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The Feud Is Getting Old: Why the Oil and Gas Industry Should Lobby for the Federal Regulation of Hydraulic Fracturing Under the Safe Drinking Water Act

Lisa A. Cumming*

ABSTRACT

The oil and gas industry has fought to ensure that the lion's share of the power to regulate hydraulic fracturing ("fracking") remains with the states, as opposed to with the federal government. In response to the known negative effects of fracking, some states have heavily restricted fracking or banned the process entirely, resulting in fracking regulations that vary widely from state to state. In the absence of a comprehensive federal regime regulating fracking, citizens in states with lax regulations are more vulnerable to the negative health and environmental effects of fracking.

Now, more studies are revealing how fracking can harm human health and the environment. Particularly devastating is fracking's effect on drinking water. The Environmental Protection Agency (EPA) has found that fracking can poison drinking water during all stages of the fracking process. Thus, drinking water is at risk in all jurisdictions that allow fracking to occur.

In response to the risks fracking poses to human health and the environment, some states have passed increasingly strict fracking regulations. This response has created great variation between states' regulatory regimes. Greater discrepancies in state fracking regulatory regimes will negatively affect oil and gas corporations by increasingly narrowing where such corporations are able to operate. Thus, oil and gas corporations, under the guidance of the corporate social responsibility ("CSR") doctrine, should lobby for the federal regulation of fracking under the Safe Drinking Water Act (SDWA). The SDWA would provide for increased protections of drinking-water resources without imposing too high a regulatory-compliance burden on oil and gas corporations.

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I. INTRODUCTION

In 2011, Bryan Latkanich agreed to let Chevron Appalachia¹ (“Chevron”) hydraulically fracture² (“frack”) two oil and gas wells on his property, where he and his three-year-old son, Ryan, lived.³ In mid-2012, Bryan started receiving monthly royalty checks from Chevron, some for as much as \$11,000.⁴ At the time, Bryan desperately needed the money,⁵ but he could have never predicted that, within a year, the money would no longer be worth the toll that fracking had inflicted on his family.⁶

Soon after Chevron began fracking the wells on Bryan’s property, Bryan noticed that his drinking water “developed a metallic taste.”⁷ Unfortunately for Bryan and his son, the taste of the water was just the opening scene to the nightmare that was yet to unfold.

1. Chevron Appalachia is a branch of Chevron, a California-based energy corporation. *See Chevron Plans to Leave Appalachia, Following the Footsteps of Other Giants*, PITTSBURGH POST-GAZETTE (Dec. 11, 2019, 5:50 PM), <http://bit.ly/2OVQ3np>.

2. Hydraulic fracturing is an oil and gas development technique that involves injecting fluid under high pressure down a well into a rock formation. *See What Is Hydraulic Fracturing?*, U.S. GEOLOGICAL SURVEY, <https://on.doi.gov/2V2HIT7> (last visited Feb. 15, 2020); *see also* discussion *infra* Section II.B.

3. *See* Neela Banerjee, *Special Report: How the U.S. Government Hid Fracking’s Risks to Drinking Water*, STATEIMPACT PA. (Nov. 22, 2017, 8:00 AM), <https://n.pr/38zPmYR>.

4. *Id.*

5. *See id.*

6. *See id.*

7. *Id.*

The next year, in 2013, Bryan was bathing his son in the tub in their family home.⁸ Bryan turned on the faucet to fill the tub, water for which came from the well located beneath the family property.⁹ Water for the family home had always come from the well and had never given Bryan cause for concern.¹⁰ Unfortunately, on this fateful day, little Ryan emerged from the tub covered in “bleeding sores.”¹¹

Bryan called the Pennsylvania Department of Environmental Protection (DEP) and requested that the department test his well water.¹² Subsequent DEP testing revealed no issues with Bryan’s water.¹³ Three years after the incident, though, Ryan “started to soil himself almost daily,” even once at school.¹⁴ Bryan continued to suspect that, despite the inconclusive testing results, the well water was causing his young son distress.¹⁵ While water is an absolute necessity, what was a parent, like Bryan, to do, when he could not trust the safety of the water he and his son used to clean, cook, and drink?¹⁶

Both Chevron and the Pennsylvania DEP denied that fracking changed the character of Bryan’s water.¹⁷ However, in 2017, a DEP test confirmed that sodium levels in Bryan’s water had “more than doubled” since Chevron began fracking on the property in 2012.¹⁸ A Duquesne University study of Bryan’s water found that the water quality had deteriorated since fracking began in 2012.¹⁹ However, the authors of the study could not point to a cause, in part because oil and gas companies do not have to disclose what chemicals they use in their fracking fluid if they can obtain an exemption from the state government.²⁰ The scientific

8. *See id.*

9. *See id.*

10. *See id.*

11. *Id.*

12. *See id.*

13. *See Banerjee, supra* note 3.

14. *Id.*

15. *See id.*

16. *See id.*

17. *See id.*

18. InsideClimate News, *Living with Fracking in Washington County, Pennsylvania*, YOUTUBE (Nov. 15, 2017), <http://bit.ly/3bHmRKS>. *See generally*, *Salt and Drinking Water*, N.Y. STATE DEP’T OF HEALTH, <https://on.ny.gov/3eEfgk6> (last visited Jan. 3, 2021) (explaining that sodium levels in water is of concern to those who have medical conditions like “high blood pressure, or certain heart, kidney or liver diseases”); *Sodium (Salt) in Drinking Water Fact Sheet*, MASS. DEP’T OF PUBLIC HEALTH, <https://bit.ly/38EfQdU> (last visited Jan. 15, 2021) (explaining that increased levels of sodium in drinking water can particularly affect those with kidney failure, as increased sodium levels in drinking water can cause an increase in body fluid that the kidneys cannot remove, causing the kidneys to swell and shut down).

19. *See Banerjee, supra* note 3.

20. *See* Matthew McFeeley, *The Disclosure Debates: The Regulatory Power of an Informed Public*, 38 VT. L. REV. 849, 859 (2013) (explaining that state rules governing the

community is currently “working with piecemeal disclosures and confidentiality agreements,” which have obscured “the true risks associated with hydraulic fracturing.”²¹ What this means for Bryan, and many other families similarly situated: “what’s in the water . . . nobody knows.”²²

However, even with limited information,²³ scientists are continually publishing studies about the negative effects of fracking on human health and the environment.²⁴ While the federal government is involved in certain aspects of fracking regulation,²⁵ states are largely responsible for creating the schemes that regulate fracking.²⁶ In response to the known negative effects of fracking felt in their communities, some state and local governments are imposing increasingly strict fracking regulations.²⁷ As a result, fracking regulations vary widely from state to state.²⁸ Absent a comprehensive federal fracking regime, states are left without uniform minimum standards to regulate in accordance with, and citizens in states with less regulation are left more vulnerable to the negative effects of fracking.²⁹

disclosure of chemicals used during fracking “vary widely in their scope, substance, and in the exemptions they grant for claims that information is a trade secret”).

21. Brie D. Sherwin, *Chocolate, Coca-Cola, and Fracturing Fluid: A Story of Unfettered Secrecy, Toxicology, and the Resulting Public Health Implications of Natural Gas Development*, 77 OHIO ST. L.J. 593, 624–25 (2016).

22. InsideClimateNews, *supra* note 18.

23. See, e.g., Sherwin, *supra* note 21, at 635; Diego Garcia, *When Risk Turns into Reality: The “Canaries” in the Oil Wells of California*, 28 BERKELEY LA RAZA L.J. 103, 104 (2018) (“The toxicity and biodegradability of more than half the chemicals used in hydraulic fracturing remains uninvestigated, unmeasured, and unknown. Basic information about how these chemicals would move through the environment does not exist.”).

24. See discussion *infra* Section II.B.

25. See James K. Pickle, *Fracking Preemption Litigation*, 6 WASH. & LEE J. ENERGY, CLIMATE & ENV’T. 295, 309 (2015) (explaining that the Clean Water Act regulates water run-off and discharges into surface waters, the Safe Drinking Water Act regulates the injection of fluid waste after fracking is complete, and the Clean Air Act regulates emissions into the air).

26. See Ellen Burford, *The Need for Federal Regulation of Hydraulic Fracturing*, 44 URB. LAW. 577, 581 (2012) (“Hydraulic fracturing is largely unregulated by the federal government.”).

27. See discussion *infra* Section III.A.

28. See MARY TIEMANN & ADAM VANN, CONG. RESEARCH SERV., R41760, HYDRAULIC FRACTURING AND SAFE DRINKING WATER ACT REGULATORY ISSUES SUMMARY 6 (2015).

29. See Burford, *supra* note 26, at 583 (“There is evidence that the states are minimally enforcing the current regulations, rendering it necessary for the federal government to step in and take over baseline regulation.”); see, e.g., Yelena Ogneva-Himmelberger & Liyao Huang, *Spatial Distribution of Unconventional Gas Wells and Human Populations in the Marcellus Shale in the United States: Vulnerability Analysis*, 60 APPLIED GEOGRAPHY 165, 173 (2015) (finding that fracking is more likely to occur in lower-income areas of Pennsylvania).

To combat the regulatory discrepancies, the federal government, prompted by the lobbying efforts of oil and gas corporations, could regulate fracking under the Safe Drinking Water Act (SDWA).³⁰ If the SDWA regulated fracking not just in instances where diesel fuel is used, the federal government could set pollution control standards for fracking, providing state governments minimum standards to adhere to.³¹ The SDWA would provide a minimum level of protection for all citizens, yet would not place an impossible compliance burden on oil and gas corporations.³² Lobbying for the federal regulation of fracking under the SDWA would signify a shift away from the longstanding theory³³ that corporations principally exist to serve their shareholders and make a profit.³⁴ Instead, if oil and gas corporations were to lobby for the federal regulation of fracking under the SDWA, those corporations would be taking the interests of communities, and not just the interests of shareholders, into account.³⁵

Part II of this Comment begins by explaining what fracking is.³⁶ Part II then details the human health and environmental consequences of fracking, including its impact on drinking water.³⁷ Part II then discusses current fracking regulations³⁸ and offers an overview of how lobbying is used as a tool to influence policy and consumers.³⁹ Finally, Part II defines the corporate social responsibility (“CSR”) doctrine and explains a relevant critique of the long-standing theory on the purpose of a corporation.⁴⁰

Next, Part III explains how oil and gas corporations should lobby for the federal regulation of fracking under the SDWA because, absent a minimum federal standard that states must at least meet, states may

30. See discussion *infra* Section III.B. The SDWA protects drinking-water quality in the United States. See *Laws and Regulations: Summary of the Safe Drinking Water Act*, EPA, <https://bit.ly/38Fhbkb> (last visited Jan. 16, 2020). The SDWA directs the EPA to set “minimum standards to protect tap water and requires all owners or operators of public water systems to comply with these primary (health-related) standards.” *Id.* Pertinent to fracking, the SDWA also happens to be the primary federal law that regulates “underground injection activities.” TIEMANN & VANN, *supra* note 28, at SUMMARY.

31. See Safe Drinking Water Act of 1974 § 1421(b)(1), 42 U.S.C. § 300h (2018) (defining the balance of power between the EPA and state governments in regulating state underground injection control programs).

32. See discussion *infra* Section II.

33. The Michigan Supreme Court, in the case *Dodge v. Ford Motor Co.*, wrote in dicta that “a business corporation is organized and carried on primarily for the profit of the stockholders.” *Dodge v. Ford Motor Co.*, 170 N.W. 668, 684 (Mich. 1919).

34. See discussion *infra* Section II.D.

35. See discussion *infra* Section II.E.

36. See discussion *infra* Section II.A.

37. See discussion *infra* Section II.B.

38. See discussion *infra* Section II.C.

39. See discussion *infra* Section II.D.

40. See discussion *infra* Section II.E.

continue to tighten their fracking regulations and, as a result, push corporations out of their jurisdictions.⁴¹ Part III then argues that states will respond favorably to efforts from oil and gas corporations lobbying for federal regulation because such efforts will demonstrate that oil and gas corporations are cognizant of fracking's harms to human health and the environment.⁴² Ultimately, Part III argues that oil and gas corporations should lobby for the federal regulation of fracking under the SDWA.⁴³ Finally, Part IV offers concluding statements on the issues raised by this Comment.⁴⁴

II. BACKGROUND

Oil and gas corporations engaging in fracking have long pushed against the federal regulation of fracking.⁴⁵ Fracking gained prominence in the 1990s⁴⁶ and has since been applauded for ushering in American energy independence.⁴⁷ However, because fracking is a relatively new technique to be commercialized,⁴⁸ the body of science on the health and environmental effects attributed to fracking is still developing.⁴⁹ An understanding of fracking,⁵⁰ fracking's effects,⁵¹ lobbying,⁵² and the corporate social responsibility doctrine⁵³ will provide a solid foundation for the thesis of this Comment.

A. *An Overview of Fracking*

The oil and gas industry first became interested in fracking in the late 1990s, when a Texas oil tycoon proved that, by pumping fluid into hydrocarbon-rich rock formations, producers could extract oil and gas from formations that were previously inaccessible using conventional techniques.⁵⁴ The tycoon, George Mitchell, wanted to extract natural gas

41. See discussion *infra* Section III.A.

42. See discussion *infra* Section III.A.

43. See discussion *infra* Sections III.B, III.C.

44. See discussion *infra* Section IV.

45. See JAMES T. O'REILLY, *THE LAW OF FRACKING* § 19.2 (Thomson Reuters 2019).

46. See Jon Gertner, *The Lives They Lived: George Mitchell*, N.Y. TIMES MAG. (DEC. 21, 2013, 4:30 PM), <https://nyti.ms/2SvAk0E>.

47. See, e.g., Victor Davis Hanson, *The Fracking Industry Deserves Our Gratitude*, NAT'L REV. (July 6, 2017, 4:00 AM), <http://bit.ly/2SVjnMm> (expressing the view that fracking is responsible for making America a large energy producer).

48. See Gertner, *supra* note 46.

49. See discussion *infra* Section II.B.

50. See discussion *infra* Sections II.A, II.C.

51. See discussion *infra* Section II.B.

52. See discussion *infra* Section II.D.

53. See discussion *infra* Section II.E.

54. See Gertner, *supra* note 46.

from the Barnett Shale in Texas.⁵⁵ The Barnett Shale is a very thick layer of rock that, before Mitchell, contained natural gas thought by industry to be impossible to extract.⁵⁶ In 1997, Mitchell changed the field by successfully fracking a well in the Barnett Shale.⁵⁷

While fracking is often used to casually describe the entire process of extracting hydrocarbons, fracking is just one part of the drilling process to extract oil and gas resources.⁵⁸ Fracking occurs when fluid is pumped down a borehole⁵⁹ to create fractures in a chosen basin,⁶⁰ specifically within a shale gas play.⁶¹ The fluid, referred to as fracking fluid, is usually composed of “water, proppant and chemical additives.”⁶² The proppant, which is commonly composed of particles like sand or ceramic pellets, is what holds open the fractures.⁶³ When the fracking fluid is removed, hydrocarbons⁶⁴ that would have otherwise been trapped in the shale gas play flow freely out of the fractures and up the borehole.⁶⁵ Leftover fracking fluid is either treated to remove the chemicals and then discarded into surface waters, used again on other fracking jobs, or left untreated and stored in underground wells.⁶⁶

The process of fracking is one part of the oil and gas extraction process because fracking comes after the borehole⁶⁷ has been drilled by a

55. *See id.*

56. *See id.*

57. *See id.* (“Daniel Yergin, the oil-industry analyst and historian, says Mitchell’s fracking technique is so far ‘the most important, and the biggest, energy innovation of this century.’”).

58. *See* Jeff Brady, *Focus on Fracking Diverts Attention from Horizontal Drilling*, NPR (Jan. 27, 2013, 5:52 AM), <https://n.pr/38yOaVK>.

59. “A borehole is the shaft drilled into the surface of the earth by a drilling rig.” U.S. DEP’T OF ENERGY, *Shale Gas Glossary* 1 (2013), <http://bit.ly/2SvYRTe> [hereinafter *Shale Gas Glossary*].

60. A basin is a bowl-shaped depression in the earth’s surface. *See Encyclopedic Entry: Basin*, NAT’L GEOGRAPHIC: RESOURCE LIBR., <http://bit.ly/37xFxl> (last visited Oct. 11, 2019).

61. A shale gas play is located within a basin and is “[a] set of discovered, undiscovered or possible natural gas accumulations that exhibit similar geological characteristics.” *Shale Gas Glossary*, *supra* note 59, at 5.

62. *The Process of Unconventional Natural Gas Production*, U.S. ENVTL. PROT. AGENCY, <http://bit.ly/2SyVSta> (last visited Oct. 11, 2019).

63. *See id.*

64. Hydrocarbons are “any of a class of organic chemical compounds composed only of the elements carbon (C) and hydrogen (H). . . . Hydrocarbons are the principal constituents of petroleum and natural gas.” *Hydrocarbon*, ENCYC. BRITANNICA, <http://bit.ly/37us8BZ> (last visited Oct. 11, 2019).

65. *See The Process of Unconventional Natural Gas Production*, *supra* note 62.

66. *See, e.g.*, Lee R. Hansen, *Transport, Storage, and Disposal of Fracking Waste*, CONN. OFFICE OF LEGIS. RES. (2014), <http://bit.ly/38zzHsr>.

67. “A borehole is the shaft drilled into the surface of the earth by a drilling rig.” *Shale Gas Glossary*, *supra* note 59, at 1.

drilling rig.⁶⁸ Another important distinction is that fracking is not synonymous with horizontal drilling,⁶⁹ fracking just refers to the process of causing fractures in the shale rock,⁷⁰ initially by way of horizontal or vertical drilling, and then by pumping fracking fluid at high pressure down the wellbore to enlarge the fractures and extract shale gas⁷¹ or oil.⁷² This distinction matters in determining how fracking should be regulated because fracking is just one stage in the process of extracting oil and gas⁷³ and different stages are subject to different regulatory schemes.⁷⁴ For example, the underground wells that hold wastewater fracking fluid for storage purposes are regulated,⁷⁵ as Class II⁷⁶ injection wells, by the SDWA, either by the EPA or by states that have received primacy.⁷⁷ Fracking, though—save for a small carve-out for when the fracking fluid contains diesel fuel—is not regulated under the SDWA.⁷⁸ Notably, because fracking is a relatively new technique within the oil and gas industry,⁷⁹ the body of information about the negative effects to human health and the environment is incomplete because scientists have not yet had enough time to discover all the negative effects.⁸⁰

68. A drilling rig is a large structure that includes a drill which drills into the surface to create boreholes. *See id.* at 2.

69. Horizontal drilling is “[t]he process of drilling the deeper portion of a well horizontally to enable access to more of the target formation.” *Id.* at 3.

70. “[A] fissile rock that is formed by the consolidation of clay, mud, or silt, has a finely stratified or laminated structure, and is composed of minerals essentially unaltered since deposition[.]” *See Shale*, MERRIAM-WEBSTER.COM DICTIONARY, <http://bit.ly/2Sx3jkL> (last visited Oct. 11, 2019).

71. Shale gas is a natural gas that sits in “tight, low permeability shale layers,” which is more difficult to extract than the natural gas that seeped out of those layers and “into sandy rock layers adjacent to the shales.” *What is Shale Gas?*, U.S. ENERGY DEP’T (2013), <http://bit.ly/3bENtMp>.

72. *See The Process of Unconventional Natural Gas Production*, *supra* note 62.

73. *See supra* notes 58–72 and accompanying text.

74. *See* Michael P. Joy & Sashe D. Dimitroff, *Oil and Gas Regulation in the United States: Overview*, THOMSON REUTERS PRAC. L. COUNTRY Q&A, <http://bit.ly/2V06umD> (last visited Feb. 15, 2020) (explaining the various levels of government that regulate different aspects of the oil and gas recovery process).

75. Safe Drinking Water Act of 1974 § 1421(a)(1), 42 U.S.C. § 300h (2018) (“The Administrator shall publish proposed regulations for State underground injection control programs . . .”).

76. Class II injection wells are used for the injection of fluids associated with oil and gas production. *Class II Oil and Gas Related Injection Wells*, U.S. ENVTL. PROT. AGENCY, <http://bit.ly/2uTFXBs> (last visited Jan. 26, 2020).

77. *See id.*

78. *See* discussion *infra* Section II.C.1 (explaining how the exemption for fracking using anything other than diesel fuels came about).

79. *See* Gertner, *supra* note 46.

80. *See* Sherwin, *supra* note 21, at 615.

B. *Effects of Fracking*

Scientists are uncovering more information about the negative health and environmental effects of fracking,⁸¹ including, but not limited to, effects on birth weights,⁸² increased asthma attacks,⁸³ increased incidences of earthquakes,⁸⁴ and, most relevant to this Comment, drinking-water contamination.⁸⁵

According to the EPA, fracking can contaminate drinking water at five possible stages of the fracking process: “water acquisition,” “chemical mixing,” “well injection,” “produced water handling,” and “wastewater disposal and reuse.”⁸⁶ If authorized, the SDWA could potentially regulate “issues related to well construction, operation, monitoring, and closure” under its Underground Injection Control (“UIC”) program.⁸⁷ Thus, the SDWA could impose regulations at the well injection stage, when fracking fluid is pumped down the borehole, in addition to the regulations already in existence for the injection of fracking fluid wastewater underground.⁸⁸

81. See Seth B.C. Shonkoff & Jake Hays, *The Science on Shale Gas Development*, PSE (Apr. 20, 2016), <http://bit.ly/2SvALIk> (explaining that, in 2010, only six peer-reviewed studies on either the health or environmental impacts of fracking were published and, in 2015, the number of published, peer-reviewed studies increased to 226).

82. See Janet Currie et al., *Hydraulic Fracturing and Infant Health: New Evidence from Pennsylvania*, SCI. ADVANCES, Dec. 2017, at 2–6, available at <http://bit.ly/2Huhh0E> (finding that the health effects of fracking on babies in utero “are highly local,” and that babies born to mothers who lived within three kilometers of an active fracking site were more likely to suffer from lower birth weights than babies born to mothers who lived further away from active fracking sites, with the negative health effects increasing as the distances between the active fracking site and the mother decrease).

83. See Bhavna Shamasunder et al., *Community-Based Health and Exposure Study Around Urban Oil Developments in South Los Angeles*, INT’L J. ENVTL. RES. & PUB. HEALTH, Jan. 2018, at 10–11; see also Sara G. Rasmussen et al., *Association Between Unconventional Natural Gas Development in the Marcellus Shale and Asthma Exacerbations*, 176 JAMA INT’L MED. 1334, 1342 (2016).

84. See Robert J. Skoumal et al., *Earthquakes Induced by Hydraulic Fracturing Are Pervasive in Oklahoma*, 123 J. GEOPHYSICAL RES. 10918, 10933 (2018).

85. Because this Comment focuses exclusively on the SDWA, which protects drinking-water resources through the promulgation of federal minimum standards for state UIC programs, this Comment discusses in-depth only fracking’s effects on drinking water. See Josh Woda et al., *Detecting and Explaining Why Aquifers Occasionally Become Degraded Near Hydraulically Fractured Shale Gas Wells*, PROC. NAT’L ACAD. SCI. 12349, 12357 (2018).

86. U.S. ENVTL. PROT. AGENCY OFF. OF RES. & DEV., EPA-600-R-16-236FA, HYDRAULIC FRACTURING FOR OIL AND GAS: IMPACTS FROM THE HYDRAULIC FRACTURING WATER CYCLE ON DRINKING WATER RESOURCES IN THE U.S., at ES-10 (2016) [hereinafter EPA-600-R-16-236FA].

87. TIEMANN & VANN, *supra* note 28, at 28.

88. See *supra* notes 75–78 and accompanying text (explaining how the EPA currently regulates fracking wastewater, but not the process of fracking proper).

The EPA has reported that fracking can harm drinking-water sources in four ways during the well-injection stage of fracking.⁸⁹ First, inadequately constructed wellbores can allow fracking fluid to leak into underground drinking-water sources.⁹⁰ Second, the fractures in the reservoir rock can pierce underground drinking-water resources and allow fracking fluid to contaminate the drinking water within the underground resource.⁹¹ Third, the existence of other wells near a fracking operation can lead to increased pressure in the area, which can damage neighboring wells and lead to the leakage of fracking fluid into the ground.⁹² Fourth, if abandoned well sites are not sealed properly,⁹³ fracking fluid can travel through a fracture, up an abandoned well path, and geyser upwards.⁹⁴ The EPA has documented occurrences in which contaminations during these different instances have taken place.⁹⁵

The EPA is certainly not the only scientific body working to uncover the negative effects of fracking on drinking water.⁹⁶ And while scientists in this field are working with limited information,⁹⁷ what they *have* found so far suggests that fracking can contaminate drinking-water

89. See EPA-600-R-16-236FA, *supra* note 86, at ES-29.

90. *See id.* Other studies on the risks that fracking poses to drinking water reiterate this point, that “integrity of the injection well is one of the most important factors to be considered when dealing with water resources contamination.” Nima Jabbari et al., *Assessing the Groundwater Contamination Potential from a Well in a Hydraulic Fracturing Operation*, 3 J. SUSTAINABLE ENERGY ENGINEERING 66, 68 (2015) (“If the well integrity is not maintained, groundwater can be a target for the contaminants originating from the initial injectant or found in the returned fluid. From the human health point of view, groundwater pollution is critical, more specifically for regions with water shortage and high demand for groundwater tables.”).

91. *See* EPA-600-R-16-236FA, *supra* note 86, at 24.

92. *See id.*

93. *See* Tom Scherer, *A Guide to Plugging Abandoned Wells*, N.D. ST. U. EXTENSION SERV. (July 2016), <http://bit.ly/38t5StH> (explaining the risks of leaving abandoned wells unsealed).

94. *See* EPA-600-R-16-236FA, *supra* note 86, at 28.

95. *See id.* at 24, 26 (citing examples from Bainbridge Township, Ohio, where an inadequately constructed gas well allowed methane to leak into a local drinking-water supply, and from Killdeer, North Dakota, where another inadequately constructed well burst and hydraulic-fracturing fluid seeped into groundwater).

96. *See generally* *Hydraulic Fracturing Can Potentially Contaminate Drinking Water Sources*, NAT. RES. DEF. COUNCIL, <https://on.nrdc.org/2HvN0hH> (last visited Feb. 15, 2019) (explaining how the National Resources Defense Council is investigating fracking’s effects on drinking water resources).

97. *See, e.g.*, Sherwin, *supra* note 21, at 624–25 (“Because the scientific community is working with piecemeal disclosures and confidentiality agreements, the true risks associated with hydraulic fracturing are unknown. And, even those with an expertise in environmental public health are being shut out of the conversation at a higher level.”); *see also* Garcia, *supra* note 23, at 104 (“The toxicity and biodegradability of more than half the chemicals used in hydraulic fracturing remains uninvestigated, unmeasured, and unknown. Basic information about how these chemicals would move through the environment does not exist.”).

resources.⁹⁸ Limited information is, in part, attributed to varying fracking-fluid-disclosure regimes, as states have been, in large part, left with the duty to regulate fracking.⁹⁹

C. Current Fracking Regulations

Given that fracking is regulated almost entirely by the states, the process is subject to different regulatory schemes in different states.¹⁰⁰ Despite the fact that a federal environmental statute, the SDWA, exists to protect public drinking-water sources, it contains an exemption for fracking.¹⁰¹ The exemption authorizes the EPA to regulate fracking through its Underground Injection Control (“UIC”) program¹⁰² only when diesel fuel is used in the fracking fluid.¹⁰³ As a result, fracking is basically unregulated by the SDWA because hydraulic fracturing using diesel fuels is incredibly rare.¹⁰⁴

1. The Safe Drinking Water Act

Congress enacted the SDWA in 1974 to protect public drinking-water sources.¹⁰⁵ Through the SDWA, Congress gave the EPA the authority to regulate state UIC programs.¹⁰⁶ To regulate UIC programs, the Administrator of the EPA (“Administrator”), the head of the EPA who is responsible for enforcing the EPA’s various acts,¹⁰⁷ promulgates minimum standards that state UIC programs must meet in order for those programs to be approved by the EPA.¹⁰⁸ These minimum standards are designed by the Administrator to prevent any underground injections that

98. See *Hydraulic Fracturing Can Potentially Contaminate Drinking Water Sources*, *supra* note 96.

99. See, e.g., Chris Boling, *Hydraulic Fracturing and Chemical Disclosure: What You Do Not Know Could Hurt You!*, 46 LOY. L.A. L. REV. 257, 262 (2012) (analyzing “various disclosure approaches taken by current state regulations”).

100. See NATHAN RICHARDSON ET AL., *THE STATE OF STATE SHALE GAS REGULATION I* (2013).

101. See NAT. RES. DEF. COUNCIL, *NRDC POLICY BASICS: FRACKING* (Feb. 2013), <https://on.nrdc.org/2SSBwu7>.

102. UIC programs regulate “issues related to well construction, operation, monitoring, and closure”. TIEMANN & VANN, *supra* note 28, at 28.

103. See Safe Drinking Water Act of 1974 § 1421(a)(1), 42 U.S.C. § 300h (2018).

104. See TIEMANN & VANN, *supra* note 28, at 22 (“EPA has not received permit applications for hydraulic fracturing activities using diesel fuels.”).

105. See *Summary of the Safe Drinking Water Act*, U.S. ENVTL. PROT. AGENCY, <http://bit.ly/2SRcVFU> (last visited Jan. 26, 2020) (“The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the U.S.”).

106. See Safe Drinking Water Act of 1974 § 1421(a)(1), 42 U.S.C. § 300h (2018) (“The Administrator shall publish proposed regulations for State underground injection control programs . . .”).

107. See *EPA’s Administrator: Michael S. Regan*, U.S. ENVTL. PROT. AGENCY, <http://bit.ly/2tSfJu2> (last visited Jan. 26, 2020).

108. See Safe Drinking Water Act of 1974 § 1421(b)(1), 42 U.S.C. § 300h (2018).

could endanger drinking-water sources.¹⁰⁹ State environmental protection agencies must ensure their UIC programs meet the minimum standards set by the Administrator in order to obtain EPA approval to implement the SDWA's requirements.¹¹⁰

In setting minimum standards under the SDWA, the Administrator is statutorily required¹¹¹ to engage in a cost-benefit analysis ("CBA") and consider both "the costs of pollution reductions"¹¹² and the effects on environmental and human health.¹¹³ When doing CBA, the Administrator considers both direct and indirect costs.¹¹⁴ Direct costs are usually equal to the money that "regulated firms or individuals must spend to comply with regulatory requirements."¹¹⁵ Indirect costs can include an estimate of the impact on employment or the economy as a result of complying with the proposed standard.¹¹⁶ The benefits, to be balanced against the direct and indirect costs, include any improvements to the environment and benefits to human health that the proposed standard aims to bring about.¹¹⁷ Assessing benefits usually involves assigning a dollar value to benefits which are difficult to monetize, such as saving human lives, preserving forests, and preventing illness.¹¹⁸ Conducting CBA ensures that agencies do not implement certain standards when the costs substantially outweigh the benefits.¹¹⁹

In practice, the Administrator, in promulgating any new national drinking-water standard, must deliver an opinion as to whether the costs to industry in complying with the standard outweigh the benefits brought about by the standard.¹²⁰ If the Administrator determines that the costs of compliance do not outweigh the benefits, the Administrator may then,

109. *See id.*

110. Safe Drinking Water Act of 1974 § 1413, 42 U.S.C. § 300g-2 (2018).

111. *See* Safe Drinking Water Act of 1974 § 1412(b)(4)(c), 42 U.S.C. § 300g-1 (2018) ("At the time the Administrator proposes a national primary drinking water regulation under this paragraph, the Administrator shall publish a determination as to whether the benefits of the maximum contaminant level justify, or do not justify, the costs based on the analysis conducted under paragraph.").

112. DAVID M. DRIESEN ET AL., ENVIRONMENTAL LAW: A CONCEPTUAL AND PRAGMATIC APPROACH 198 (3d ed. 2016) (explaining that "monetizing the benefits" achieved by a regulation is "extremely controversial" because society generally is against assigning a dollar value to human life).

113. *See id.* at 87.

114. *See id.* at 197.

115. *Id.*

116. *See id.*

117. *See id.*

118. *See id.* at 197–98.

119. *See id.* at 87. ("CBA requires agencies to quantify the costs of pollution reductions, much as they would in evaluating the economic feasibility of a technology-based standard, and also to consider environmental and health effects, as they do when setting effects-based standards.").

120. *See id.*

after an opportunity for public comment, promulgate a standard that is justified by the cost of compliance.¹²¹ Therefore, according to the statute, the Administrator is allowed to set a standard for protecting drinking water that is less stringent than a standard which would be the most protective of drinking-water sources¹²² if the Administrator can provide evidence that the less stringent standard “maximizes health risk reduction benefits at a cost that is justified by the benefits.”¹²³

Further, the SDWA has a clause that directs the Administrator to not “unnecessarily disrupt” state programs already “in effect and being enforced in a substantial number of states.”¹²⁴ In enacting the SDWA, members of Congress expressed that they wished for states to maintain the autonomy to regulate drinking-water sources with varying levels of stringency, so long as all states were subject to minimum federal standards¹²⁵:

[T]he balance to be sought between the legitimate responsibility of the States to protect drinking water sources and Federal backup enforcement is a proper one. The States must assume primary responsibility for the implementation of the policies set out in this legislation. The Federal Government obviously cannot police each and every drinking-water supply system in this country. It is hoped that a close working partnership will evolve through the programs authorized by this legislation.¹²⁶

Former president Gerald R. Ford, in office during the enactment of the SDWA,¹²⁷ even went so far as to say that he “still [had] reservations” about the Act because of the possibility for “extensive Federal involvement.”¹²⁸ President Ford said that he intended the Act to “be administered so as to minimize both Federal involvement and costs.”¹²⁹

121. See Safe Drinking Water Act of 1974 §1412(6)(A), 42 U.S.C. § 300g-1 (2018).

122. See *id.*

123. *Id.*; see also Karl S. Coplan, *The Missing Element of Environmental Cost-Benefit Analysis: Compensation for the Loss of Regulatory Benefits*, 30 GEO. ENVTL. L. REV. 281, 311 (2018).

124. Safe Drinking Water Act of 1974 § 1421(b)(3)(B)(i), 42 U.S.C. § 300h (2018). (“In prescribing regulations under this section the Administrator shall, to the extent feasible, avoid promulgation of requirements which would unnecessarily disrupt State underground injection control programs which are in effect and being enforced in a substantial number of States.”).

125. 120 CONG. REC. 37371, 37591 (1974).

126. *Id.*

127. Gerald R. Ford was the 38th President of the United States. See *Gerald R. Ford*, WHITE HOUSE, <http://bit.ly/38JWiCE> (last visited Feb. 15, 2020).

128. Gerald R. Ford, President, *The President’s Statement on Signing the Safe Drinking Water Act* (Dec. 17, 1974), ENVTL. AND NAT. RES. POL’Y DIV. OF THE CONG. RES. SERV., 97TH CONG., A LEGISLATIVE HISTORY OF THE SAFE DRINKING WATER ACT TOGETHER WITH A SECTION-BY-SECTION INDEX 398 (Comm. Print 1982).

129. *Id.*

The intent to ensure that states maintained a level of autonomy resulted in the cooperative federalism model that the SDWA employs.¹³⁰

The cooperative federalism model¹³¹ allows the federal and state governments to share responsibility for how a law is enforced.¹³² Under the SDWA, states can apply for “primacy,” which allows a state’s equivalent of the EPA to implement the SDWA within that state.¹³³ States with primacy are still subject to federal oversight to ensure they are regulating according to minimum federal standards.¹³⁴ Certain activities adjacent to fracking, like fracking-wastewater disposal, are subject to federal minimum standards under the SDWA.¹³⁵ However, fracking—the injection of fluid containing chemicals underground¹³⁶—is not regulated by the SDWA, per the Energy Policy Act of 2005 (“the Energy Policy Act”).¹³⁷

Congress’s impetus for passing the Energy Policy Act began in 1997 with the case *Legal Environmental Assistance Foundation v. EPA*.¹³⁸ In *Legal Environmental Assistance Foundation*, the Eleventh Circuit held that fracking is defined as an “underground injection” under the SDWA,¹³⁹ and that the EPA is “legally required to regulate hydraulic fracturing” under the SDWA.¹⁴⁰ Following the ruling in *Legal Environmental Assistance Foundation*, the EPA conducted a study on the risk that fracking for coalbed methane¹⁴¹ poses to drinking-water

130. See Safe Drinking Water Act § 1401, 42 U.S.C. § 300f (2018). See generally Cara Cunningham Warren, *An American Reset-Safe Water & A Workable Model of Federalism*, 27 DUKE ENVTL. L. & POL’Y F. 51, 54 (2016) (explaining that the SDWA employs a cooperative federalism model).

131. See discussion *infra* Section II.C.2.

132. “Cooperative federalism is a model of intergovernmental relations that recognizes the overlapping functions of the national and state governments.” *Cooperative Federalism*, CTR. STUDY OF FEDERALISM (2006), <http://bit.ly/37vZ2lR>.

133. See Safe Drinking Water Act § 1413(a), 42 U.S.C. § 300g-2 (2018); see also MARY TIEMANN, CONG. RESEARCH SERV., RL31234, SAFE DRINKING WATER ACT (SDWA): A SUMMARY OF THE ACT AND ITS MAJOR REQUIREMENTS 7 n.15 (2015) (“All states (except Wyoming and the District of Columbia), territories, and Navajo Nation have primacy. EPA oversees water systems in non-primacy areas and retains oversight of primacy states.”).

134. See DRIESEN ET AL., *supra* note 112, at 486.

135. See *supra* notes 69–72 and accompanying text.

136. See Jeffrey M. Gaba, *Flowback: Federal Regulation of Wastewater from Hydraulic Fracturing*, 39 COLUM. J. ENVTL. L. 251, 265 (2014).

137. See *id.* at 254.

138. *Legal Env’tl. Assistance Found., Inc. v. U.S. E.P.A.*, 118 F.3d 1467, 1478 (11th Cir. 1997) (holding that the EPA must regulate fracking as an “underground injection” under the SDWA).

139. *Id.*

140. *Id.* at 1469.

141. *Frequent Questions About Coal Mine Methane*, U.S. ENVTL. PROT. AGENCY, <http://bit.ly/2HvNhRL> (last visited Nov. 10, 2019). Coalbed methane is a type of natural

sources.¹⁴² In 2004, when the EPA's study was published, the EPA concluded that the risk posed by fracking on drinking-water sources was small, except in the instances that diesel fuel¹⁴³ was used in the fracking fluid.¹⁴⁴

In response to *Legal Environmental Assistance Foundation* and the EPA's 2004 study, Congress passed the Energy Policy Act in 2005.¹⁴⁵ The Energy Policy Act expressly abrogated the Eleventh Circuit's conclusion in *Legal Environmental Assistance Foundation* by amending the SDWA¹⁴⁶ so that the EPA regulates fracking under the SDWA only when diesel fuel is used.¹⁴⁷ The Energy Policy Act specifically excludes fracking using anything "other than diesel fuels" from regulation under the SDWA.¹⁴⁸ The oil and gas industry lobbied zealously for the passage of the Energy Policy Act,¹⁴⁹ as the industry benefits from the exemption of fracking using anything other than diesel fuels because diesel fuels are rarely, if ever, used in fracking fluid.¹⁵⁰

Since the enactment of the Energy Policy Act, the EPA has reversed its position on the danger that fracking poses to drinking-water resources and, in 2015, released a second version of its 2004 study.¹⁵¹ The 2004

gas that is extracted, by fracking, from coal beds and is considered to be hazardous because the resource is explosive. *See id.*

142. *See* TIEMANN & VANN, *supra* note 28, at 19.

143. "Diesel fuel is the common term for the petroleum distillate fuel oil sold for use in motor vehicles that use the compression ignition engine . . ." *Diesel Fuel Explained*, U.S. ENERGY INFO. ADMIN., <http://bit.ly/31XYJiy> (last visited Nov. 10, 2019).

144. *See* TIEMANN & VANN, *supra* note 28, at 20.

145. *See* Gaba, *supra* note 136, at 265 ("The effect of the amendment has been to ensure that, unless diesel oil is included in the fracking fluid, the fracking process itself is excluded from regulation under the SDWA.").

146. *See* Energy Policy Act of 2005, Pub. L. No. 109-58 § 322, 119 Stat. 594, 694 (2005) ("The term 'underground injection'— (A) means the subsurface emplacement of fluids by well injection; and (B) excludes—(i) the underground injection of natural gas for purposes of storage; and (ii) 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.").

147. *See* TIEMANN & VANN, *supra* note 28, at 20.

148. *See* Energy Policy Act of 2005, *supra* note 146.

149. *See, e.g.*, O'REILLY, *supra* note 45. Most notably, the multi-national oil-field-service company Halliburton lobbied so extensively for the Energy Policy Act that the act was referred to as the "Halliburton loophole." *Id.* ("The exemption was informally named for the principal lobbying beneficiary, the Halliburton Corporation, which had previously been headed by then-Vice President Dick Cheney."). During this time, the White House and the oil and gas industry shared a cozy relationship: then-Vice President Dick Cheney, who was in office during the promulgation of the 2005 Energy Policy Act, was a former chief executive of Halliburton from 1995 until 2000, when Cheney left the company to run for Vice President. *See* David E. Rosenbaum, *A Closer Look at Cheney and Halliburton*, N.Y. TIMES (Sept. 28, 2004), <https://nyti.ms/2whGSaw>.

150. *See* TIEMANN & VANN, *supra* note 28, at 22 ("EPA has not received permit applications for hydraulic fracturing activities using diesel fuels.").

151. *See supra* notes 88–97 and accompanying text.

study had been heavily criticized by environmental groups, and even former EPA scientists, who called the report inaccurate and incomplete.¹⁵² In fact, some employees of Cadmus Group, the government contractor who wrote the report, later criticized the EPA for “chang[ing] parts of the working draft that suggested fracking for coalbed methane could pose risks to drinking water.”¹⁵³

The 2015 study found evidence of drinking-water contamination during all stages of the fracking process—from procuring the fracking fluid to storing the used fluid once fracking is complete.¹⁵⁴ Further, other reports have detailed instances in which contaminants attributed to fracking have been found in drinking water.¹⁵⁵ Given this information, state and local governments have been enacting more stringent fracking regulations.¹⁵⁶

2. The Preemption Doctrine and Home Rule Charters

Since both states and local governments enact fracking regulations, oftentimes the two bodies of government conflict with each other. The preemption doctrine is thus important to the oil and gas industry because local governments often attempt to regulate fracking and face preemption

152. See *EPA Findings on Hydraulic Fracturing Deemed “Unsupportable”*, UNION OF CONCERNED SCIENTISTS (Dec. 7, 2006), <http://bit.ly/37vWjci>; Mike Soraghan, *Frack Study’s Safety Findings Exaggerated, Bush EPA Official Says*, N.Y. TIMES (May 20, 2011), <https://nyti.ms/2SSYPnq> (“[T]he study has been criticized, most prominently by Denver-based EPA environmental engineer Weston Wilson, who wrote to Congress that the study’s findings were ‘unsupportable.’”).

153. Banerjee, *supra* note 3.

154. See Coral Davenport, *Reversing Course, E.P.A. Says Fracking Can Contaminate Drinking Water*, N.Y. TIMES (Dec. 13, 2016), <https://nyti.ms/38zry7B>; see also *supra* notes 88–97 and accompanying text.

155. See, e.g., Gayathri Vaidyanathan, *Fracking Can Contaminate Drinking Water*, SCI. AM. (Apr. 4, 2016), <http://bit.ly/2SNz489>.

156. In April of 2019, the Colorado General Assembly enacted SB 19-181, “a major overhaul of oil and gas regulations.” Matt Bloom, *Curious Colorado: What Senate Bill 181 Does - And Doesn’t Do*, KUNC (Mar. 29, 2019, 7:00 AM), <http://bit.ly/39KxcnD>. Specifically, Section 4 of the act “clarifies that local governments have land use authority to regulate the siting of oil and gas locations to minimize adverse impacts to public safety, health, welfare, and the environment and to regulate land use and surface impacts.” S.B. 19-181, 2019 REG. SESS. (Colo. 2019). In 2016, Nebraska’s governor signed LB 1082 into law, revising certain Nebraska statutes relating to oil and gas, mandating that the Commission has the authority to “require periodic sampling and reporting of injection fluids injected into Class II commercial underground injection wells” from well operators. L.B. 1082, 104TH LEG., SECOND SESS. (Neb. 2016). Legislators introduced the bill in response to a controversial approval by the commission that, had the approval made it past litigation, would have allowed an oil and gas company to inject wastewater underground in Nebraska that had been transported from other states. See Ariana Brocius, *Bill Seeks to Further Regulate Wastewater Wells in Nebraska*, NEB. EDUC. TELECOMM. (Mar. 8, 2016 6:45 AM), <http://bit.ly/37CTW09>.

challenges.¹⁵⁷ The preemption doctrine maintains that if two laws conflict, the law coming from the level of government with more authority will supersede the law coming from the level of government with less authority.¹⁵⁸ For example, a conflict emerges when a local government bans fracking in a town, but the state government has designed a regulatory regime to permit for “uniform statewide regulation” in the state.¹⁵⁹ In that instance, the preemption doctrine dictates that the state law would prevail.¹⁶⁰

Because of the limitations of the preemption doctrine, local governments often attempt to use their home rule powers to regulate fracking.¹⁶¹ Home rule is a grant given by a state’s constitution that transfers the authority to govern municipal matters from state governments to local governments.¹⁶² In essence, a home rule charter states what powers a municipality’s government has.¹⁶³ Many local governments have tried to ban or severely limit fracking through home rule authority.¹⁶⁴ However, not all states allow for home rule.¹⁶⁵ While home rule can grant the authority to the local government to govern a wide variety of municipal activities, one caveat always remains: The rule created by a local government may not conflict with state law.¹⁶⁶

157. See Jamal Knight & Bethany Gullman, *The Power of State Interest: Preemption of Local Fracking Ordinances in Home-Rule Cities*, 28 TUL. ENVTL. L.J. 297, 298 (2015) (“In response to these concerns over potentially adverse impacts on public health and the natural environment associated with hydraulic-fracturing operations, state and local governments each seek greater control over the oil and gas industry.”).

158. Preemption stands for the proposition that when federal law conflicts with state law, federal law displaces state law. See *Preemption*, CORNELL L. SCH.: LEGAL INFO. INST., <http://bit.ly/2OYYZc2> (last visited Nov. 10, 2019).

159. See *State ex rel. Morrison v. Beck Energy Corp.*, 37 N.E.3d 128, 131, 134 (Ohio 2015) (holding that city ordinances governing oil and gas drilling were preempted by conflicting state law).

160. See *id.*

161. See Knight & Gullman, *supra* note 157, at 298–99.

162. See, e.g., Kate Lao Shaffner, *What Is Home Rule?*, WHYY (July 24, 2014), <http://bit.ly/39PP1lh>.

163. See *generally Governance Overview: Structure & Powers*, BOROUGH OF STATE COLLEGE, <https://bit.ly/31kqB0Q> (last visited Apr. 10, 2021).

164. See *Beck*, N.E.3d at 134 (holding that city ordinances governing oil and gas drilling were preempted by conflicting state law); see also *City of Fort Collins v. Colorado Oil*, 369 P.3d 586, 589 (Colo. 2016) (holding that a five-year moratorium on fracking and storing fracking waste within city limits imposed by the local government under home rule authority was preempted by state law); *Frederick v. Allegheny Twp. Zoning Hearing Bd.*, 196 A.3d 677, 697 (Pa. Commw. Ct. 2018), *appeal denied*, 208 A.3d 462 (Pa. 2019) (holding that a municipality may use zoning powers to regulate where drilling takes place but cannot use those zoning powers to regulate how drilling may be done).

165. See *Home Rule*, CMTY. ENVTL. LEGAL DEF. FUND, <http://bit.ly/37vZIHV> (last visited Jan. 26, 2020).

166. See James R. Wolf & Sarah Harley Bolinder, *The Effectiveness of Home Rule: A Preemption and Conflict Analysis*, 83 FLA. B.J. 92, 93 (2009) (explaining that “to avoid

In the absence of federal regulation, local governments have sometimes succeeded in using home rule authority to regulate fracking in their jurisdictions.¹⁶⁷ In many states, oil and gas corporations find themselves frequently litigating preemption issues with municipalities and local governments.¹⁶⁸ Absent a change in how fracking is regulated, oil and gas corporations will continue to find themselves in court over the same issues.¹⁶⁹

D. Lobbying

While there are, presumably, a myriad of ways in which corporate interests can advocate for a regulatory change, lobbying can be a very powerful way for interest groups to influence policy in their favor.¹⁷⁰ Lobbying generally refers to the act of attempting to influence government action,¹⁷¹ often using money.¹⁷² Lobbies are groupings of individuals, special interest groups, and companies that share a defining characteristic,¹⁷³ such as the oil and gas industry lobby.

The oil and gas industry lobby in the United States is well-funded.¹⁷⁴ According to OpenSecrets.org,¹⁷⁵ the entire oil and gas

conflicting with state legislation, local action must be able to coexist with the state legislation without frustrating its purpose”).

167. See Marie C. Baca, *Pittsburgh Bans Natural Gas Drilling*, PROPUBLICA (Nov. 16, 2010, 9:49 PM), <http://bit.ly/2SMEbFy>.

168. See Pickle, *supra* note 25, at 298 (“Conflicts between state and local regulations have generated a considerable amount of litigation.”).

169. See *id.* at 337 (explaining that the federal government should be responsible for regulating fracking because the current system “is convoluted, complex, and costly” and a federal regulatory regime could “end any future preemption litigation before it begins”).

170. See, e.g., *How States Define Lobbying and Lobbyist*, NAT’L CONF. OF STATE LEGISLATURES (Sept. 8, 2020), <http://bit.ly/2P0EUC5> (defining the act of lobbying generally “as an attempt to influence government action through either written or oral communication”).

171. See *id.*

172. See, e.g., The Center for Responsive Politics, *Influence & Lobbying*, OPENSECRETS, <http://bit.ly/37zsh7c> (last visited Jan. 26, 2020).

173. See *Lobby*, MERRIAM-WEBSTER.COM DICTIONARY, <http://bit.ly/2vGO9jL> (last visited Jan. 20, 2020) (defining lobbying as “a group of persons engaged in lobbying especially as representatives of a particular interest group”).

174. Between 1998 and 2020, the oil and gas industry lobby spent \$2,366,330,376, placing the lobby as the sixth highest-spending lobby, according to how much money was spent during that time. See The Center for Responsive Politics, *Industries*, OPENSECRETS, <http://bit.ly/2SOZlgT> (last visited Jan. 16, 2021). The spending lobbies in front of the oil and gas industry lobby are as follows, in descending order: Pharmaceuticals and Health Products, Insurance, Electric Utilities, Electronics Manufacturing & Equipment, and Business Associations. See *id.*

175. OpenSecrets is a website detailing federal campaign contributions and lobbying data and is run by The Center for Responsive Politics, a nonprofit and nonpartisan research group. See The Center for Responsive Politics, *About*, OPENSECRETS, <http://bit.ly/2Hw35nL> (last visited Jan. 26, 2020).

industry lobby spent \$124,697,322.00 in 2019 and \$83,566,826 in 2020¹⁷⁶ in the form of donations to “outside spending” groups, candidates, and election party committees.¹⁷⁷ Individual oil and gas companies gave amounts as high as \$7,720,000 in 2020—mostly to conservative groups and Republican causes.¹⁷⁸ In the 2018 election cycle, the lobby gave a total of \$28,347,453.00¹⁷⁹ to House and Senate candidates from both parties and gave \$85,431,625.00 to the Democratic and Republican parties at large.¹⁸⁰

While the oil and gas industry lobby has historically used lobbying to oppose any efforts to increase the federal regulation of fracking—as demonstrated by the lobbying efforts that took place during the passage of the Energy Policy Act¹⁸¹—other lobbies are using influence to *support* efforts to increase federal regulation, as a defensive measure to preempt stricter state regulation. For example, the technology industry lobby, another big spender, is currently using its money to lobby for a uniform federal data-privacy regulation.¹⁸² Technology giants like Google,¹⁸³ Facebook,¹⁸⁴ and Microsoft¹⁸⁵ are lobbying for a federal data privacy regulation to supplant patchwork state regulations.¹⁸⁶ This move began after California started to pass its now-active data privacy law, the California Consumer Privacy Act (“CCPA”).¹⁸⁷ The CCPA is concerning to big technology companies because it imposes strict requirements on

176. The Center for Responsive Politics, *Oil & Gas: Lobbying, 2020*, OPENSECRETS, <http://bit.ly/38yn9lj> (last visited Jan. 16, 2021). The five highest recorded contributions were from Chevron Corp, Exxon Mobil, Koch Industries, Royal Dutch Shell, and the American Petroleum Institute. *See id.*

177. *See* The Center for Responsive Politics, *Industry Profile: Oil & Gas*, OPENSECRETS, <http://bit.ly/2HvO4Cd> (last visited Jan. 16, 2021).

178. *See* The Center for Responsive Politics, *Oil & Gas: Summary*, OPENSECRETS, <https://bit.ly/3qNiBzA> (last visited Jan. 16, 2020) (filtering for “All cycles”).

179. The Center for Responsive Politics, *Oil & Gas: Money to Congress (2018)*, OPENSECRETS, <http://bit.ly/38ynjZX> (last visited Jan. 26, 2020).

180. *See* The Center for Responsive Politics, *Oil & Gas: Top Contributors to Federal Candidates, Parties, and Outside Groups (2018)*, OPENSECRETS, <http://bit.ly/3bJSZ0s> (last visited Jan. 26, 2020).

181. *See* discussion *supra* Section II.C.1.

182. *See* Cecilia Kang, *Tech Industry Pursues a Federal Privacy Law, on Its Own Terms*, N.Y. TIMES (Aug. 26, 2018), <https://nyti.ms/2HpYtzo>.

183. Google is an international internet-services company. *See About*, GOOGLE, <https://bit.ly/3w55H44> (last visited Nov. 10, 2019).

184. Facebook is an online social-networking platform. *See Company Info*, FACEBOOK, <http://bit.ly/2vGFuy8> (last visited Nov. 10, 2019).

185. Microsoft is a technology company. *See About*, MICROSOFT, <http://bit.ly/2SuTdAX> (last visited Nov. 10, 2019).

186. *See, e.g.*, Kang, *supra* note 182.

187. *See, e.g.*, Gilad Edelman, *California’s Privacy Law Goes into Effect Today. Now What?*, WIRED (Jan. 1, 2020, 7:00 AM), <http://bit.ly/2SxRGtL>.

companies that collect consumer data from Californians.¹⁸⁸ In the 2018 United States Senate Commerce Committee Hearing,¹⁸⁹ the CCPA was up for discussion¹⁹⁰; Representatives from big technology companies advocating for uniform federal regulation “confirmed that they support the preemption of California’s new rules.”¹⁹¹ In 2019, the Internet Association, a lobbying group representing Facebook, Google, Microsoft, and Twitter, spent \$176,000.00 in three months lobbying against the CCPA.¹⁹² Some of that money went to creating social media ads that targeted users in California, expressing to those users that the CCPA would cost them money to use the internet.¹⁹³

As shown by the lobbying efforts of big technology companies, lobbying can be a powerful tool not only for influencing policy, but for influencing consumers and preempting stricter state laws.¹⁹⁴ If done effectively, lobbying efforts can connect with consumers on issues important to them and show that an industry group or individual corporation is aligned with their values as consumers.¹⁹⁵ For example, a corporation may notice that consumers are primed to become increasingly environmentally conscious,¹⁹⁶ by publicizing its environmentally conscious lobbying efforts to consumers, the corporation can add value by connecting with consumers who value socially responsible corporations.¹⁹⁷

E. The Corporate Social Responsibility Doctrine

Corporate social responsibility (“CSR”) encourages boards of directors and other decision makers within a corporation to not solely act in the corporation’s own self-interest but to incorporate social and

188. See, e.g., Zach Whittaker, *Silicon Valley Is Terrified of California’s Privacy Law. Good.*, TECHCRUNCH (Sept. 19, 2019, 12:00 PM), <https://tcrn.ch/2u7itnw>.

189. See *Examining Safeguards for Consumer Data Privacy: Hearing Before the Senate Committee on Commerce, Science, and Transportation*, 115TH CONG. (2018).

190. See, e.g., Jeff John Roberts, *Here Comes America’s First Privacy Law: What the CCPA Means for Business and Consumers*, FORTUNE (Sept. 13, 2019, 6:30 AM), <http://bit.ly/39F5Sa4>.

191. Whittaker, *supra* note 188.

192. See Tony Romm, *California Adopted the Country’s First Major Consumer Privacy Law. Now, Silicon Valley Is Trying to Rewrite It.*, WASH. POST (Sept. 3, 2019, 11:26 AM), <https://wapo.st/2Hu6ymK>.

193. See *id.*

194. See, e.g., Guy Holburn & Davin Raiha, *Startups Are Turning Customers into Lobbyists*, HARV. BUS. REV. (Oct. 24, 2017), <http://bit.ly/2vGFFti> (“Our research finds that some insurgent firms have prevailed on the regulatory front by using a strategy straight out of the playbook of environmental activists – mobilizing stakeholders to become political advocates.”).

195. See *id.*

196. See, e.g., Katherine White et. al, *The Elusive Green Consumer*, HARV. BUS. REV. MAG., July–Aug., 2019, available at <https://bit.ly/38CNqRv>.

197. See discussion *supra* Section II.E.

environmental concerns into the business model.¹⁹⁸ The notion that corporations should act as socially responsible entities is not a new concept.¹⁹⁹ CSR was actually entrenched in pre-nineteenth-century English corporate law—which was exported to the United States—under which corporations had to be approved by the government and had to serve some sort of public purpose.²⁰⁰ By the mid-nineteenth century in the United States, corporations were no longer required to have a public purpose.²⁰¹ Currently, private interests are sufficient to incorporate.²⁰² CSR encourages corporations to serve the public interest in some way, even though doing so is not mandated.²⁰³

In August 2019, The New York Times reported on a letter²⁰⁴ signed by “[n]early 200 chief executives,” on “the purpose of a corporation.”²⁰⁵ Business Roundtable²⁰⁶ published the letter,²⁰⁷ which included signatures from CEOs of big oil and gas corporations like BP,²⁰⁸ Chevron,²⁰⁹ and Exxon Mobil.²¹⁰ The letter pledged to not just advance the interests of

198. See, e.g., *What is CSR?*, UNITED NATIONS INDUS. DEV. ORG., <http://bit.ly/2UWd1yB> (last visited Jan. 10, 2020).

199. See, e.g., Scott Tong, *The First Corporations — Way Back — Had Social Purpose*, WUNC (June 14, 2016), <https://bit.ly/2NXV2ab>.

200. See Tyler Halloran, *A Brief History of the Corporate Form and Why It Matters*, FORDHAM J. CORP. FIN. L. (Nov. 18, 2018), <http://bit.ly/2Sv9INo>.

201. See Tong, *supra* note 199.

202. See *id.*

203. See UNITED NATIONS INDUS. DEV. ORG., *supra* note 198.

204. *Business Roundtable Redefines the Purpose of a Corporation to Promote ‘An Economy That Serves All Americans’*, BUS. ROUNDTABLE (Aug. 19, 2019), <https://bit.ly/3copJP0>.

205. David Gelles & David Yaffe-Bellany, *Shareholder Value Is No Longer Everything*, *Top C.E.O.s Say*, N.Y. TIMES (Aug. 19, 2019), <https://nyti.ms/2wn1JJI>; see also Andrew Ross Sorkin, *Ex-Corporate Lawyer’s Idea: Rein in ‘Sociopaths’ in the Boardroom*, N.Y. TIMES (July 29, 2019), <https://nyti.ms/2V7qVyj>.

206. Business Roundtable is an organization composed of CEOs from large American corporations. See *About Us*, BUS. ROUNDTABLE, <http://bit.ly/39F6e0o> (last visited Jan. 26, 2020).

207. See BUS. ROUNDTABLE, *supra* note 204; see also Claudine Gartenberg & George Serafeim, *181 Top CEOs Have Realized Companies Need a Purpose Beyond Profit*, HARV. BUS. REV. (Aug. 20, 2019), <http://bit.ly/2wn1Wwu> (explaining that, “one of the preeminent business lobbies in the United States, the Business Roundtable (BR) includes the CEOs of leading U.S. companies from Apple to Walmart”).

208. BP is “one of the world’s largest oil companies.” *BP PLC*, ENCYC. BRITANNICA, <http://bit.ly/2Swoa7D> (last visited Nov. 10, 2019).

209. Chevron is an energy company that is engaged in producing, refining, transporting, and marketing of oil and natural gas, and is also involved in other energy services. See *Chevron Corp.*, BLOOMBERG, <https://bloom.bg/2uGywZS> (last visited Nov. 10, 2019).

210. Exxon Mobil is a large oil and gas company that engages in the exploration, production, and generation of fuels. See *Exxon Mobil Corp.*, BLOOMBERG, <https://bloom.bg/3bB9ICW> (last visited Nov. 10, 2019).

shareholders, but to invest in employees, deal in a fair manner with suppliers, and support surrounding communities.²¹¹

This letter on the new purpose of a corporation proved to be incredibly newsworthy because the letter embodied public criticism of the long-held view that “the business of business is business, and the sole focus of the CEO is to maximize the profits of that business.”²¹² The fact that the Business Roundtable letter “has the backing of CEOs representing nearly 30% of total [United States] market capitalization” is nothing short of momentous.²¹³

Around the same time, some large oil and gas corporations, like Shell²¹⁴ and Southwestern Energy,²¹⁵ took a stand against the Trump²¹⁶ Administration’s rollbacks²¹⁷ of methane-emission regulations.²¹⁸ These rollbacks proposed a regulatory loosening of the requirements that govern how oil and gas operators monitor methane leaks out of wells, pipelines, and other infrastructure related to extraction and production.²¹⁹ In standing against rollbacks of environmental protections, large oil and gas corporations were praised for standing up against the EPA’s effort to “[put] profits ahead of public health and safety.”²²⁰

As a corporate strategy, socially responsible efforts can add value to the corporation.²²¹ Value is expressed in monetary terms and represents what a customer is willing to pay in a market offering of the company on

211. See Gartenberg & Serafeim, *supra* note 207.

212. *Id.*

213. *Id.*

214. Shell is comprised of both energy and oil and gas companies. See *About Us*, SHELL, <https://go.shell.com/2UWaswI> (last visited Jan. 26, 2020).

215. Southwestern Energy is a producer of natural gas and natural-gas liquids. See *About*, SOUTHWESTERN ENERGY, <http://bit.ly/2HvHOUs> (last visited Jan. 26, 2020).

216. Donald J. Trump was the 45th president of the United States. See *Donald Trump*, WHITE HOUSE, <https://bit.ly/2PySD6h> (last visited Feb. 15, 2020).

217. The Trump Administration has made a habit of slashing several major federal environmental regulations. See Livia Albeck-Ripka et al., *95 Environmental Rules Being Rolled Back Under Trump*, N.Y. TIMES (Dec. 21, 2019), <https://nyti.ms/321fYzB>.

218. See Clifford Krauss, *Trump’s Methane Rule Rollback Divides Oil and Gas Industry*, N.Y. TIMES (Aug. 29, 2019), <https://nyti.ms/2UVhIZz> (“Under increasing pressure from shareholders, activists and their own employees, BP, Shell, Exxon Mobil and several other international oil companies have joined the Oil and Gas Climate Initiative, which is pledged to reduce gas emissions. It is one part of a growing acknowledgment in the industry that climate change and future regulation are a threat.”).

219. See Juliet Eilperin & Brady Dennis, *Trump Administration to Relax Restrictions on Methane, a Powerful Greenhouse Gas*, WASH. POST (Aug. 29, 2019, 6:30 PM), <https://wapo.st/2HpZaJ0>.

220. See, e.g., Joseph Ottis Minott, *Guest Commentary: Say No to Methane*, PHILA. CITIZEN (Dec. 26, 2019), <http://bit.ly/39FQjiE>.

221. See Henri Servaes & Ane Tamayo, *The Impact of Corporate Social Responsibility on Firm Value: The Role of Customer Awareness*, 59 MGMT. SCIENCE 1045, 1045 (2013).

the stock exchange.²²² Evidence suggests that firm value increases when a corporation has a consumer base that is aware of the corporation's CSR activities.²²³ Thus, CSR has the ability to alter the customer's behavior and "affect firm value."²²⁴ A study by Henri Servaes and Ane Tamayo suggests that through advertising efforts, a corporation can make its customers aware of CSR efforts and increase the likelihood that the now-aware consumer will "reward" the corporation for engaging in CSR, meaning that CSR efforts will increase the value of the corporation.²²⁵ Advertising and lobbying efforts go hand in hand.²²⁶ Groups that want to wield influence recognize that they need to publicize their lobbying efforts to make consumers aware of lobbying activities that align with their values.²²⁷

III. ANALYSIS

Oil and gas corporations engaging in fracking should lobby for the federal regulation of fracking under the SDWA. As state and local governments continue to tighten their fracking regulations,²²⁸ and as more scientific evidence on the negative health and environmental effects of fracking emerges,²²⁹ large corporations in the oil and gas industry should seize the opportunity—in the spirit of CSR—to lobby for the federal regulation of fracking to ensure that operations in certain

222. See James C. Anderson & James A. Narus, *Business Marketing: Understand What Customers Value*, HARV. BUS. REV. MAG., Nov.–Dec., 1998, available at <http://bit.ly/2HG1Oux>.

223. See Servaes & Tamayo, *supra* note 221, at 1047.

224. *Id.*

225. See *id.*

226. See Erin Quinn & Chris Young, *D.C. Influencers Spend More on Advertising and PR than Lobbying*, TIME (Jan. 15, 2015, 5:00 AM), <http://bit.ly/2SNujLH>.

227. See *id.* ("The oil and gas industry trade group spent more than \$7 million lobbying federal officials in 2012. But that sum was dwarfed by the \$85.5 million it paid to four public relations and advertising firms to, in effect, lobby the American public—including \$51.9 million just to global PR giant Edelman.").

228. See *Georgia Passes Modern-Day Fracking Protections into Law*, SOUTHERN ENVTL. L. CTR. (May 11, 2018), <http://bit.ly/2uOr9iM>; see also Miriam Aczel, *SCOOP & STACK Causing Cracks: Oklahoma Tightens Regulations to Curb Fracking Earthquakes*, ENVTL. L. INST. (Mar. 5, 2018), <http://bit.ly/3bHlHir>; The Associated Press, *California Halts Permits for Oil Fracking*, ARK. DEMOCRAT GAZETTE (Nov. 20, 2019, 1:49 AM), <http://bit.ly/39PQIVh>.

229. See, e.g., IRENA GORSKI & BRIAN S. SCHWARTZ, ENVIRONMENTAL HEALTH CONCERNS FROM UNCONVENTIONAL NATURAL GAS DEVELOPMENT 2 (2019), <http://bit.ly/2u7jagC> ("By 2017, there were a number of important, peer-reviewed studies published in the scientific literature that raised concern about potential ongoing health impacts. These studies have reported associations between proximity to UNGD and pregnancy and birth outcomes; migraine headache, chronic rhinosinusitis, severe fatigue, and other symptoms; asthma exacerbations; and psychological and stress-related concerns.").

states do not become foreclosed.²³⁰ Lobbying for the federal regulation of fracking under the SDWA comports with the CSR doctrine because the increased regulation of fracking would ensure that each state has to regulate the process at least according to a minimum standard set by the federal government, ensuring a minimum level of protection for all citizens.²³¹

The following Analysis proceeds in three steps. First, it explains why the federal regulation of fracking generally would benefit the oil and gas industry: absent a federal minimum standard with which state governments must comply, state and local governments will continue to increase the stringency of their fracking regulations out of a desire to address the harms associated with fracking.²³² Second, the Analysis explains why the SDWA should be the vehicle for regulating fracking at the federal level: because the Administrator must use CBA²³³ in setting any federal minimum standard under the SDWA²³⁴ and the SDWA allows states that are already regulating at the federal minimum standards to continue to operate their UIC programs without disruption, the oil and gas industry will not suffer a massive compliance burden if fracking is regulated under the SDWA. Third, the Analysis explains why lobbying would be the most effective method for the oil and gas industry to bring about the federal regulation of fracking.²³⁵

A. Federal Regulation Will Benefit the Oil and Gas Industry

Oil and gas corporations engaging in fracking should lobby for the federal regulation of fracking. The current system of regulation, where there are no minimum standards to which states must adhere, has left

230. See Thomas Kaplan, *Citing Health Risks, Cuomo Bans Fracking in New York State*, N.Y. TIMES (Dec. 17, 2014), <https://nyti.ms/2weGn0T> (explaining how the ban on fracking in New York came about as a result of increased literature on the health risks associated with fracking); see also Jon Hurdle, *With Governor's Signature, Maryland Becomes Third State to Ban Fracking*, STATEIMPACT PA. (Apr. 4, 2017, 9:35 PM), <https://n.pr/2UREHou>.

231. See discussion *supra* Section II.C.1; see also Emily C. Powers, *Fracking and Federalism: Support for an Adaptive Approach That Avoids the Tragedy of the Regulatory Commons*, 19 J.L. & POL'Y 913, 930–31 (2011) (“Laws like the Clean Air Act (CAA), Clean Water Act (CWA), Safe Drinking Water Act (SDWA), and the Emergency Planning and Community Right to Know Act (EPCRA) require states to devise and implement comprehensive plans to meet federal goals.”); *Primary Enforcement Authority for the Underground Injection Control Program*, U.S. ENVTL. PROT. AGENCY, <http://bit.ly/37xc4zB> (last visited Jan. 10, 2020).

232. See discussion *infra* Section III.A.

233. See discussion *infra* Section III.B.

234. See discussion *infra* Section III.B.

235. See *supra* notes 133–39 and accompanying text.

citizens in states with less regulation more vulnerable²³⁶ to the negative effects of fracking.²³⁷ The recent activities of local and state governments in enacting moratoriums and bans on fracking show that governments are reacting to the negative effects of fracking.²³⁸ As more information emerges, the current model that allows corporations to frack in states with less regulation²³⁹ will grow increasingly at odds with the duties of both municipal and state governments to exercise their police powers²⁴⁰ to protect the health and safety of all citizens within their jurisdictions.²⁴¹

236. See Kate Mishkin, *Residents Say Natural Gas Production Is Marring West Virginia. And the Legislature Isn't Doing Anything About It.*, PROPUBLICA (Mar. 6, 2019, 11:00 AM), <http://bit.ly/2UREIJ4>; see also Tom Dart, *Texas Sinkholes: Oil and Gas Drilling Increases Threat, Scientists Warn*, GUARDIAN (Mar. 27, 2018, 7:37 AM), <http://bit.ly/2vFqVuo>; Melissa Healy, *Babies Born to Moms Who Lived Near Fracking Wells Faced Host of Health Risks, Study Suggests*, L.A. TIMES (Dec. 13, 2017, 2:00 PM), <https://lat.ms/2Hvgexm>.

237. See Kate Mishkin, *Residents Say Natural Gas Production Is Marring West Virginia. And the Legislature Isn't Doing Anything About It.*, PROPUBLICA (Mar. 6, 2019, 11:00 AM), <http://bit.ly/2UREIJ4>; see also Tom Dart, *Texas Sinkholes: Oil and Gas Drilling Increases Threat, Scientists Warn*, GUARDIAN (Mar. 27, 2018, 7:37 AM), <http://bit.ly/2vFqVuo>; Melissa Healy, *Babies Born to Moms Who Lived Near Fracking Wells Faced Host of Health Risks, Study Suggests*, L.A. TIMES (Dec. 13, 2017, 2:00 PM), <https://lat.ms/2Hvgexm>.

238. See *City of Fort Collins v. Colo. Oil & Gas Ass'n*, 369 P.3d 586, 589 (Colo. 2016) (explaining that citizens of Fort Collins voted in favor of “[a]n ordinance placing a moratorium on hydraulic fracturing and the storage of its waste products within the City of Fort Collins or on lands under its jurisdiction for a period of five years, without exemption or exception, in order to fully study the impacts of this process on property values and human health”); Brief of Respondents, *Norse Energy Corp. USA v. Town Of Dryden et al.*, 2012 WL 12977647, at *2 (N.Y.A.D. 3 Dept.) (“Respondents now urge this Court to reaffirm their constitutionally guaranteed and legislatively delegated home rule powers, which authorize them to protect the public health, safety, and general welfare”); see also Brief of Respondent, *Cooperstown Holstein Corp. v. Town of Middlefield*, 2012 WL 1297759, at *4 (N.Y.A.D. 3 Dept.) (“The Town Board was particularly concerned with the impacts that heavy industrial uses would have on its water supply, which could adversely impact . . . the health, safety, and welfare of Middlefield’s residents”).

239. See, e.g., Travis Miller, *The Evolving Regulations and Liabilities Entwined in Corporate Social Responsibility*, 46 TEX. ENVTL. L.J. 219, 222–23 (2017) (“To escape the costs of compliance . . . corporations moved production to more welcoming and less-regulated jurisdictions.”).

240. See, e.g., *Tenn. Wine & Spirits Retailers Ass’n v. Thomas*, 139 S. Ct. 2449, 2473 (2019) (quoting *Mugler v. Kansas*, 123 U.S. 623, 661 (1887)) (explaining a state’s police powers in the context of alcohol regulation and reasoning that not “‘every statute enacted ostensibly for the promotion’ of ‘the public health, the public morals, or the public safety’ is ‘to be accepted as a legitimate exertion of the police powers of the State’”).

241. See, e.g., Heidi Gorovitz Robertson, *When States’ Legislation and Constitutions Collide with Angry Locals: Shale Oil and Gas Development and Its Many Masters*, 41 WM. & MARY ENVTL. L. & POL’Y REV. 55, 59 (2016) (“Local jurisdictions seeking to control or influence the work of the shale oil and gas industry argue it is within their right of self-government to enact ordinances to protect the health and welfare of their citizens and communities.”).

States like Colorado,²⁴² Wyoming,²⁴³ Montana,²⁴⁴ and Pennsylvania²⁴⁵ are responding to fracking in an aggressive way by passing more stringent laws. Additionally, the passage of more stringent regulations by local governments has prompted oil and gas companies who hold permits from the state authority to operate oil and gas wells in the area to sue local governments and, through litigation costs, pay the price of lax regulation.²⁴⁶ As the body of scientific research on the negative effects of fracking grows,²⁴⁷ oil and gas corporations will continue to litigate over municipal bans and moratoriums on fracking.²⁴⁸

242. See, e.g., John Aguilar, *In “New Era” of Oil and Gas Regulation, Colorado Communities Waste No Time Writing Own Rules*, DENVER POST (May 6, 2019, 6:00 AM) <https://dpo.st/2UVmAht> (explaining that after S.B. 19181—a bill giving cities and towns in Colorado increased regulatory power over oil and gas activities within their jurisdictions and shifting the priority of the state oil and gas commission to public health and safety—was signed into law by Colorado’s governor, local governments immediately started to put new rules in place).

243. See, e.g., Benjamin Storrow, *Wyoming, Halliburton Agree to Greater Fracking Disclosure*, CASPER STAR-TRIBUNE (Jan. 26, 2015), <http://bit.ly/2SwSDCN> (explaining that a condition of a settlement between regulators from Wyoming, Halliburton, and environmental groups required the Wyoming Oil and Gas Conservation Commission to implement a review process, making it more difficult for oil and gas companies to claim their fracking-fluid recipe is a trade secret and therefore exempt from public information requests).

244. See, e.g., Matt Volz, *Montana Lawmakers Seek to Change Fracking Disclosure Rules*, GREAT FALLS TRIBUNE (Apr. 10, 2017, 7:36 PM), <http://bit.ly/39GOUrM> (explaining that Montana passed S.B. 0299, which makes trade secret exemptions more difficult to obtain and mandates that any information not deemed a trade secret be available to the public).

245. See e.g., *Pa. Envtl. Def. Found. v. Commonwealth*, 161 A.3d 911, 933 (2017) (citing *Robinson Township v. Commonwealth*, 83 A.3d 901, 957 (Pa. 2013) (plurality)) (holding that under Pennsylvania’s Environmental Rights Amendment, “the Commonwealth has a duty to prohibit the degradation, diminution, and depletion of our public natural resources, whether these harms might result from direct state action or from the actions of private parties [and] . . . the Commonwealth must act affirmatively via legislative action to protect the environment”).

246. See, e.g., Christopher J. Hilson, *Litigation Against Fracking Bans and Moratoriums in the United States: Exit, Voice and Loyalty*, 40 WM. & MARY ENVTL. L. & POL’Y REV. 745, 745 (2016) (explaining that these lawsuits can follow three forms: (1) preemption claims alleging that the local authority needed to enact such a ban or moratorium is preempted by state law; (2) “takings” claims alleging that the bans are “unconstitutional regulatory takings” violative of property rights; and (3) claims challenging the actual process by which the ban or moratorium was enacted).

247. See, e.g., Lucy Goodchild van Hilten, *Fracking: Science Needs to Catch up with Public Awareness, Researchers Say*, ELSEVIER (Apr. 8, 2015), <http://bit.ly/321grBR> (“I think the involvement of big oil and gas companies, and the potential environmental impacts of the process, have put fracking in the public eye,” explained Dr. Ferrer. ‘People have been aware of it for five years or more, and now that it’s becoming increasingly common – and controversial – more research is going into different aspects of fracking.’”).

248. See, e.g., Wendy Koch, *As U.S. Fracking Bans Increase, So Do Lawsuits*, NAT’L GEOGRAPHIC (Nov. 6, 2014), <https://on.natgeo.com/2wmE4cl> (explaining that as more municipalities attempt to ban or limit fracking, more lawsuits are filed in response).

In order to avoid this extensive litigation, oil and gas corporations should lobby for the federal regulation of fracking.

Large oil and gas corporations should be further incentivized to lobby for federal regulation because consumers are increasingly demanding accountability.²⁴⁹ A corporation can add value by creating a corporate strategy focused on social responsibility.²⁵⁰ However, one caveat is that any added value attributed to the knowledge of CSR efforts requires a corporation to have a good reputation.²⁵¹ Because the public generally does not view fracking favorably,²⁵² CSR efforts in lobbying for federal regulation may be used to rehabilitate this poor public image.²⁵³ Therefore, if a large oil and gas corporation were to lobby for the SDWA to regulate fracking and then endeavor to inform its customers about its efforts to do so, increased customer awareness may have the potential to increase company value, if such activities “change the customers’ perceptions” of the corporation.²⁵⁴

B. Federal Regulation Under the SDWA

Oil and gas corporations should lobby for the federal regulation of fracking under the SDWA for two reasons. First, the SDWA requires the Administrator to conduct CBA before promulgating any minimum standard.²⁵⁵ Second, the SDWA provides for an opportunity for states to keep their existing programs.²⁵⁶

First, the SDWA requires the Administrator to use CBA in setting minimum standards that state UIC programs must adhere to.²⁵⁷

249. See Miller, *supra* note 239, at 236–37 (explaining that corporations should start viewing CSR as an obligation instead of a marketing or PR strategy because citizen awareness about corporate conduct has prompted calls to action for corporations to improve practices).

250. See Servaes & Tamayo, *supra* note 221, at 1047.

251. See *id.* at 1048.

252. See MICHAEL D. HOLLOWAY & OLIVER RUDD, FRACKING: THE OPERATIONS AND ENVIRONMENTAL CONSEQUENCES OF HYDRAULIC FRACTURING 127 (2013).

253. See generally Servaes & Tamayo, *supra* note 221, at 1059 (“Our evidence also suggests that firms engaging in and publicizing CSR activities can only add value if these activities and firm reputation are aligned. Hence, firms with poor reputations are unlikely to reap any immediate benefits (in terms of shareholder value creation) from engaging in CSR. In fact, such activities may appear disingenuous and may well have the opposite effect. In the long-run, the engagement in and dissemination of such activities could create value if they change the customers’ perceptions of the firm.”).

254. *Id.*

255. See discussion *supra* Section III.C.1.

256. See discussion *supra* Section III.C.1.

257. See discussion *supra* Section III.C.1. The Administrator must make a finding that the cost of compliance with the regulation for the regulated party justifies the benefits reaped by enacting the regulation. See DRIESEN ET AL., *supra* note 112, at 87; see also Lisa Heinzerling, *Cost-Nothing Analysis: Environmental Economics in the Age of Trump*, 30 COLO. NAT. RES., ENERGY & ENVTL. L. REV. 287, 287 (2019) (explaining how

Consequently, regulation under the SDWA would offer increased protections to human health and the environment but would do so only when the cost of the regulation justifies the benefits reaped.²⁵⁸ CBA is beneficial to corporations because corporations would have an opportunity to say whether or not the cost of the proposed standard is justified through the notice-and-comment process.²⁵⁹ CBA involves corporations directly in standard-setting because industry, through their input, can give their interpretation to the EPA on what any proposed standard would cost.²⁶⁰

Second, the SDWA leaves open the possibility that some states may be able to keep operating their UIC programs, uninterrupted by federal regulation.²⁶¹ The SDWA would likely not displace a state program regulating fracking unless that state program did not meet the federal minimum standards.²⁶² This type of regulatory scheme would benefit corporations because certain states that have programs favorable to industry could continue without disruption, so long as the state standards at least meet the federal minimum standards set by the Administrator.²⁶³

C. Corporate Lobbying for the Federal Regulation of Fracking

Large oil and gas corporations could use lobbying as the main tool to push for the federal regulation of fracking. Lobbying by large corporations in pursuit of policy that matches their interests is common across all major industries.²⁶⁴ Corporations have successfully lobbied to

CBA “came to dominate federal environmental policy,” in part through a series of executive orders, and arguing that CBA, under President Trump, has “mutated” to become, what the author calls, “‘cost-nothing’ analysis” whereby the federal government takes only costs into account, “discard[ing] policies aimed at protecting human health and the environment”).

258. See discussion *supra* Section III.C.1.

259. See Safe Drinking Water Act of 1974 § 1412(b)(3)(c)(i), 42 U.S.C. § 300g (2018) (explaining that when the Administrator proposes “any national primary drinking water regulation that includes a maximum contaminant level,” the Administrator is required to “seek public comment” on, among other things, “[q]uantifiable and nonquantifiable costs,” and that these costs must have a factual basis on which to assert that the costs would likely result “solely as a result of compliance with the maximum contaminant level”); see also BUSINESS ROUNDTABLE, USING COST-BENEFIT ANALYSIS TO CRAFT SMART REGULATION (2014).

260. See Safe Drinking Water Act of 1974 § 1412(b)(3)(c)(i), 42 U.S.C. § 300g (2018).

261. See Safe Drinking Water Act of 1974 § 1421(b)(3)(B)(i), 42 U.S.C. § 300h (2018).

262. See *id.*

263. See *id.*

264. See discussion *supra* Section II.D.

exempt fracking from federal regulation before²⁶⁵ and could thus lobby to the opposite effect.

The oil and gas industry lobby, like the technology industry lobby, is no stranger to influencing policy through lobbying.²⁶⁶ Similar to how technology giants are lobbying for increased regulation in the data-privacy space, oil and gas corporations could use lobbying to advocate for the federal regulation of fracking.²⁶⁷ Given that the oil and gas industry lobby already has an incredible amount of influence on policy,²⁶⁸ lobbying would be a familiar action that corporations could take to push for the federal regulation of fracking under the SDWA.

IV. CONCLUSION

In the past, large oil and gas corporations have lobbied against the federal regulation of fracking.²⁶⁹ The SDWA previously codified the responsibility of regulating fracking until that responsibility was stripped from it by the Energy Policy Act.²⁷⁰ Currently, the SDWA regulates fracking only when fracking fluid includes diesel fuel—an exceedingly rare occurrence.²⁷¹ Unfortunately, the regulation of fracking at the state level has left citizens in states with lax regulations vulnerable to the negative human health and environmental effects of fracking because oil and gas corporations are more likely to frack where regulations are less stringent.²⁷² By profiting to the detriment of citizens, oil and gas corporations are increasingly butting heads with state and local governments that are legislating and creating stricter fracking regulations.²⁷³ Further, perpetuating the current system of regulating fracking at the state level is inapposite to the teachings of CSR.²⁷⁴

Oil and gas corporations could either continue to conflict with state and local governments in court and see more jurisdictions become foreclosed to them,²⁷⁵ or the oil and gas lobby could start lobbying for the

265. See *supra* note 151 and accompanying text (explaining how oil company Halliburton, among others, successfully lobbied for the passage of the Energy Policy Act).

266. See discussion *supra* Section II.D.

267. See discussion *supra* Section II.D.

268. See, e.g., Lisa Friedman & Claire O’Neill, *Who Controls Trump’s Environmental Policy?*, N.Y. TIMES (Jan. 14, 2020), <https://nyti.ms/2HuLCfi> (explaining that many of Donald Trump’s federal agency officials came to their positions from careers in the oil and gas industry).

269. See discussion *supra* Section II.C.2.

270. See discussion *supra* Section II.C.2.

271. See TIEMANN & VANN, *supra* note 28, at 22 (“EPA has not received permit applications for hydraulic fracturing activities using diesel fuels.”).

272. See discussion *supra* Section II.B.

273. See discussion *supra* Section II.E.

274. See discussion *supra* Section II.C.2.

275. See discussion *supra* Section III.C.

federal regulation of fracking under the SDWA.²⁷⁶ Indeed, the lobbying effort itself could possibly add value to any oil and gas corporation that chooses to publicize its efforts.²⁷⁷ Lobbying for the federal regulation of fracking under the SDWA is the best choice for the oil and gas industry lobby. While the SDWA authorizes the Administrator to set federal minimum standards that states must at least regulate according to, the SDWA also allows for the grandfathering-in of state programs that have already satisfied those federal minimum standards.²⁷⁸ Thus, if fracking were regulated under the SDWA, state programs would not be unnecessarily disrupted in jurisdictions already in compliance²⁷⁹ and the Administrator's federal minimum standards would additionally provide increased protections to state citizens.²⁸⁰ Therefore, lobbying for the federal regulation of fracking under the SDWA would provide increased protections to citizens without placing a great compliance burden and cost on oil and gas corporations.

276. See discussion *supra* Sections II.E, III.A.

277. See discussion *supra* Sections II.E, III.A.

278. See discussion *supra* Sections II.C.1, III.B.

279. See discussion *supra* Sections II.C.1, III.B.

280. See discussion *supra* Sections II.C.1, III.B.