focus on three main standards: wellbore construction, chemical disclosures, and water management.¹⁵⁵ The ultimate goals of the rules were:

[t]o ensure that wells are properly constructed to protect water supplies, to make certain that the fluids that flow back to the surface as a result of hydraulic fracturing operations are managed in an environmentally responsible way, and to provide public discourse of the chemicals used in hydraulic fracturing liquids.¹⁵⁶

Some of the key changes in the wellbore construction included a set of cement evaluation tools “to help ensure that usable water zones have been isolated and protected from contamination”¹⁵⁷ In terms of working with the states, the BLM established an intention to continue working together to form partnerships and “reduce duplication of effort for agencies and operators, particularly by implementing the final rule as consistently as possible with state or tribal regulations.”¹⁵⁸ In response, Wyoming and Colorado filed petitions in March 2015, seeking judicial review of the Fracking Rule under the Administrative Procedure Act (APA).¹⁵⁹ North Dakota, Utah, and the Ute Indian Tribe of the Uintah and Ouray Reservation intervened in the action, and the court granted the parties’ motion to consolidate the two separate actions.¹⁶⁰ The parties collectively sought to enjoin BLM from applying the Fracking Rule.¹⁶¹

¹⁴⁹ *Id.* at 16190

¹⁵⁰ *How is Shale Gas Produced?*, U.S. DEP’T OF ENERGY, http://energy.gov/sites/prod/files/2013/04/f0/how_is_shale_gas_produced.pdf (last visited Sept. 26, 2017).

¹⁵¹ *See id.*

¹⁵² Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16128-01, 16129 (proposed Mar. 26, 2015) (to be codified at 43 C.F.R. pt. 3160).

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *See id.*

¹⁵⁶ *Id.* at 16128.

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* at 16129.

¹⁵⁹ *Wyoming*, 136 F. Supp. 3d at 1327. *See also* 5 U.S.C. § 701.

¹⁶⁰ *Wyoming*, 136 F. Supp. 3d 1317.

¹⁶¹ *Id.*

C. Enjoining BLM and the Tenth Circuit Analysis

The court began its analysis with an overview of the law pertaining to preliminary injunctions.¹⁶² The court highlighted the purpose of a preliminary injunction—the preservation of the status quo before trial.¹⁶³ It is no secret that the status quo here was power to regulate fracking held by the states and Indian tribes.¹⁶⁴ Thus, the scales were tipped in favor of the states and tribes at the outset.¹⁶⁵ The majority of the court’s analysis surrounded the likelihood of success on the merits requirement for granting an injunction, and consequently, is the main focus of this section. The court’s analysis regarding the remaining elements of an injunction also present interesting points and will be addressed in relevant part.

1. Likelihood of Success on the Merits

Determining the likelihood of success on the merits in this case turned on whether the BLM had the authority to promulgate the new set of hydraulic fracturing requirements (Fracking Rule).¹⁶⁶ First, the court asserted that the authority of an administrative agency to pass laws is limited by the power that is delegated by Congress, regardless of how serious the problem is.¹⁶⁷ Indeed, this posed a difficult hurdle for the BLM because although the fracking issue was a serious and real threat, its authority was limited by Congress’ express delegation of powers to administrative agencies.¹⁶⁸ As a result, the main question before the court was whether the BLM was granted actual authority by Congress.¹⁶⁹

¹⁶² *Id.* at 1327. (“To obtain a preliminary injunction, petitioners must show: (1) a likelihood of success on the merits; (2) that they will [likely] suffer irreparable harm; (3) that the balance of equities tips in their favor; and (4) that the injunction is in the public interest.”) (quoting *Petrella v. Brownback*, 787 F.3d 1242, 1257 (10th Cir. 2015)).

¹⁶³ *Id.* at 1328.

The purpose of a preliminary injunction is *merely to preserve the relative positions of the parties until a trial* on the merits can be held. Given this limited purpose, and given the haste that is often necessary if those positions are to be preserved, a preliminary injunction is customarily granted on the basis of procedures that are less formal and evidence that is less complete than in a trial on the merits. A party thus is not required to prove his case in full at a preliminary-injunction hearing, and the findings of fact and conclusions of law made by a court granting a preliminary injunction are not binding at trial on the merits.

(Quoting *Univ. of Texas v. Camenisch*, 451 U.S. 390, 395 (1981)) (citations omitted) (emphasis added).

¹⁶⁴ *See id.*

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ *Id.* See also *Bowen v. Georgetown Univ. Hosp.*, 488 U.S. 204, 208 (1988); *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 125 (2000).

¹⁶⁸ *Wyoming*, 136 F. Supp. 3d 1317 at 1329.

¹⁶⁹ *Id.*

The law applied by the court for evaluating the actions of administrative agencies was the famous and oft-cited *Chevron Doctrine*.¹⁷⁰ Under the *Chevron* analysis, the court found that Congress' intent was clear on hydraulic fracturing and that it "ha[d] directly spoken to the issue of hydraulic fracturing in the EAct of 2005."¹⁷¹ Thus, because Congress specifically exempted fracking from regulation in 2005, the court held that the BLM did not have authority to regulate.¹⁷² In any event, the court drudged through the different statutes and acts that the BLM claimed authority under.¹⁷³ Four of the BLM's claims to authority are worth exploring and appear to have been overlooked too quickly by the court—these claims include the Federal Land Policy and Management Act of 1976, the Mineral Leasing Act of 1920, the Indian Mineral Leasing Act of 1938, and the Indian Mineral Development Act of 1982.¹⁷⁴

Notably, the Federal Land Policy and Management Act vests authority in the BLM to act in a way that "will best meet the present and future needs of the American people[.]"¹⁷⁵ including accounting for "the long-term needs of future generations . . . [regarding] minerals . . ." and doing what is "necessary to prevent unnecessary or undue degradation of the lands . . ."¹⁷⁶ This authority appears to encompass a broad range of oil and gas exploration and was quickly overlooked by the court.¹⁷⁷ Interestingly, Section 21 of Title 30 defines minerals as, "all minerals and mineral fuels including oil, gas, coal, oil shale[,] and uranium."¹⁷⁸ Moreover, the province of the Secretary of the Interior is "to conduct inquiries and scientific and technologic investigations concerning . . . mineral substances with a view to improving health conditions, and increasing safety, efficiency, economic development, and conserving resources through the prevention of waste . . ."¹⁷⁹ So, although the court made it clear that Congress explicitly removed hydraulic fracturing from regulation in the EAct of 2005, an argument powerfully centered in law,¹⁸⁰ it is incontrovertible that the BLM had widespread and strong authority in the Federal Land Policy and Management

¹⁷⁰ *Id.* See also Koch, *supra* note 38 and accompanying text.

¹⁷¹ Koch, *supra* note 38 (quoting *Chevron, U.S.A., Inc. v. Nat. Res. Def. Council, Inc.* 467 U.S. 837, 842–43 (1984)).

¹⁷² *Wyoming*, 136 F. Supp. 3d 1317 at 1329.

¹⁷³ *Id.* The court examined the Federal Land Policy and Management Act of 1976, the Mineral Leasing Act of 1920, the 1930 Right-of-Way Leasing Act, the Mineral Leasing Act for Acquired Lands, the Federal Oil and Gas Royalty Management Act of 1982, the Indian Mineral Leasing Act of 1938, and the Indian Mineral Development Act of 1982. *Id.*

¹⁷⁴ *Wyoming*, 136 F. Supp. 3d at 1330.

¹⁷⁵ 43 U.S.C. § 1702(c) (2015).

¹⁷⁶ 43 U.S.C. §§ 1732(b), 1701(a)(8) & (12) (emphasis added).

¹⁷⁷ *Wyoming*, 136 F. Supp. 3d 1317 at 1329.

¹⁷⁸ 30 U.S.C. § 21a (2015).

¹⁷⁹ U.S.C. § 3.

¹⁸⁰ *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 384, (1992) ("[I]t is a commonplace of statutory construction that the specific governs the general[.]"). See also *In re Gledhill*, 76 F.3d 1070, 1078 (10th Cir. 1996) ("A court should not construe a general statute to eviscerate a statute of specific effect.").

Act.¹⁸¹ Notwithstanding the breadth of the regulatory authority, the court determined that the authority was insufficient.¹⁸²

The Mineral Leasing Act of 1920's "necessary and proper" clause vests power in the Secretary of Interior to oversee the development of oil and gas on federal lands.¹⁸³ It also requires the lessee to use "*all reasonable precautions* to prevent waste of oil or gas developed in the land"¹⁸⁴ This language lends its hand to promulgating rules that prevent and protect the public from contamination and waste, such as the Fracking Rule proposed by the BLM.¹⁸⁵

Both the Indian Mineral Leasing Act of 1938 and the Indian Mineral Development Act of 1982 grant the BLM power to impose regulations and future revisions regarding oil and gas leases on Indian lands.¹⁸⁶ This broad authority also would seem to encompass fracking on Indian and federal lands.¹⁸⁷

Nonetheless, the court established that all of this authority was too broad for comprehensive rulemaking authority on behalf of the BLM.¹⁸⁸ Furthermore, because Congress specifically excluded fracking from regulation under the SDWA, and "the specific governs the general" in statutory interpretation,¹⁸⁹ the court held that the BLM had no authority to regulate.¹⁹⁰ The health concerns and environmental problems surrounding the fracking industry demonstrate that the BLM had good reason to promulgate the Fracking Rule. However, the court made clear that good reason is not sufficient to defeat Congress's specific exclusion of hydraulic fracturing in the EAct.¹⁹¹

The BLM vehemently argued that "interpreting the EAct as precluding all federal regulation of hydraulic fracturing" still leaves a regulatory gap for federal and Indian land.¹⁹² The court responded that no matter how important the issue may be, "[i]f agency regulation is prohibited by a statute specifically directed at a particular activity, it cannot be reasonably concluded that Congress intended regulation of the same activity would be authorized under a more general statute administered by a different agency."¹⁹³ Thus, the court further leaned

¹⁸¹ See *Wyoming*, 136 F. Supp. 3d 1317 at 1329.

¹⁸² *Id.* at 1330.

¹⁸³ See 30 U.S.C. § 189; *Geosearch, Inc. v. Andrus*, 508 F.Supp. 839, 842 (D.Wyo. 1981); *Harvey v. Udall*, 384 F.2d 883 (10th Cir. 1967).

¹⁸⁴ 30 U.S.C. §§ 223, 225, 226(d) & (e) (2015) (emphasis added).

¹⁸⁵ Oil and Gas; Hydraulic Fracturing on Federal and Indian Lands, 80 Fed. Reg. 16128-01, 16129 (proposed Mar. 26, 2015) (to be codified at 43 C.F.R. pt. 3160).

¹⁸⁶ 25 U.S.C. §§ 396(d), 2107. The secretary shall "consult with national and regional Indian organizations and tribes with expertise in mineral development both in the initial formulation of rules and regulations and *any future revision* or amendment of such rules and regulations." U.S.C. § 2107 (emphasis added).

¹⁸⁷ See 25 U.S.C. §§ 396(d), 2107.

¹⁸⁸ *Wyoming*, 136 F. Supp. 3d 1317 at 1329.

¹⁸⁹ *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 384 (1992).

¹⁹⁰ *Wyoming*, 136 F. Supp. 3d 1317 at 1329.

¹⁹¹ *Id.*

¹⁹² *Wyoming*, 136 F. Supp. 3d at 1336.

¹⁹³ *Id.*

on Congress and the separation of powers by asserting that the purpose of the EAct was clear and unambiguous.¹⁹⁴

Furthermore, the court considered arguments that the BLM made regarding the dangers of fracking.¹⁹⁵ The court said: “In determining whether [an agency’s] decision is supported by substantial evidence, the court must also consider that evidence which fairly detracts from the [agency’s] decision.”¹⁹⁶ The court also stated that the record demonstrated that, “both experts and government regulators have repeatedly acknowledged a lack of evidence linking the hydraulic fracturing process to groundwater contamination.”¹⁹⁷ It is clear that the court was uninformed of the dangers of fracking—most particularly the studies that demonstrated a link between hydraulic fracturing and groundwater contamination.¹⁹⁸ The BLM may have “fail[ed] to reference a single confirmed case of the hydraulic fracturing process contaminating groundwater[,]” but this Note has laid out a plethora of evidence to the contrary.¹⁹⁹ Whether or not the court was made aware of the multiple studies that linked fracking to a whole host of issues is one question. However, the fact that the court was willing to discuss the potential for extreme harm suggests that, even despite the specific exclusion in the SDWA, it would be willing to step in and invoke change in the event of a serious and impending harm.²⁰⁰ Perhaps the court would even intervene by incorporating appropriate changes to the BLM’s proposed promulgation of rules concerning fracking.

The court further asserted that there were no examples of the inadequacy of existing state regulations to protect against the BLM’s claimed risks.²⁰¹ However, almost every state involved in the industry has seen some negative effects from the fracking process.²⁰² While at the same time, the EPA 2004 study—proven to be inaccurate—demonstrated that a large majority of our nation’s population is misinformed regarding the dangers in the fracking industry.²⁰³

The *Wyoming* court rejected the BLM’s broad authority and held it was insufficient to regulate fracking.²⁰⁴ Notwithstanding the court’s evaluation of the relevant case law, a considerable amount of time was spent calculating the goals

¹⁹⁴ *Id.*

¹⁹⁵ *Id.* at 1340.

¹⁹⁶ *Id.* at 1339.

¹⁹⁷ *Id.*

¹⁹⁸ *See supra* Part II.B.

¹⁹⁹ *Wyoming*, 136 F. Supp. 3d at 1339; *see also supra* Part II.B; *supra* notes 59–62 and accompanying text; *The Okla. Editorial Bd.*, THE OKLAHOMAN, (Oct. 8, 2015), <http://newsok.com/article/5451954>.

²⁰⁰ *See Wyoming*, 136 F. Supp. 3d at 1346.

²⁰¹ *Wyoming*, 136 F. Supp. 3d at 1336.

²⁰² *See supra* Part II.B.

²⁰³ Sharon Kelly, *EPA Study: Fracking Puts Drinking Water Supplies at Risk of Contamination*, RESILIENCE, (June 5, 2015), <http://www.resilience.org/stories/2015-06-05/epa-study-fracking-puts-drinking-water-supplies-at-risk-of-contamination/>.

²⁰⁴ *Wyoming*, 136 F. Supp. 3d 1317 at 1327; 5 U.S.C. § 701.

and purported public interest in the BLM's proposed Fracking Rule.²⁰⁵ In that evaluation, the court improperly relied on studies of fracking which were found to be fabricated.²⁰⁶ Moreover, although case precedent and the SDWA provided a difficult hurdle, the weight of the public interest in granting the injunction was miscalculated.²⁰⁷

2. *The Public Interest & Contributions in the Industry*

The states have a significant interest in the money generated by the oil and gas industry, and public safety tends to be an afterthought.²⁰⁸ Louie Gohmert, a Republican Congressman for Texas, responded to the BLM's efforts and stated:

With the prospects of a new energy and job friendly administration, there is a real opportunity to restore the principles of federalism and the Tenth Amendment while preventing burdensome and overreaching Washington regulations from stymying job creation in Texas at the same time they increase the cost of gasoline and energy²⁰⁹

Texas is a major player in the oil and gas business and has a history of receiving large donations from the fracking industry.²¹⁰ In November 2014, the city of Denton, Texas passed a ban on fracking that was overturned after \$800,000 was channeled to members of the Texas state legislature who voted against the ban.²¹¹ The council stated that it was “in the overall interest of the Denton taxpayers to strategically repeal the ordinance”²¹² Accordingly, in order to avoid the same corruption experienced during the EPAct of 2005, contributions from members of the fracking industry to congressmen should be limited.²¹³

The state litigants in this case—Wyoming, Colorado, the tribes in North Dakota, and Utah—have significant ties to the fracking industry.²¹⁴ In 2013,

²⁰⁵ See *Wyoming*, 136 F. Supp. 3d at 1327.

²⁰⁶ See *supra* Part II.B. See also Tong & Scheck, *supra* note 121.

²⁰⁷ See *infra* note 231 and accompanying text.

²⁰⁸ Kat Sieniuc, *Lawmaker Pushes Bill to Move Fracking Regulation To States*, LAW360 (Feb. 8, 2017), <https://www.law360.com/articles/889703/lawmaker-pushes-bill-to-move-fracking-regulation-to-states>. See also Raimi & Newell, *supra* note 122.

²⁰⁹ Sieniuc, *supra* note 208.

²¹⁰ David Turnbull, *The not-so-hidden fracking money fueling the 2016 elections*, OIL CHAIN INT'L (Feb. 9, 2016), <http://priceofoil.org/2016/02/09/the-not-so-hidden-fracking-money-fueling-the-2016-elections/>.

²¹¹ *Id.* See also Max B. Baker, *Denton City Council repeals fracking ban*, STARTELEGRAM (June 16, 2015), <http://www.star-telegram.com/news/business/barnett-shale/article24627469.html#storylink=cpy>.

²¹² Baker, *supra* note 211.

²¹³ See Dorner, *supra* note 117.

²¹⁴ See Laura Hancock, *Report: Wyoming's Sen. Barrasso No. 7 in Contributions from Fracking Interests*, CASPER STAR TRIBUNE (Nov. 24, 2013), http://trib.com/news/state-and-regional/govt-and-politics/report-wyoming-s-sen-barrasso-no-in-contributions-from-fracking/article_92203d4b-

Senator John Barrasso of Wyoming was “the seventh highest recipient among all members of Congress in contributions from companies and associations involved in hydraulic fracturing.”²¹⁵ In Colorado, the people did not have the opportunity to vote on fracking because “[t]he anti-fracking committees raised about \$424,000 . . . [while] opponents raised \$16 million in an unprecedented funding gap.”²¹⁶ Ninety percent of the pro-fracking contributions came from energy companies.²¹⁷ According to the Bureau of Indian Affairs, tribes at the Fort Berthold reservation in North Dakota received \$117 million in royalties in 2011.²¹⁸ It is clear that there is money in the fracking industry that interested parties do not want to pass up.

But instead of focusing on the money, the states suing the BLM should consider the environmental damage fracking causes. Three million gallons of fracking wastewater spilled in North Dakota in 2015.²¹⁹ Additionally, the fracking in North Dakota was the cause of 4.5 million metric tons of carbon dioxide being released into the atmosphere in 2012, which is “roughly the equivalent of adding 1 million cars to U.S. highways in 2012.”²²⁰ The damaging effects of these activities occurred in the states and locations the BLM sought to enforce regulation.²²¹ Despite the negative repercussions, states appear imprudent and misguided by large contributions and tax revenue. The BLM’s interests are aligned with the public’s interests as evidenced by “approximately 177,000 public comments on the initial proposed rules from individuals, Federal and state governments and agencies, interest groups, and industry representatives.”²²² If legislators accept donations from the fracking industry for the wrong reasons and without the public interest in mind, it is time for change.

In any case, the industry continues to contribute large amounts of money to state legislators in order to keep the Halliburton loophole in play.²²³ For example, The New York Times put together a list of people who contributed “over [one] million dollars in the 2016 election . . . and there’s some major fracking

f0df-54fc-92a4-70be357a1807.html; Jacy Marmaduke, *Why Colorado Won't Vote on Fracking in 2016*, COLORADOAN (Sept. 27, 2016), <http://www.coloradoan.com/story/news/2016/09/27/why-colorado-wont-vote-fracking-2016/91134232/>; Evelyn Nieves, *The North Dakota Oil Fracking Boom Creates Clash of Money and Devastation*, ALTERNET (Sept. 22, 2012) <http://www.alternet.org/environment/north-dakota-oil-fracking-boom-creates-clash-money-and-devastation>;

²¹⁵ Hancock, *supra* note 214.

²¹⁶ Marmaduke, *supra* note 214.

²¹⁷ *Id.*

²¹⁸ Nieves, *supra* note 214.

²¹⁹ Stefanie Spear, *Worst Fracking Wastewater Spill in North Dakota Leaks 3 Million Gallons Into River*, ECOWATCH (Jan. 23, 2015), <http://www.ecowatch.com/worst-fracking-wastewater-spill-in-north-dakota-leaks-3-million-gallon-1882001918.html>.

²²⁰ Bobby Magill, *North Dakota Gas Flaring Doubles, Pumping CO2 Into Air*, CLIMATE CENT. (Mar. 21, 2014), <http://www.climatecentral.org/news/north-dakota-gas-flaring-doubles-pumping-co2-into-air-17212>.

²²¹ *See generally Wyoming*, 136 F. Supp. 3d 1317.

²²² 80 Fed. Reg. at 16,131.

²²³ Turnbull, *supra* note 210.

money hiding in plain sight.”²²⁴ Sadly, it appears that the environmental and health concerns of the public fall by the wayside.

3. Irreparable Harm

The industry claimed two main harms: “(i) compliance costs and (ii) disclosure of trade secrets and confidential information.”²²⁵ When Congress passed the Energy Policy Act of 2005, it determined that the public interest was best served by removing federal regulation of hydraulic fracturing with one exception—leaving the regulation of fracking using diesel fuels under the jurisdiction of the EPA.²²⁶ Considering the EPA’s history of hiding and misrepresenting factual data in connection with their studies on hydraulic fracturing, it strains credulity to believe they would not also be willing to use diesel fuel in the industry and simply not report it.²²⁷ Accordingly, it is entirely possible that diesel fuel methods are being used in fracking operations unbeknownst to the public, especially considering the industry’s willingness to pay money to circumvent regulation and skew research results.²²⁸ Therefore, the industry has not earned the right to complain about more stringent reporting requirements. The public has a right to know about the chemicals that cause deadly and debilitating diseases.²²⁹

The industry’s complaints about disclosure of trade secrets is meritless. The Fracking Rule proposed by the BLM sought to require “public disclosure of the chemicals used in hydraulic fracturing fluids.”²³⁰ Accordingly, the stated goal of this requirement was to inform the public of chemicals used in fracking fluid; not expose trade secrets.²³¹

The court explained that if chemicals were disclosed, the Freedom of Information Act (FOIA) would not provide the authority.²³² Therefore, the court found that the information could not be disseminated to the public as the BLM’s Fracking Rule intended.²³³ Notwithstanding the court’s ruling, it seems that the proprietary information could be filtered out by a supervisory authority overseeing

²²⁴ *Id.*

²²⁵ See *Wyoming*, 136 F. Supp. 3d 1317 at 1347 (referring to the costs of implementing the new cementing and reporting requirements).

²²⁶ 42 U.S.C. § 300h(d)(1)(B).

²²⁷ See Tong & Scheck, *supra* note 121.

²²⁸ See *id.*; see also Turnbull, *supra* note 210.

²²⁹ *Halting Illegal Dumping of Oil Waste Into California’s Imperiled Water Supplies*, EARTH JUSTICE, <http://earthjustice.org/cases/2015/halting-illegal-dumping-of-oil-waste-into-california-s-imperiled-water-supplies> (“Wastewater can also include fracking fluid, which often contains chemicals that are linked to serious human health problems, including cancer and birth defects.”). See also Sumi, *supra* note 59; Loki, *supra* note 74.

²³⁰ 80 C.F.R. 16128.

²³¹ *Id.*

²³² *Wyoming*, 136 F. Supp. 3d at 1350.

²³³ *Id.*

the disclosure.²³⁴ Moreover, the information that is needed to determine safety throughout the fracking process is of paramount importance and should be disseminated.²³⁵ The public does not want trade secrets, nor does the BLM. They want information on what chemicals oil and gas companies are pumping into the earth.²³⁶ Admittedly, the court was able to poke holes in the BLM's proposed set of Fracking Rules; however, more efficient monitoring should be required for the public's knowledge and safety.²³⁷

4. *Balance of the Equities*

The court was under the impression that neither the industry nor the BLM could demonstrate any environmental harm would result they delayed imposing the Fracking Rule until trial.²³⁸ On top of that, the court explained that the BLM failed to establish any studies or measures of potential environmental harm due to fracking.²³⁹ While this may have been true, the court incorrectly relied on the 2015 EPA study that was downplayed and did not accurately report the effects of fracking on groundwater contamination and USDWs.²⁴⁰ In fact, the court relied on language that was altered by the EPA to advocate that there were no issues with drinking water.²⁴¹ To the court's credit, this information was not available to it when this decision was rendered.²⁴²

Additionally, the court determined that states' existing regulation adequately administered fracking.²⁴³ However, the court's trust in state regulation of fracking may have been misplaced.²⁴⁴ Take California for example, where in March 2015, the Department of Oil, Gas, and Geothermal Resources shut down twelve oil field wells due to concerns about groundwater contamination.²⁴⁵ Pat-

²³⁴ *Id.* at 1349.

²³⁵ *Id.* at 1348.

²³⁶ *Id.* at 1326

²³⁷ See Tong & Scheck, *supra* note 121.

²³⁸ See *id.*

²³⁹ See *id.*

²⁴⁰ See *id.*

²⁴¹ See *id.* ("EPA noted there are mechanisms by which fracking activities have the potential to impact groundwater, the agency did not find evidence that these mechanisms have led to *widespread, systemic impacts on drinking water resources in the United States.*") (internal quotations omitted) (emphasis added). This was the exact language that was determined to be changed right before the study was released in efforts to downplay the true effects of fracking. Tong & Scheck, *supra* note 121.

²⁴² *Wyoming*, 136 F. Supp. 3d at 1350. See also Tong & Scheck, *supra* note 121.

²⁴³ *Wyoming*, 136 F. Supp. 3d at 1350–51. See also 80 Fed. Reg. at 16,178 (observing that "[a]ll state laws apply on Federal lands"); *id.* at 16,187 (referencing regulations in California, Colorado, Montana, New Mexico, North Dakota, Oklahoma, Texas, Utah, and Wyoming and acknowledging that more than ninety-nine percent of total well completions on federal lands since 2010 were located in one of these states).

²⁴⁴ See *supra* Part II.B. See also *supra* notes 82–83.

²⁴⁵ Chris Megerian, *California Orders 12 Oil-field Wells Shut to Protect Groundwater* (Mar. 3, 2015, 7:35 PM), <http://www.latimes.com/local/california/la-me-0304-wells-closed-20150304-story.h>

rick Sullivan of the Center for Biological Diversity explained that despite the state's perceived efforts, officials were still falling short of what should be done: "It's inadequate, it's ridiculous, it's unacceptable. They've allowed decades of injections into these aquifers that should have been protected. Even now, they're still dragging their feet."²⁴⁶ That is just one example. As previously discussed, North Dakota and Wyoming—the litigants arguing that they have fracking under control—have had their issues with regulation.²⁴⁷

In rendering its decision, the court asserted that the industry generates jobs, which serves the public interest.²⁴⁸ The court concluded on that there was no showing of harm to the environment, and in balancing the equities, the public interest was not outweighed.²⁴⁹ Even if the BLM is found to lack regulatory authority, fracking should be monitored at the federal level to ensure consistent application of rules across the fifty states, and to protect of our underground sources of drinking water (USDWs).

Despite claims by commentators that the Safe Drinking Water Act (SDWA) and Clean Water Act (CWA) already provide protection for USDWs, evidence collected by scientists, governmental entities, and environmental groups has suggested otherwise.²⁵⁰ States' erroneous claims that their current regulations will suffice are also defeated by research and data analyses.²⁵¹ However, donations and contributions from the industry may pose an obstacle.²⁵² Regardless, a regulatory gap at the federal level for hydraulic fracturing on Indian and federal lands remains, and states are not adequately regulating these practices. Accordingly, swift action is necessary to create a consistent, safe, and manageable regime for the process of hydraulic fracturing.²⁵³

This case provided the court an opportunity to extend the definition of oil and gas exploration on federal and Indian lands. It was a chance to grant the BLM authority to impose more stringent regulations on fracking for the benefit of our health and our environment. Sadly, the court was bound by statutory interpretation and the strong policy of maintaining the status quo for a preliminary injunction.²⁵⁴ What does this mean moving forward?

tml.

²⁴⁶ *Id.*

²⁴⁷ Spear, *supra* note 219. See also Urbina, *supra* note 80, at 2.

²⁴⁸ *Wyoming*, 136 F. Supp. 3d at 1351 (“[G]eneration of revenue and employment from mineral development projects serves the public interest.”).

²⁴⁹ *Id.*

²⁵⁰ See *supra* Part II.B.

²⁵¹ *Id.*

²⁵² See generally Calvin Sloan, *Fracking Special Interests Spent Big in 2016 Elections* (Nov. 21, 2016, 10:25 AM), <http://www.prwatch.org/news/2016/11/13173/fracking-special-interests-spent-big-2016-elections>.

²⁵³ See *supra* Part II.B.

²⁵⁴ See *Morales v. Trans World Airlines, Inc.*, 504 U.S. 374, 384, (1992); *In re Gledhill*, 76 F.3d 1070, 1078 (10th Cir. 1996).

IV. PROPOSED SOLUTIONS & CURRENT ISSUES

Even if the *Wyoming* court was correct in its grant of a preliminary injunction and the BLM does not have the authority to regulate fracking on the lands at issue, the serious health and environmental risks appear inevitable. Furthermore, if any entity or agency were to regulate, the EPA has proven time and time again that they are unfit to handle it.²⁵⁵ Consequently, with the potential risks posed, the BLM's new rules provide solid standards that can be applied to all fracking activity.²⁵⁶ With or without the new rules, environmental safety hangs in the balance.

Although the *Wyoming* court discussed the pitfalls of the Fracking Rule, many upsides were overlooked. If the rule is implemented, more stringent recordkeeping requirements will be imposed on the industry.²⁵⁷ The negative environmental and health effects are real, and an accurate accounting of chemicals will serve to promote public safety. Since the EPAct of 2005, there has been constant damage to the earth beneath our feet, the water, and the air. This problem has gone unmonitored and slid under the radar for too long, and without the proper action, we may find ourselves in an even deeper hole. The only concern with proposing that Congress act as a solution is that some congressmen are on the payroll as well—especially in “districts with fracking activity”²⁵⁸

Even with the BLM's strong push to create meaningful regulation in the industry, there are forces that create opposition. With President Donald Trump's new administration, the fight against the oil and gas industry may become even more difficult.²⁵⁹

A. Recent Proposed Legislation

The 114th Congress proposed a bill on March 19, 2015, coined the Fracturing Responsibility and Awareness of Chemicals Act (FRAC Act).²⁶⁰ The bill laid out a multitude of findings concerning hydraulic fracturing studies and current regulation on this hydraulic fracturing activity.²⁶¹ The legislative proposal was first introduced to Congress in 2009 and purported to rescind the SDWA exemption for hydraulic fracturing, which would give the EPA authority to regulate the process.²⁶² Within the Act was a requirement that the chemicals used in

²⁵⁵ See generally *supra* Part II.

²⁵⁶ See generally 80 FR 16, 128–16, 222 (Mar. 26, 2015).

²⁵⁷ See *Dorner*, *supra* note 117; *Turnbull*, *supra* note 210.

²⁵⁸ *Redden*, *supra* note 112. See also Citizens for Responsibility and Ethics in Washington, Natural Cash: How the Fracking Industry Fuels Congress http://crew.3cdn.net/29e185cb94de445559_rom6b5st3.pdf.

²⁵⁹ See *infra* Part IV.B.

²⁶⁰ 114th Cong., 1st Session, S. 828.

²⁶¹ *Id.* at Section 2.

²⁶² *Id.*

the fracking process be reported.²⁶³ Interestingly, the 114th Congress determined that “activities relating to hydraulic fracturing (such as surface discharges, wastewater disposal, and air emissions) are already regulated at the Federal level under a variety of environmental statutes, including portions of . . . the Safe Drinking Water Act.”²⁶⁴ The byproducts of fracking are regulated, but the actual process of fracking is not. Furthermore, Congress took note of some research with incorrect findings—similar to those relied on by the Tenth Circuit.²⁶⁵ In fact, they also relied on the 2004 study conducted by the EPA.²⁶⁶ The Act has been introduced in the House and the Senate.²⁶⁷ The proposed bills add the following to the SDWA:

- (1) require disclosure of the chemicals used in the fracturing process
- (2) repeal the hydraulic fracturing exemption established in EPAct 2005, and
- (3) amend the term “underground injection” to include the injection of fluids used in hydraulic fracturing operations, thus authorizing EPA to regulate this process under the SDWA.²⁶⁸

The Senate Bill would also allow states to seek primary enforcement responsibility for hydraulically fractured wells via a similar but different process from obtaining primary enforcement responsibility for other underground injection wells.²⁶⁹ Unfortunately, this proposed legislation has been introduced but not passed. Despite the efforts to crack down on fracking, the massive donations to

²⁶³ *Id.*

²⁶⁴ 114th Cong., 1st Session, S. 828. Section 2 (9)(A).

²⁶⁵ *Id.*

[A] February 2012 study by the Energy Institute at the University of Texas at Austin, entitled ‘Fact-Based Regulation for Environmental Protection in Shale Gas Development’, found that “[n]o evidence of chemicals from hydraulic fracturing fluid has been found in aquifers as a result of fracturing operations”; and on October 1, 2014, the Ground Water Protection Council and State Oil and Gas Regulatory Exchange released a report . . . concluding that ‘In step with dramatic industry growth over the past five years, states have substantially improved groundwater protection laws and regulations governing oil and natural gas production.

Id.

²⁶⁶ *Id.* (“[A] 2004 study by the Environmental Protection Agency, entitled ‘Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs’, found no evidence of drinking water wells contaminated by fracture fluid from the fracked formation . . .”).

²⁶⁷ H.R. 1482 S. 785, *see also* Fracturing Responsibility and Awareness of Chemicals Act, S. 865, 115th Cong. § 2 (2017); Fracturing Responsibility and Awareness of Chemicals Act, H.R. 2012, 115th Cong. § 2 (2017).

²⁶⁸ H.R. 1482 S. 785.

²⁶⁹ *Id.*

congressmen have carried the day.²⁷⁰ Thus, the same dangers and uncertainties associated with fracking will continue to plague our health, our drinking water, and our environment.

B. Trump Administration

The Trump Administration has taken the pressure off of the oil and gas industry to increase protective measures and follow regulations.²⁷¹ Environmentalists are fearful that the Trump Administration will destroy the progress they have made in the last ten years regarding oil and gas policy.²⁷² Trump wants to oversee a great oil and gas drilling boom that will create jobs both onshore and offshore.²⁷³ By definition, that will include repealing regulation and decreasing stress on the energy industry as a whole.²⁷⁴ In essence, the Obama Administration's efforts will be thwarted if new energy policies are put in place and old regulation is repealed. With this new effort by the White House to repeal regulation, the BLM's authority to regulate fracking and our chances at protecting ourselves from the harms it creates looks increasingly less likely. Indeed, Trump will be working to dismantle the EPA, which means even less regulation.²⁷⁵ President Trump indicated during his campaign that he hoped to do away with the EPA, or 'leave a little bit'²⁷⁶ Trump's former head of the transition team for the EPA, Myron Ebell, said that the administration is likely to "propos[e] cuts to the 15,000 [person] staff," and explained that a vast majority of the EPA's work is done at the state level so that number of employees is excessive.²⁷⁷ Though Ebell kept most confidential information under wraps, he suggested a \$1 billion dollar cut to the EPA's \$8 billion dollar budget was a rea-

²⁷⁰ Redden, *supra* note 112 ("So far, the industry has successfully fended off almost all federal regulation of fracking," CREW's report notes.).

²⁷¹ Juliet Eilperin & Steven Mufson & Philip Rucker, *The Oil and Gas Industry is Quickly Amassing Power in Trump's Washington*, WASH. POST (Dec. 14 2016), https://www.washingtonpost.com/politics/the-oil-and-gas-industry-is-quickly-amassing-power-in-trumps-washington/2016/12/14/0d4b26e2-c21c-11e6-9578-0054287507db_story.html?utm_term=.148f732d4cb7.

²⁷² *Id.*

²⁷³ *Id.*

²⁷⁴ Nick Cunningham, *Why The Trump Administration is a Huge Wildcard For The Oil Industry*, OILPRICE.COM (Jan. 31, 2017, 4:00 PM), <http://oilprice.com/Energy/Energy-General/Why-The-Trump-Administration-Is-A-Huge-Wildcard-For-The-Oil-Industry.html>.

²⁷⁵ Michael Biesecker & Seth Borenstein, *Official: Trump Wants to Slash the EPA's Workforce, Budget*, ASSOCIATED PRESS (Jan. 26, 2017), <https://apnews.com/1314fbdaa3cb4995a5e72ed7e77db88c/official-trump-wants-slash-epa-workforce-budget>; see also Valerie Volcovici, *Trump EPA to Propose Repealing Obama's Climate Regulation*, REUTERS (Oct. 3, 2017), <https://www.reuters.com/article/us-usa-epa-carbon-exclusive/trump-epa-to-propose-repealing-obamas-climate-regulation-document-idUSKCN1C90BY>.

²⁷⁶ *Id.* (internal quotations omitted).

²⁷⁷ *Id.*

sonable expectation. The Trump Administration has “already imposed a freeze on the EPA’s social media [and] halted its rulemaking”²⁷⁸

In February 2017, the Senate confirmed the appointment of Scott Pruitt, former Oklahoma attorney general, as the new head of the EPA by a fifty-two to forty-six vote.²⁷⁹ Fascinatingly, Pruitt sued the EPA on multiple occasions, in efforts to prevent federal air and water regulation from being imposed—fourteen times to be exact.²⁸⁰ In thirteen of those cases, co-parties contributed to Pruitt in some way or another.²⁸¹ Pruitt served as leader of the Republican Attorneys General Association, which “[s]ince 2013[] has collected \$4.2 million from fossil-fuel related companies, including Exxon Mobil, Koch Industries, [and] Murray Energy and Southern Company”²⁸² In many of those cases, the aforementioned companies supported the lawsuits filed by Pruitt.²⁸³ Mark Derichsweiler, who led the Oklahoma Department of Environmental Quality division, was frustrated with Pruitt’s approach and said that he “has advocated and stood up for the profits of business . . . at the expense of people who have to drink the water or breathe the air”²⁸⁴ Pruitt advocated for a much smaller and more restrained EPA, criticized federal regulation on water and air, and strongly advocated for state-controlled environmental regulation at his Senate confirmation hearing.²⁸⁵ Obviously, state regulation has failed thus far and has been confirmed to be unsatisfactory in many states with such authority.²⁸⁶

²⁷⁸ Rebecca Leber, *Trump Expected to Sign Executive Orders Hitting the EPA*, MOTHER JONES (Feb. 16, 2017, 11:52 PM), <http://www.motherjones.com/environment/2017/02/trump-executive-orders-epa>.

²⁷⁹ Coral Davenport, *Senate Confirms Scott Pruitt as E.P.A. Head*, N.Y. TIMES (Feb. 17, 2017), <https://www.nytimes.com/2017/02/17/us/politics/scott-pruitt-environmental-protection-agency.html>.

²⁸⁰ Coral Davenport, *Scott Pruitt, Testifying to Lead E.P.A., Criticizes Environmental Rules*, N.Y. TIMES (Jan. 18, 2017), <https://www.nytimes.com/2017/01/18/us/politics/scott-pruitt-testifying-to-lead-epa-criticizes-environmental-rules.html> [hereinafter *Scott Pruitt, Testifying*].

²⁸¹ *Id.*

²⁸² Coral Davenport, *Counseled by Industry, Not Staff, E.P.A. Chief Is Off to a Blazing Start*, N.Y. TIMES (July 1, 2017), <https://www.nytimes.com/2017/07/01/us/politics/trump-epa-chief-pruitt-regulations-climate-change.html?mcubz=3>.

²⁸³ *Id.*

²⁸⁴ Eric Lipton and Coral Davenport, *Scott Pruitt, Trump’s E.P.A. Pick, Backed Industry Donors Over Regulators*, N.Y. TIMES (Jan. 14, 2017), <https://www.nytimes.com/2017/01/14/us/scott-pruitt-trump-epa-pick.html>. (internal citations omitted).

²⁸⁵ *Scott Pruitt, Testifying, supra* note 268.

²⁸⁶ See *supra* Part II.B.; Urbina, *supra* note 80; Spear, *supra* note 219; *supra* note 83; Penn. Dep’t of Env’tl. Prot. Water Supply Determination Letters, http://files.dep.state.pa.us/OilGas/BOGM/BOGMPortalFiles/OilGasReports/Determination_Letters/Regional_Determination_Letters.pdf; Brian E. Fontenot et al., *An Evaluation of Water Quality in Private Drinking Water Wells Near Natural Gas Extraction Sites in the Barnett Shale Formation*, ENVTL. SCI. & TECH. (July, 25, 2013), <http://pubs.acs.org/doi/abs/10.1021/es4011724> (finding higher levels of selenium and arsenic in wells near drilling in the Barnett Shale (Texas) region compared with water that was farther from drilling); Darrah, *supra* note 18.

Shockingly, emails between Pruitt and the oil and gas industry have recently been released as required by a judge's order.²⁸⁷ The emails make it clear that Pruitt had, and probably still does have, a "very cozy relationship [with] . . . Devon Energy, as well as other coal, oil and gas companies," according to Nick Surgey, the research director at the Center for Media and Democracy.²⁸⁸ In fact, some of the emails from major players in the oil and gas industry congratulated the new EPA head: "Thank you to your respective bosses and all they are doing to push back against President Obama's EPA and its axis with liberal environmental groups to increase energy costs for Oklahomans and American families across the states."²⁸⁹ Although this statement is anecdotal, it demonstrates that at least some companies in the industry have interests in repelling efforts to fix the environmental regulations and hardships placed on them.

Pruitt also interviewed for high-level positions in the EPA and considered fellow Oklahoma Republican, Senator James M. Inhofe, who stated: "there has never been an instance of ground water contamination caused by hydraulic fracturing . . . for oil and natural gas."²⁹⁰

V. CONCLUSION

Despite the law that may have limited the *Wyoming* court's ability to authorize the BLM to regulate hydraulic fracturing, the reality is that the industry is destroying the environment, creating serious health risks, and paying politicians and legislators to look the other way. The contributions made to support the industry should be scrutinized. Congress should impose stringent regulations that require more safety precautions, more testing for the future, and more reporting requirements so that the American people remain informed of what is going on in their backyards. However, in light of Scott Pruitt's history and his new position as head of the EPA, it is unclear where regulation is headed. If his plans to cut down the EPA prevail, even more environmental regulatory power will remain with the states, which seems unsatisfactory given the clear incentives—that is, receiving massive amounts of jobs, tax money, and contributions to their legislators. If that is the case, no environmentalist or rational thinker can impact the current state of affairs, and we may be in for serious earthquakes, deadly diseases, and contamination of our fresh water resources.

²⁸⁷ Oliver Milman & Dominic Rushe, *Thousands of Scott Pruitt's Emails Just Hit the Internet. Here Are the Wildest, Scariest Bits*, MOTHER JONES (Feb. 22, 2017, 7:55 PM), <http://www.motherjones.com/environment/2017/02/new-epa-head-scott-pruitts-emails-reveal-close-ties-fossil-fuel-interests>.

²⁸⁸ *Id.*

²⁸⁹ *Id.*

²⁹⁰ Dave Levitan, *James Inhofe Makes Questionable Claims On Fracking, Water Contamination*, HUFFINGTON POST (Mar. 27, 2015), http://www.huffingtonpost.com/2015/03/27/james-inhofe-fracking_n_6957406.html.

