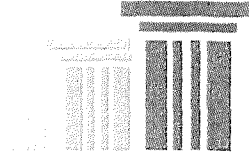


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THE LIABILITY ENGINE THAT COULD NOT:
WHY THE DECADES-LONG LITIGATION PURSUIT OF NATURAL
RESOURCE SUPPLIERS SHOULD GRIND TO A HALT

Phil Goldberg, Christopher E. Appel, & Victor E. Schwartz

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Phil Goldberg, Christopher E. Appel,** & Victor E. Schwartz****

A country's natural resources are a vital public asset. How these resources are extracted and used are valuable social and economic drivers.¹ Consider fossil fuels and their ability over the past century to generate affordable domestic sources of electricity. These resources have dramatically elevated the standard of living in the United States.² Extracting and using natural resources for purposes such as energy production, though, also comes with risks.³ While natural resources are limited in supply and have great value, they can cause environmental, property, and personal harms even when properly used.⁴ Establishing national policies for the extraction, supply, and use of natural resources takes delicate, deliberative balancing of benefits and risks.

For much of American history, this balancing has been placed in the hands of Congress, state legislatures, and regulators pursuant to legislative

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¹ See *infra* Part I.

² See GEORGE CONSTABLE & BOB SOMERVILLE, A CENTURY OF INNOVATION: TWENTY ENGINEERING ACHIEVEMENTS THAT TRANSFORMED OUR LIVES 2-5 (Joseph Henry Press 2003) (calling societal electrification the "greatest engineering achievement" of the past century).

³ See Peter S. Glaser et al., *Managing Coal: How to Achieve Reasonable Risk with an Essential Resource*, 13 VT. J. ENVTL. L. 177, 187-201 (2011) (discussing natural resource risks in energy production).

⁴ See *id.*

authority.⁵ This makes sense. These bodies have the capacity to carefully weigh competing considerations and determine the path they believe is in the best interests of the American public. Nevertheless, the exclusivity of this governance has been under attack for decades by those who believe that private litigation is a necessary path for regulation. Since the 1970s, litigation has grown as a tactic for regulating the supply and use of natural resources. These lawsuits would have courts make energy policy while looking solely at the plaintiffs' environmental allegations. Some of these suits are nakedly political with the plaintiffs fully acknowledging that their goals are to regulate or reduce the use of natural resources, such as the consumption of fossil fuels.⁶ Other suits are brought by profit-motivated lawyers simply hoping to tap into funds generated by the sale of natural resources.⁷

This article examines the varied attempts to subject to liability those who extract, sell, or use natural resources beyond the legislative and regulatory regimes adopted by policymakers. It explains how this decades-long pursuit of natural resource liability has historically failed. However, rather than come to an end, this litigation has taken a page from *The Little Engine that Could*, following the credo that if you persist at something long enough, you will succeed.⁸ Indeed, over the past decade there have been several new waves of litigation offering creative theories to regulate natural resource development and use through expanded liability.⁹ This article analyzes these attempts and the public policy reasons why such pursuits should be the engine that "could not."

Part I provides an historical overview of how Congress has carefully managed risks associated with natural resources. Part II explains attempts to subject producers of natural resources to liability under products liability theories. This litigation "engine" was the first to be derailed. Part III discusses efforts to sue both producers and industrial users of natural resources under conduct-based torts, such as public nuisance. While these tracks have not reached the plaintiffs' desired destinations, they also have not yet reached their terminus. Finally, part IV examines litigation engines directed at government regulators to force them to adopt the plaintiffs' desired political agendas. The article concludes that turning the extraction and use of natural resources into liability-causing events are unwise "regulation through litigation."¹⁰

⁵ See generally EVOLUTION OF NATURAL RESOURCES LAW AND POLICY, Natural Resources Law Center, University of Colorado Law School (MacDonnell and Bates, eds., 2010).

⁶ See *infra* notes 129 through 130 and accompanying text; see also *infra* Part IV.B.

⁷ See *infra* Part II.

⁸ See WATTY PIPER, *THE LITTLE ENGINE THAT COULD* (1930).

⁹ See *infra* Parts III and IV.

¹⁰ See Victor E. Schwartz & Christopher E. Appel, *Government Regulations and Private Litigation: The Law Should Enhance Harmony, Not War*, 23 B.U. PUB. INT. L.J. 185, 189-95 (2014) (discussing various lawyer-driven "regulation through litigation" attempts, including climate change litigation).

Courts should continue rejecting litigation that attempts to regulate America's supply and use of natural resources. Natural resources are important public goods. How they are extracted and used has broad impacts on society, and balancing their benefits and risks are decisions best left in the hands of elected representatives in Congress. Congress, along with the federal regulators they authorize, unlike courts, have the institutional tools to properly balance broad stakeholder interests and set natural resource policy for the entire country.

I. THE EVOLUTION OF NATURAL RESOURCES LAW

Society's modern development, both in the United States and abroad, is inexorably tied to the development and use of a country's natural resources.¹¹ Natural resources—which include water, soil, forestry, fish, wildlife, minerals, oil, and natural gas, among many other raw materials¹²—provide key ingredients for governments to meet the food, shelter and quality of life needs of its citizenry. The development and use of these resources have spurred economic and societal growth. The production of these resources have generated commerce and led to the building of nations' infrastructure. In particular, the extraction and use of fossil fuels—namely coal, oil, petroleum and natural gas—over the past 200 years have fueled the industrial and information revolutions that have driven world economies.¹³ The result has been a global rise in standards of living, healthier human populations, and longer lifespans.¹⁴ Modern society would not have happened without the ability of governments to harness their natural resources.

The United States has developed into one of the world's most advanced societies in large part because it is endowed with vast natural re-

¹¹ See Adam I. Davis, *Ecosystem Services and the Value of Law*, 20 DUKE ENVTL. L. & POL'Y F. 339, 340 (2010) (“the principle that we can own land, build on it, and take resources from it is still a rock on which the world economy stands”); see also *Sustainability*, EPA, (last updated Sep. 21, 2015), <http://www2.epa.gov/sustainability/learn-about-sustainability#what> (“Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment.”).

¹² See, e.g., MINN. STAT. ANN. § 116B.02, subdiv. 4 (defining natural resources to include “all mineral, animal, botanical, air, water, land, timber, soil, quietude, recreational and historical resources”); HAW. CONST. ART. XI, § 1 (stating objective to “conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources”).

¹³ See *Fossil Fuel Energy Consumption*, WORLD BANK, <http://data.worldbank.org/indicator/EG.USE.COMM.FO.ZS> (reporting fossil fuel consumption as a percentage of total energy consumption for industrialized nations); see also Alfred D. Chandler, Jr., *Anthracite Coal and the Beginnings of the Industrial Revolution in the United States*, 46 BUS. HISTORY REV. 141, 142 (1972) (discussing importance of coal production in U.S. Industrial Revolution).

¹⁴ See Peter S. Glaser et al., *supra* note 3, at 178; see also Robert Mann, *Another Day Older and Deeper in Debt: How Tax Incentives Encourage Burning Coal and The Consequences for Global Warming*, 20 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 111 (2008) (stating that coal has “kept us warm, fired our factories, fed our trains and lit our world”).

sources. The nation has access to water via natural rivers and oceans,¹⁵ approximately 670 million forested acres, and 450 million acres of cropland.¹⁶ The United States additionally contains natural deposits of more than ninety nonfuel minerals that include key commodity reserves of gold, copper, iron ore, and zinc.¹⁷ It also boasts a reserve base of roughly 480 billion short tons of coal, which is enough for the country to provide 35% of the world's coal supply for more than 250 years,¹⁸ an estimated 354 trillion cubic feet (Tcf) natural gas reserve, and strategic reserves of more than thirty-six billion barrels of crude oil.¹⁹ The aggregate value of these natural resource reserves has been estimated at \$45 trillion.²⁰

Given the importance and abundance of the nation's resources, the federal government has long promoted, and profited from, their extraction and use. Starting in the 19th century, Congress enacted laws to encourage westward expansion, greater land use, and exploration.²¹ In 1866, Congress enacted the first federal mining laws to facilitate the discovery of minerals and precious metals such as gold, silver, and copper.²² These laws assured property rights for those who extracted the minerals. The General Mining Law of 1872, which is still in effect today,²³ proclaimed that "all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to [such] exploration and purchase."²⁴ To facilitate this exploration and generate public revenue, the government leased public land for private sector companies to extract the deposits.²⁵

¹⁵ See *Water Sense: Tomorrow & Beyond*, EPA (last updated Oct. 16, 2015) http://www.epa.gov/watersense/our_water/tomorrow_beyond.html (explaining that "Earth might seem like it has abundant water, but in fact less than 1 percent is available for human use").

¹⁶ See *Major Land Uses*, U.S. DEPT. OF AGRICULTURE, <http://ers.usda.gov/data-products/major-land-uses.aspx#25972>.

¹⁷ See *Mineral Commodity Summaries 2014*, U.S. Geological Survey, U.S. DEPT. OF INTERIOR, <http://minerals.usgs.gov/minerals/pubs/mcs/2014/mcs2014.pdf>.

¹⁸ See *U.S. Coal Reserves*, U.S. ENERGY INFORMATION ADMIN., <http://www.eia.gov/coal/reserves/>; Coal Facts, Coal News, <http://www.coalnews.net/facts.php>.

¹⁹ See *U.S. Crude Oil and Natural Gas Proved Reserves*, U.S. ENERGY INFORMATION ADMIN. (Nov. 23, 2015), <http://www.eia.gov/naturalgas/crudeoilreserves/index.cfm>.

²⁰ See *The World's Most Resource-Rich Countries*, 24/7 WALL STREET (Apr. 18, 2012), <http://247wallst.com/special-report/2012/04/18/the-worlds-most-resource-rich-countries/>.

²¹ *Supra* note 5.

²² See Mining Law of 1866, 14 Stat. 251 (1866); Robert B. Comer, *Introduction to Federal Mining Law*, in AMERICAN LAW OF MINING § 30.01 (2nd ed.); John C. Lacy, *The Historic Origins of the U.S. Mining Laws and Proposals for Change*, 10 NAT. RESOURCES & ENV'T 13 (1995) (providing an early history of mining law).

²³ See Ch. 152 § 9, 17 Stat. 91 (codified as amended at 30 U.S.C. § 22-54 and §§ 611-615); see also George C. Coggins et al., FEDERAL PUBLIC LAND AND RESOURCES LAW 85-86 (5th ed. 2002) (discussing early federal mining laws).

²⁴ 30 U.S.C. § 22.

²⁵ The first federal mineral leasing act was passed in 1807, but was "never adequately administered and was ineffectual in its scope and effect." Wells S. Parker, *Mining on Federal Lands*, Rocky Mountain Mineral Law Foundation, Public Land Law, Regulation, and Management, Paper 5 (2014). It

Congress then adopted several federal land leasing laws leading up to the Mineral Leasing Act of 1920, which established a comprehensive leasing system for minerals within federal lands.²⁶ This structure for natural resource development is still in effect today. The government now has leases for royalty payments tied to the extraction of nearly 70 different types of minerals.²⁷

Across this time, Congress has actively managed risks associated with the exploration, extraction, and use of these natural resources.²⁸ Worker safety, public health, and environmental protection have all been addressed through federal laws.²⁹ In 1891, Congress enacted the first federal mine safety law, which, among other things, established minimum ventilation requirements at underground coal mines and prohibited operators from employing children under age 12.³⁰ That same year, Congress passed the Forest Reserve Act to enable the President to set aside “forest reserves” for conserving lands that might have been used for commercial purposes.³¹ At the beginning of the 20th Century, President Roosevelt set aside more than 230 million acres of land during his presidency, including inaugurating five national parks and fifty-five wildlife refuges.³² In 1910, Congress created the Bureau of Mines within the Department of the Interior to identify ways to reduce worker accidents.³³

In the late 1940s and 1950s, Congress laid the foundation for the modern network of worker safety and environmental laws to assure both the

was not until the adoption of series of mining acts, beginning in 1866 and culminating with the Mining Law of 1872, that the federal government began to take a more active role in leasing its land. *See id.*; *see also* Coggins et al., *supra* note 23, at 85 (stating that the federal government’s interest in the acquisition of minerals and mineral rights extends as far back as the Congress of the Confederation in the 1780s).

²⁶ *See* Ch. 85, 41 Stat. 437 (1920); *see also* Parker, *supra* note 25 (characterizing The Mineral Leasing Act of 1920 as “the most comprehensive federal mineral development legislation”).

²⁷ *See Leasing Minerals on Federal and Indian Lands: Briefing for Congressional Requestors*, Government Accountability Office, GAO-13-45R Mineral Resources (June 2012), at 11, <http://www.gao.gov/products/GAO-13-45R>.

²⁸ *See* Alexandra B. Klass, *Property Rights on the New Frontier: Climate Change, Natural Resource Development, and Renewable Energy*, 38 *ECOLOGY L. Q.* 63, 77 (2011); *see also* Mark Latham, Victor E. Schwartz & Christopher E. Appel, *The Intersection of Tort and Environmental Law: Where the Twains Should Meet and Depart*, 80 *FORDHAM L. REV.* 737, 743-46 (2011) (explaining distinct purposes and goals behind seminal federal environmental laws relating to natural resource development).

²⁹ *See id.*

³⁰ *See History of Mine Safety and Health Legislation*, MINE SAFETY AND HEALTH ADMIN., U.S. DEPT. OF LABOR, <http://www.msha.gov/MSHAINFO/MSHAINFO2.HTM>.

³¹ *See* Act of Mar. 3, 1891, ch. 561, 26 Stat. 1095, 1103 (repealed 1976); *see also Our History*, U.S. FORESTRY SERV., <http://www.fs.fed.us/learn/our-history>.

³² *See* Robert Brown, *A Conservation Timeline*, THE WILDLIFE PROFESSIONAL (Fall 2010), [https://www.wildlifedepartment.com/aboutodwc/A%20Conservation%20Timeline\[1\].pdf](https://www.wildlifedepartment.com/aboutodwc/A%20Conservation%20Timeline[1].pdf).

³³ *See* Bureau of Mines Act, Pub. L. No. 61-179, ch. 240, 36 Stat. 369 (1910); *see also supra* note 30.

sustainability of America's natural resources and a reduction of adverse impacts associated with extracting and using them. These early efforts included the first code of federal regulations for mine safety in 1947,³⁴ the Federal Water Pollution Control Act of 1948,³⁵ and the Air Pollution Control Act of 1955.³⁶ In the 1960s and 1970s, society significantly increased awareness of workplace and environmental risks, and Congress acted accordingly, enacting an array of laws to manage these risks, whether they came from the extraction of natural resources, man-made chemicals, or other sources.

For environmental risks, Congress established the Environmental Protection Agency (EPA) in 1970 and enacted a series of laws aimed at balancing society's interests in commercial development and being responsible stewards of the environment.³⁷ The cornerstones of this effort were the Clean Water Act (CWA),³⁸ Clean Air Act (CAA),³⁹ National Environmental Policy Act (NEPA),⁴⁰ and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).⁴¹ The CWA and CAA create permitting programs, such as the National Pollutant Discharge Elimination System (NPDES), to regulate the release of pollutants.⁴² Under NEPA, Environmental Impact Statements are required for any action that can significantly affect the environment.⁴³ Also, CERCLA provides a remedy for the release of hazardous substances above permitted amounts.⁴⁴ While each of these laws has broad applicability, they have directly regulated the extraction and use of natural resources, particularly fossil fuels.

Complementing this system are laws that target risks associated with specific natural resources. For example, the National Forest Management

³⁴ Act of Aug. 4, 1947, Pub. L. No. 80-328, 61 Stat. 725; The Federal Mine Safety Code, 32 C.F.R. Part 304 (1947), reprinted in 11 Fed. Reg. 9017 (1946); see also *supra* note 30.

³⁵ Federal Water Pollution Control Act of 1948, Pub. L. No. 80-845, 62 Stat. 1155 (1948); see also History of the Clean Water Act, Law & Regulations, EPA, <http://www2.epa.gov/laws-regulations/history-clean-water-act> ("The Federal Water Pollution Control Act of 1948 was the first major U.S. law to address water pollution.").

³⁶ Air Pollution Control Act of 1955, Pub. Law No. 84-159, 69 Stat. 322 (1955).

³⁷ See Latham et al., *supra* note 28, at 743-46; Michael C. Blumm & David H. Becker, *From Martz to the Twenty-First Century: A Half-Century of Natural Resources Law Casebooks and Pedagogy*, 78 U. COLO. L. REV. 647, 651 (2007) (discussing "regulatory explosion of the late 1960s and 1970s" of environmental law); Jerry L. Anderson, *The Environmental Revolution at Twenty-Five*, 26 RUTGERS L.J. 395, 410 (1995).

³⁸ 33 U.S.C. § 1251(a).

³⁹ 42 U.S.C. §§ 7401 et seq.

⁴⁰ 42 U.S.C. §§ 4321-4370(f).

⁴¹ 42 U.S.C. §§ 9601-9675.

⁴² See *Water Permitting 101*, OFFICE OF WASTEWATER MANAGEMENT, EPA, <http://water.epa.gov/polwaste/npdes/basics/upload/101pape.pdf>.

⁴³ 42 U.S.C. § 4332(2)(C); see also *National Environmental Policy Act (NEPA)*, *Basic Information*, EPA, <http://www.epa.gov/Compliance/basics/nepa.html>.

⁴⁴ 42 U.S.C. §§ 9606-9609; Latham et al, *supra* note 29, at 743-46.

Act gives the Department of Agriculture the responsibility and tools to manage the nation's forests, including the use of timber for logging.⁴⁵ The Surface Mining Control and Reclamation Act, which the Department of Interior administers, regulates all aspects of mining operations and reclamation projects, including the standards mine operators must follow for mountain top mining.⁴⁶ The Oil Pollution Act requires companies to develop detailed contingency plans to contain spills, establishes a trust fund for cleaning up spills where the responsible party cannot do so, and sets forth guidance for how liability and damages are to be measured in the event of such a spill.⁴⁷

This integrated approach of general and highly specific laws has been remarkably successful in reducing impacts of natural resource commerce on both the environment and the American public. For example, under this regime aggregate emissions of common air pollutants have been reduced by 68 percent since 1970.⁴⁸ Much of the early focus was on coal production. New technologies at coal-fired power plants that were encouraged by these laws are now capable of reducing emissions of sulfur dioxide by 98 percent, particulate matter by 99.8 percent, and nitrous oxides by 86 percent.⁴⁹ As a result, while coal use has tripled since the 1970s, regulated emissions from coal-based electricity have decreased by 40 percent.⁵⁰ Other regulatory regimes have met similar successes. In Moab, Utah, an Environmental Impact Statement developed pursuant to NEPA identified potential contamination of the Colorado River from 16 million tons of uranium mine tailings situated near the river's floodplain, allowing the development of a plan to transport this material to a safer place.⁵¹ Further, CERCLA has been used to clean up hundreds of mines.⁵²

Congress has used this same approach to tightly control risks associated with worker safety. In the 1970s, Congress established the Occupational

⁴⁵ 16 U.S.C. §§ 1600–1614.

⁴⁶ 30 U.S.C. §§ 1201–1328.

⁴⁷ 33 U.S.C. § 2701 et seq. The Act also created a trust fund financed by a tax on oil to clean up spills when a responsible party is incapable or unwilling to do so.

⁴⁸ See The U.S. Clean Air Act and the Economy, Benefits and Costs of Clean Air Act, U.S. Env'tl. Prot. Agency, <http://www.epa.gov/air/oaqps/permits/basic.html>.

⁴⁹ See The Facts About Air Quality and Coal-Fired Power Plants, Institute for Energy Research, <http://instituteeforenergyresearch.org/studies/the-facts-about-air-quality-and-coal-fired-power-plants/>.

⁵⁰ See National Mining Ass'n, Clean Coal Technology, http://www.nma.org/pdf/fact_sheets/cct.pdf (citing findings of the National Energy Technology Laboratory).

⁵¹ See The National Environmental Policy Act 40th Anniversary Symposium, 40 Env'tl. L. Rep. News & Analysis 11183, 11189 (2010) (statement of Mary O'Brien, Utah Forests Project Manager for the Grand Canyon Trust); see also Moab UMTRA Project, <http://moabtailings.org/> (reporting that removal of uranium tailings from the banks of the Colorado River is about 45% complete).

⁵² See Stuart Buck & David Gerard, *Cleaning Up Mining Waste*, Political Economic Research Center (Nov. 2011), at 4, http://www.perc.org/sites/default/files/rs01_1.pdf (discussing use of CERCLA to clean up abandoned mines); see also Abandoned Mine Lands, Superfund, <http://www.epa.gov/superfund/programs/aml/index.htm>.

Safety and Health Administration⁵³ and the Federal Mine Safety and Health Administration.⁵⁴ These agencies have coordinated their respective regulatory and enforcement roles to eliminate potential inconsistency in mine operator safety standards and reduce any regulatory gaps.⁵⁵ Together, they have promulgated thousands of regulations governing workplace issues such as the appropriate head gear and footwear for mineworkers, as well as requiring safety features on the tools that mineworkers use.⁵⁶ Their regulations have helped reduce workplace fatalities by more than 65% and occupational injury and illness by 67%.⁵⁷ Overall, mineworker injuries in the United States have dropped from a peak of 3,242 work-related fatalities in 1907, when the nation had its single deadliest mine disaster,⁵⁸ to only twenty work-related fatalities in 2013.⁵⁹ Overall, mining has become “one of the most heavily regulated industries in the United States.”⁶⁰

Congress’s response to today’s new energy sources demonstrates its ongoing commitment to manage these benefits and risks.⁶¹ A new method for extracting oil and natural gas is hydraulic fracturing, commonly referred to as “fracking,” which involves blasting a pressurized liquid made of water, sand, and chemicals deep underground to release the oil and gas in subterranean rocks. EPA is studying fracking “to provide oversight, guidance and, where appropriate, rulemaking” to reduce any potential impacts on drinking water, surface and ground water, and air pollution.⁶² Government

⁵³ See Occupational Safety and Health Act of 1970, Pub. L. No. 91-596 (codified at 29 U.S.C. § 651 et seq).

⁵⁴ See Federal Mine Safety and Health Act of 1977, Pub. L. No. 91-173, § 2.

⁵⁵ See Interagency Agreement Between the Mine Safety and Health Administration, U.S. Department of Labor, and Occupational Safety and Health Administration, OSHA, https://www.osha.gov/pls/owadisp.show_document?p_table=MOU&p_id=222.

⁵⁶ See *OSHA Law & Regulations*, OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, U.S. DEPT. OF LABOR, <https://www.osha.gov/law-regs.html>.

⁵⁷ See *Commonly Used Statistics*, OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, U.S. DEPT. OF LABOR, <https://www.osha.gov/oshstats/commonstats.html>.

⁵⁸ See Assoc. Press, *Deadliest Recent U.S. Mine Accidents*, msnbc.msn.com, (Apr. 6, 2010), http://www.msnbc.msn.com/id/36192868/ns/us_news-life/t/deadliest-recent-us-mine-accidents/ (noting that 362 miners were killed in an explosion near Monongah, West Virginia in 1907).

⁵⁹ See *Coal Fatalities for 1900 Through 2014*, MINE SAFETY & HEALTH ADMIN, <http://www.msha.gov/stats/centurystats/coalstats.asp>.

⁶⁰ A. Brooke Rubenstein & David Winkowski, *A Mine is a Terrible Thing to Waste: Past, Present and Future Reclamation Efforts to Correct the Environmentally Damaging Effects of Coal Mines*, 13 VILL. ENV'T L.J. 189 (2002) (discussing regulation of the coal industry).

⁶¹ See Eugene E. Smary et al., *The Convergence of Mining Law and Environmental Law*, Rocky Mountain Mineral Law Foundation, International Mining and Oil & Gas Law, Development, and Investment, Paper No. 8B (2011) (discussing integration of natural resource extraction laws with modern environmental laws).

⁶² Natural Gas Extraction – Hydraulic Fracturing, Env'tl. Prot. Agency, <http://www2.epa.gov/hydraulicfracturing>; see also Effluent Limitations Guidelines and New Source Performance Standards for the Oil and Gas Extraction Point Source Category, 40 C.F.R. Parts 9 and 435 (2001), <http://www.gpo.gov/fdsys/pkg/FR-2001-01-22/pdf/01-361.pdf>; Oil and Gas Extraction Effluent

agencies are also managing risks posed by renewable energy sources such as solar energy production and wind farms.⁶³ Solar energy installations, for example, can strain water resources, and wind farms can adversely impact wildlife.⁶⁴ When such new risks arise, they are initially governed under the general guidelines provided by the CWA, CAA, NEPA, and CERCLA. Should these regulatory regimes prove insufficient, Congress can enact tailored regulations to manage them.

Over the years, the American people have directly benefited from this active partnership between their government and the private sector over how best to manage the nation's natural resources. The federal government owns about 28% of the country's total land,⁶⁵ about two-thirds of which is available for the extraction or harvesting of natural resources.⁶⁶ As indicted, the government has entered lease agreements for royalty payments tied to the extraction of dozens of minerals, which produces more than \$11 billion annually for the federal government.⁶⁷ Fossil fuels used for energy production—namely oil, gas, natural gas liquids, and coal—account for approximately 98% of these royalties.⁶⁸ The result has been a highly advanced economy, high standards of living for the American people, and a comprehensive risk management system for America's natural resources.

The question then is whether regulation through litigation is needed beyond government oversight and control. This article will next explore the value of private lawsuits seeking to regulate the extraction and use of natural resources through litigation.

Guidelines, Env'tl. Prot. Agency, <http://water.epa.gov/scitech/wastetech/guide/oilandgas/> (stating that EPA is developing rules to address wastewater discharges produced by "unconventional extraction").

⁶³ See Glaser et al., *supra* note 3, at 198-200 (discussing impacts of wind and solar energy production).

⁶⁴ See *id.*; *Renewable Electricity Generation*, OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY, <http://energy.gov/eere/renewables>.

⁶⁵ See *Federal Land Ownership: Overview and Data*, Congressional Research Service (Feb. 8, 2012), at 1, <https://www.fas.org/sgp/crs/misc/R42346.pdf>.

⁶⁶ See Davis, *supra* note 11, at 340 (estimating percentage of federally managed land available for resource extraction and related activities based on data published by General Accounting Office); see also *Land Ownership: Information on the Acreage, Management and Use of Federal and Other Lands*, U.S. Gen. Accounting Office (1996), at 2, <http://www.gao.gov/archive/1996/rc96040.pdf>.

⁶⁷ See *Leasing Minerals on Federal and Indian Lands: Briefing for Congressional Requestors*, Government Accountability Office, GAO-13-45R Mineral Resources (June 2012), at 11, <http://www.gao.gov/products/GAO-13-45R> ("The resulting revenue from mineral leasing activity on federal and Indian lands in fiscal years 2010 and 2011 was \$11.3 billion and \$11.4 billion, respectively.")

⁶⁸ See *id.* at 37.

II. ENGINE NO. 1 – LIABILITY FOR NATURAL RESOURCE “PRODUCTS”

Groups opposed to the use of certain natural resources, as well as individuals alleging injury from their use, have sought to impose liability against the companies that extract, supply, or use natural resources.⁶⁹ In the 1960s, when courts were first developing the doctrine of strict products liability, lawsuits sought to take advantage of the law’s early malleability by alleging injury related to natural resource “products.”⁷⁰

The American Law Institute’s (ALI) *Restatement (Second) of Torts* provided the blueprint from which a majority of state high courts have recognized strict products liability.⁷¹ Under Section 402A of this Restatement, a manufacturer can be subject to liability for defects in a product’s manufacture, design, or warning.⁷² The ALI did not specifically address the application of this liability regime to suppliers of naturally occurring raw materials.⁷³ The only issue Section 402A spoke to with respect to natural resources was the inappropriateness of liability where a raw material is incorporated into a product as a component part.⁷⁴

In its origins, the focus of product liability was on manufactured products, not natural resources.⁷⁵ Unlike manufactured products, there is no

⁶⁹ See Victor E. Schwartz & Christopher E. Appel, *Exporting United States Tort Law: The Importance of Authenticity, Necessity, and Learning from Our Mistakes*, 38 PEPP. L. REV. 551, 553-54 (2011) (discussing history of strict products liability law); Latham et al., *supra* note 29, at 743-46 (discussing history of “watershed” environmental laws).

⁷⁰ See William Prosser, *The Fall of the Citadel (Strict Liability to the Consumer)*, 50 MINN. L. REV. 791 (1966); see also William Prosser, *The Assault Upon the Citadel (Strict Liability to the Consumer)*, 69 YALE L.J. 1099 (1960).

⁷¹ See Victor E. Schwartz, *The Restatement (Third) of Torts: Products Liability—The American Law Institute’s Process of Democracy and Deliberation*, 26 HOFSTRA L. REV. 743, 745-46 (1998) (discussing influence of § 402A); see also John W. Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825, 829 (1973).

⁷² See Restatement (Second) of Torts § 402A. In adopting § 402A, the American Law Institute (ALI) principally relied on the California Supreme Court’s decision in *Greenman v. Yuba Power Products, Inc.*, 377 P.2d 897 (Cal. 1963). This decision was authored by the court’s chief justice, Roger Traynor, who was also an Advisor to the ALI project. See Schwartz & Appel, *supra* note 69, at 554.

⁷³ See Restatement (Second) of Torts § 402A caveat (stating that the ALI expresses no opinion on whether strict liability applies to the seller of a product “expected to be processed or otherwise substantially changed before it reaches the user or consumer”); see also Restatement (Second) of Torts § 388 (discussing liability of suppliers).

⁷⁴ *Id.* at cmt. p (“[T]he manufacturer of pigiron, which is capable of a wide variety of uses, is not so likely to be held to strict liability when it turns out to be unsuitable for the child’s tricycle into which it is finally made by a remote buyer.”).

⁷⁵ See M. Stuart Madden, *Liability of Suppliers of Natural Raw Materials and the Restatement (Third) of Torts: Products Liability – A First Step Towards Sound Public Policy*, 30 U. MICH. J.L. REF. 281, 295-96 (1997); Charles E. Cantu, *The Illusive Meaning of the Term “Product” Under Section 402A of the Restatement (Second) of Torts*, 44 OKLA. L. REV. 635, 656, 658 (1994) (discussing “unusual results” by courts in interpreting definition of “product” under § 402A).

“human judgment” that goes into making natural resources.⁷⁶ Courts concluded that natural resources cannot be “mis-manufactured” or differently “designed,” so there can be no manufacture or design defect.⁷⁷ Iron is iron, coal is coal, and sand is sand.

To the extent raw materials were included in products or sold themselves, courts found their risks were better addressed by concepts reflected in comment *i* of Section 402A, which states that liability, shall not be imposed for inherent product characteristics.⁷⁸ A comparable limit on liability for inherent characteristics is set forth in the *Restatement of Torts, Third: Products Liability* with respect to category liability.⁷⁹ These are lawful products which have no reasonable alternative design, and cannot be made reasonably safe through instructions or warnings.

Typically, raw material suppliers send their materials either to industrial users of raw materials or manufacturers of products that incorporate raw materials.⁸⁰ The supplier’s warnings obligation has traditionally been to adequately warn these corporate customers of risks that may not be generally known, though courts appreciated early on that it can be infeasible to attach warnings to certain raw materials, such as a lump of coal or grain of sand.⁸¹ Further, under the sophisticated purchaser doctrine, a supplier owes no duty to warn where the recipient knows or should know of these risks.⁸² Consider the example of sand, which can pose a health hazard if reduced to a respirable state during manufacturing.⁸³ Industrial workers have brought

⁷⁶ See *id.*; *cf.* *Wyrulec Co. v. Schutt*, 866 P.2d 756, 760 (Wyo. 1993) (holding strict liability doctrine inapplicable against electrical utility because electricity was not “a product”).

⁷⁷ See *id.* at 285; see also *Restatement (Third) of Torts: Product Liability* § 5 cmt. c (“[A] basic raw material such as sand, gravel, or kerosene cannot be defectively designed.”); Victor E. Schwartz, *Unavoidably Unsafe Products: Clarifying the Meaning and Policy Behind Comment K*, 42 WASH. & LEE L. REV. 1139 (1985).

⁷⁸ See *Restatement (Second) of Torts* § 402A cmt. i (1965).

⁷⁹ See *Restatement (Third) of Torts: Product Liability* § 2 cmt. e (1998).

⁸⁰ See Victor E. Schwartz & Christopher E. Appel, *Effective Communication of Warnings in the Workplace: Avoiding Injuries in Working with Industrial Materials*, 73 MO. L. REV. 1, 4-9 (2008) (discussing practical impediments to communicating effective warnings); Victor Schwartz & Russell Driver, *Warnings in the Workplace: The Need for a Synthesis of Law and Communication Theory*, 52 U. CIN. L. REV. 38, 39 (1983).

⁸¹ See *id.*; see also *Bond v. E.I. DuPont De Nemours & Co.*, 868 P.2d 1114, 1120-21 (Colo. Ct. App. 1993) (“[T]here is little social utility in placing the burden on a manufacturer of component parts or supplier of raw materials of guarding against injuries caused by the final product when the component parts or raw materials themselves were not unreasonably dangerous.”).

⁸² See, e.g., *Jodway v. Kennametal, Inc.*, 525 N.W.2d 883 (Mich. Ct. App. 1994) (purchaser of raw cobalt was “sophisticated user” such that material supplier did not have duty to warn of risks involved with use of product). The sophisticated user doctrine is also referred to by some courts as the “knowledgeable” or “responsible” user/intermediary doctrine. See, e.g., *Rivers v. AT & T Techs., Inc.*, 554 N.Y.S.2d 401, 403 (1990) (employing the term “responsible intermediary”).

⁸³ See, e.g., *Bergfeld v. Unimin Corp.*, 319 F.3d 350, 352 (8th Cir. 2003); *Haase v. Badger Mining Corp.*, 682 N.W.2d 389, 392 (Wis. 2004); *Diamond v. Avondale Indus., Inc.*, 773 So. 2d 266, 267 (La. Ct. App. 2000).

personal injury claims against sand providers, and some courts have determined that a sand supplier must provide warnings to employees of raw material purchasers where the supplier knows how the sand will be processed.⁸⁴ Other examples of such liability involving plant workers include suppliers of metals,⁸⁵ raw asbestos,⁸⁶ and other substances that can cause harm depending on how used.⁸⁷

Courts have found that a raw material supplier's obligation to warn does not extend to ordinary consumers of products that may include its materials. In these situations, the supplier generally lacks control over, or may not know, how the raw material will be used and may not be able to identify or communicate with its end user.⁸⁸ Several legal doctrines have emerged to place the responsibility to provide warnings to downstream product users with the manufacturer in the "best position" to effectively warn.⁸⁹ For ex-

⁸⁴ See, e.g., *Humble Sand & Gravel, Inc. v. Gomez*, 146 S.W.3d 170, 194 (Tex. 2004) (remanding case for new trial to determine whether sand supplier owed duty to warn their customers' employees); *Gray v. Badger Mining Corp.*, 676 N.W.2d 268, 271 (Minn. 2004) (finding genuine issues of material fact existed as to whether sand supplier's warnings to intermediary were adequate).

⁸⁵ See, e.g., *Whitehead v. St. Joe Lead Co., Inc.*, 729 F.2d 238, 249-250, 254 (3rd Cir. 1984) (rejecting substantial change in condition and open and obvious risk doctrines alleged by supplier of lead to industrial plant); *Skinner v. Derr Const. Co.*, 937 So. 2d 430, 437 (La. Ct. App. 2006) (denying summary judgment to supplier of fabricated steel alleged to have caused construction accident).

⁸⁶ See, e.g., *Arena v. Owens Corning Fiberglas Corp.*, 74 Cal. Rptr. 2d 580, 582 (Cal. Ct. App. 1998) ("We conclude that a supplier of raw asbestos is subject to strict products liability."); *Jenkins v. T & N PLC*, 53 Cal.Rptr.2d 642, 647 (Cal. App. Ct. 1996) ("As a matter of law, a bulk supplier of raw asbestos fiber incorporated into a finished product can be subject to strict products liability to an individual suffering from a disease caused by exposure to the supplier's asbestos."); *but see Cimino v. Raymark Indus., Inc.* 151 F.3d 297, 335 (5th Cir. 1998) (holding that it would create an unbearable burden on the manufacturer of the raw asbestos "building block" material later incorporated into insulating sheets by requiring the purchaser/employer to warn on every possible use); *Riggs v. Asbestos Corp. Ltd.*, 304 P.3d 61, 69 (Utah Ct. App. 2013) (stating that supplier's asbestos "product could not be defectively designed or manufactured because it is a raw, unadulterated material").

⁸⁷ See, e.g., *Donahue v. Phillips Petroleum Co.*, 866 F.2d 1008, 1012 (8th Cir. 1989) (affirming jury verdict against a bulk supplier of liquid propane); *Jones v. Hittle Serv., Inc.*, 549 P.2d 1383, 1395 (Kan. 1976) (finding bulk supplier of liquid propane only fulfills his duty to warn consumers "when he ascertains that the distributor to whom he sells is adequately trained" and "capable of passing his knowledge on to his customers"); *Messer Griesheim Indus., Inc. v. Eastman Chem. Co.*, 194 S.W.3d 466, 483 (Tenn. Ct. App. 2005) (vacating trial court's grant of summary judgment to supplier of liquid carbon dioxide on negligence and product liability claims made by distributor); *but see York v. Union Carbide Corp.*, 586 N.E.2d 861 (Ind. Ct. App. 1992) (rejecting negligence and strict product liability claims against supplier of argon gas); *Jackson v. Reliable Paste & Chem. Co.*, 483 N.E.2d 939, 942-43 (Ill. App. Ct. 1985) (finding supplier of methanol owed no duty to warn purchaser of chemical's explosive and flammable propensities).

⁸⁸ See, e.g., *Maxton v. Western States Metals*, 136 Cal. Rptr. 3d 630, 632-33 (Cal. Ct. App. 2012) ("Generally suppliers of raw materials to manufacturers cannot be liable for negligence or under a strict products liability theory to the manufacturers' employees who sustain personal injuries as a result of using the raw materials in the manufacturing process.").

⁸⁹ See *id.*; *Madden*, *supra* note 75, at 291 ("In the thirty years following publication of section 402A, judicial decisions have followed two paths toward excluding raw materials sellers from design or

ample, the raw material supplier doctrine discharges the supplier's duty to warn consumers or other downstream product users where the immediate purchaser of the raw material receives an adequate warning.⁹⁰ Also, the "substantial change in condition" doctrine states that a supplier's duty to warn end users is discharged if the product or material undergoes a substantial change after leaving a supplier's hands.⁹¹ Further, a natural resource supplier does not have a duty to warn downstream users of "open and obvious" dangers.⁹²

Despite these bedrock principles, individuals and interest groups have sometimes doggedly pursued suppliers of raw materials in their litigations. One such instance occurred in the 1990s with silicone, which was used as a component part for medical implants.⁹³ While the raw material suppliers were ultimately not subject to liability, they had to incur significant legal costs to defend the onslaught of cases. When some suppliers stopped making the material available for medical devices in order to avoid being sued, Congress enacted the Biomaterials Access Assurance Act of 1998⁹⁴ to clarify that suppliers of raw materials in medical implants are not subject to liability.⁹⁵ The legislation worked, and extractors of raw materials once again supplied those materials to manufacturers of medical devices.

warnings liability – de jure immunity or de facto immunity.”); Edward M. Mansfield, *Reflections on Current Limits on Component and Raw Material Supplier Liability and the Proposed Third Restatement*, 84 KY. L.J. 221, 241-45 (1995-96) (discussing reasons courts developed doctrines limiting product liability for raw material suppliers).

⁹⁰ See *id.*

⁹¹ Restatement (Second) of Torts § 402A(1)(b); see *id.* at cmt. p; see also *Walker v. Stauffer Chem. Corp.*, 96 Cal. Rptr. 803, 806 (Cal. Ct. App. 1971) (holding that substantial changes made by purchaser of sulfuric acid supplied in bulk discharged supplier duty to warn); cf. *Haase*, 682 N.W.2d at 392 (finding silica sand supplier not subject to liability for worker's silicosis because sand underwent a substantial change after leaving supplier's possession).

⁹² Restatement (Second) of Torts § 402A cmt. j (stating there is no duty to warn “when the danger, or potentiality of danger, is generally known and recognized”).

⁹³ See Daniel Q. Posin, *Silicone Breast Implant Litigation and My Father-in-Law: A Neo-Coasen Analysis*, 70 TUL. L. REV. 2565, 2571-72 (1996). The types of medical implants featuring silicone as the primary component include: heart pacemakers, mechanical valves, heart-lung oxygenators used during open-heart surgery, chin and cheek implants for accident victims, certain contact lenses, devices used for brain surgery, urological surgery instruments, and prosthetic joints all feature silicone plastics. See *id.* at 2572 n.30; see also W. Snyder, *Silicone Breast Implants: Can Emerging Medical, Legal, and Scientific Concepts Be Reconciled?*, 18 J. LEGAL MED. 133, 136 (1997) (stating that “over 500 medical products contain measurable amounts of silicone”).

⁹⁴ See Pub. L. 105-230 (Aug. 13, 1998), 112 Stat. 1519 (codified at 21 U.S.C. §§ 1601-1606); see also *Artiglio v. Gen. Elec. Co.*, 71 Cal. Rptr. 2d 817, 822 (Cal. Ct. App. 1998) (granting summary judgment to supplier of silicone used in medical breast implants).

⁹⁵ See *id.*; see also FDA, *Medical Devices Draft Guidance for the Implementation of the Biomaterials Access Assurance Act*, 66 Fed. Reg. 17562 (Apr. 2, 2001); Ann M. Murphy, *The Biomaterials Access Assurance Act of 1998 and Corporate Supplier Liability: Who You Gonna Sue?*, 25 DEL. J. CORP. L. 715 (2000).

Around the same time, the American Law Institute published the *Restatement of Torts Third: Products Liability*.⁹⁶ The Restatement Third addressed this issue head on, making clear that “decisions regarding the use of such [raw] materials are not attributable to the supplier of the raw materials but rather to the fabricator that puts them to improper use.”⁹⁷ The Restatement further recognizes that “a basic raw material such as sand, gravel, or kerosene cannot be defectively designed” and that “[t]o impose a duty to warn would require the seller to develop expertise regarding a multitude of different end products and to investigate the actual use of raw materials by manufacturers over whom the supplier has no control.”⁹⁸ The Restatement concluded that courts should not “impose such an onerous duty to warn.”⁹⁹ Thus, attempts to subject suppliers of natural resources to product liability have generally failed.

III. ENGINE NO. 2 – LIABILITY FOR NATURAL RESOURCE EXTERNALITIES

A second engine of litigation against suppliers of raw materials has focused on conduct-based theories, such as public nuisance, for the externalities associated with the use of natural resources.¹⁰⁰ This effort is still going on today, with a number of suits directed at burning fossil fuels to produce energy.¹⁰¹ Environmental groups often sponsor these lawsuits as agenda-driven efforts to regulate the use of fossil fuels through the courts. They combine ideological-based arguments with creative tort theories in the hopes of persuading judges to circumvent, or put pressure on, Congressional decisions regarding the use of natural resources.¹⁰²

As with product cases, this effort also had its roots in the 1960s. When the Restatement (Second) of Torts was being drafted, environmental lawyers started a campaign to transform public nuisance from a restrained government tort into a tool for requiring businesses to remediate environ-

⁹⁶ See Restatement (Third) of Torts: Products Liability § 5 (1997) (liability of sellers of component products integrated into a finished product).

⁹⁷ *Id.* at cmt. c.

⁹⁸ *Id.*

⁹⁹ *Id.*

¹⁰⁰ See Victor E. Schwartz, Phil Goldberg, & Christopher E. Appel, *Can Governments Impose a New Tort Duty to Prevent External Risks? The “No-Fault” Theories Behind Today’s High-Stakes Government Recoupment Suits*, 44 WAKE FOREST L. REV. 923, 940-45 (2009) (discussing use of public nuisance theory in lawsuits seeking to impose liability against private companies for external risks associated with product uses).

¹⁰¹ See Victor E. Schwartz, Phil Goldberg, & Christopher E. Appel, *Does the Judiciary Have the Tools for Regulating Greenhouse Gas Emissions?*, 46 VAL. U. L. REV. 369, 369-70 (2012) (discussing public nuisance climate change litigation).

¹⁰² See *id.* at 379-80 (explaining how climate change litigation is a result of frustrations by environmental advocates over incremental approach to regulating fossil fuel emissions).

mental conditions, regardless of wrongdoing or causation.¹⁰³ In essence, they sought to capitalize on the amorphous nature of the word “nuisance.” As prominent legal observers have noted, “There is perhaps no more impenetrable jungle in the entire law than that which surrounds the word ‘nuisance.’ It has meant all things to all people.”¹⁰⁴ The first act of these environmental lawyers was to pursue changes to public nuisance chapters of the Restatement in hopes of breaking “the bounds of traditional public nuisance.”¹⁰⁵ Among other things, they lobbied to remove wrongful conduct requirements so claims could be brought even when defendants engaged in lawful commerce.

Although fully presented, none of their changes were adopted in the black letter of the Restatement. The law of public nuisance has developed clear elements and standards over the course of centuries of jurisprudence.¹⁰⁶ The tort is designed to address quasi-criminal conduct that, while not illegal, is unreasonable given the circumstances and could cause injury to someone exercising a common, societal right.¹⁰⁷ Traditional examples of public nuisances include blocking a public roadway, dumping sewage into a public river, or blasting a stereo when people are picnicking in a public park.¹⁰⁸ Thus, natural resource providers engaging in lawful commerce were not the intended targets of public nuisance liability. Nevertheless, the efforts to turn public nuisance into a “super tort” for regulating environmental policy through the courts focused on the use of fossil fuels for energy production.¹⁰⁹

The first test case for these theories, *Diamond v. General Motors Corp.*, was brought in the early 1970s. The plaintiffs were environmentalists and pursued hundreds of companies that sold products or engaged in activities that they claimed collectively caused smog to form in and around

¹⁰³ See Denise E. Antolini, *Modernizing Public Nuisance: Solving the Paradox of the Special Injury Rule*, 28 ECOL. L.Q. 755, 838 (2001).

¹⁰⁴ W. Page Keeton et. al., *Prosser & Keeton on Torts* 616 (5th ed. 1984); see also F.H. Newark, *The Boundaries of Nuisance*, 65 L.Q. REV. 480, 480 (1949) (calling public nuisance a “mongrel” tort for being “intractable to definition”).

¹⁰⁵ Antolini, *supra* note 103, at 838.

¹⁰⁶ See Victor E. Schwartz & Phil Goldberg, *The Law of Public Nuisance: Maintaining Rational Boundaries on a Rational Tort*, 45 WASHBURN L.J. 541, 562-70 (2006) (discussing traditional elements of public nuisance).

¹⁰⁷ See *id.* at 564-65; see also Donald G. Gifford, *Public Nuisance as a Mass Products Liability Tort*, 71 U. CIN. L. REV. 741, 745-46 (2003) (“Historically, public nuisance most often was not regarded as a tort, but instead as a basis for public officials to pursue criminal prosecutions or seek injunctive relief to abate harmful conduct. Only in limited circumstances was a tort remedy available to an individual, and apparently never to the state or municipality.”).

¹⁰⁸ See *id.* at 541-42; see also Restatement (Second) of Torts § 821A cmt. b (1979).

¹⁰⁹ See Schwartz & Goldberg, *supra* note 106, at 522 (“The reason personal injury lawyers have been lured by the elixir of public nuisance theory is because, if successful, it acts as a ‘super tort.’ As with products liability, public nuisance theory offers [essentially] strict liability.”); see also Gifford, *supra* note 107, at 741.