

Global warming litigation heats up

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Scientists have confirmed that human-generated carbon dioxide emissions are contributing to potentially dangerous environmental change. Determining who—if anyone—is responsible may ultimately be up to the courts.

Global warming is fast becoming the hot legal issue of our time. Hardly a month goes by without a bar association panel or law school symposium on the legal issues arising from global warming.

Tort lawsuits have been filed against industrial emitters of greenhouse gases (GHGs), industry has filed cases against states seeking to preempt regulation of greenhouse gases, and numerous suits have been filed against the federal government for failing to take action under various federal statutes.

Like all legal stories, this one starts with the facts. Global warming (aka climate change) is happening because of massive emissions of greenhouse gases. There are six major GHGs, of which carbon dioxide is by far the most plentiful and has the largest impact. Its primary source is the burning of fossil fuels—coal, oil, and natural gas. A broad scientific consensus now concludes that the last 50 years of warming is due to human-generated GHG emissions, primarily carbon dioxide.¹

The carbon dioxide emitted from burning fossil fuels can stay in the atmosphere for centuries, where it traps atmospheric heat. Greenhouse gases disperse relatively quickly in the atmosphere, so over time it is inconsequential where on the planet emissions occur.²

And emissions are growing exponentially: Of the estimated 1.065 billion metric tons of carbon dioxide emitted since

1900, 83 percent has entered the atmosphere since 1950.³

The United States emits more greenhouse gases than any other nation and is responsible for 22 percent of current world emissions, even though it has less than 5 percent of the world's population.⁴ The latest scientific projections of global warming for this century show that temperature will increase anywhere from 2 degrees to more than 11 degrees Fahrenheit, depending primarily on the level of emissions.⁵ The scientific community is urging policymakers to adopt policies that might hold future warming to the low end of the projected range by promptly limiting GHG emissions.

Even holding this century's warming to another 2 or 3 degrees would constitute a rate and magnitude of change that is unprecedented in human history. Scientists say that droughts and floods will become more severe and frequent; the rate of sea level rise will continue to accelerate and cause increased beach erosion and greater storm surges; ecosystems will disintegrate; the oceans will heat up and further acidify; arctic sea ice will disappear in summertime; and heat waves that kill large numbers of people will become more intense and frequent.

Whom to blame for this calamity? Surprisingly few corporations sit at the heart

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of environmental problems arising from such widespread emissions. In the United States, electric utilities are responsible for 40 percent of carbon dioxide emissions.⁶ A substantial fraction of the electricity sector's emissions is concentrated in a fairly small number of corporations. Just 48 companies are responsible for three-quarters of all U.S. electricity emissions of carbon dioxide; of those, 19 corporations are responsible for half the U.S. electricity sector's emissions, and just seven corporations for one-fourth.⁷

Automobiles—the second major source of GHGs—are responsible for about a quarter of U.S. carbon dioxide emissions. Worldwide, a handful of corporations make automobiles. On the fuel-supply side, a small number of coal and oil companies dominate world markets. One study estimated that just one corporation, ExxonMobil (and its predecessors), is responsible for approximately 5 percent of the carbon dioxide in the atmosphere.⁸

All these corporations could be said to be blameworthy. U.S. electric utilities rely heavily on a 19th-century technology—crushing coal into dust, blowing it into a furnace, and burning it—with appalling efficiency rates.⁹ The electricity sector's emissions are increasing every year, and the industry has fought hard for two decades to kill any federal requirements for more use of wind, solar, and other renewable energy sources. It scored its latest “victory” on that front last year when it successfully lobbied to remove a renewable electricity requirement from the federal energy bill.¹⁰

Although U.S. automakers improved their products' fuel efficiency in response to regulations promulgated in 1975 that required vehicles to meet certain standards by 1985, they have fought every attempt since then to raise fuel economy standards. Last year, they gave in to the call for higher fuel efficiency with the enactment of the Energy Independence and Security Act of 2007, which increases fuel economy to 35 mpg for a combined car and truck fleet by 2020.¹¹ But that modest concession will still keep U.S. standards behind those of the rest of the developed world.

The electric power, automobile, coal, and oil industries have engaged in a campaign of deception and denial regarding global warming for many years. In the 1990s, these industries formed, joined, and/or funded scores of groups designed to deceive the public about the cause and consequences of global warming by sowing doubt about scientific understanding, trumping up minor inconsistencies in data, using marginal scientists eager to earn cash as talking heads in media blitzes, and distributing petitions supposedly signed by thou-

petition, saying it lacked authority to regulate under the Clean Air Act and claiming that such regulation would undercut the president's strength in global warming negotiations with other nations by giving him fewer emissions to bargain with. The states and environmental groups then sued to force the agency's hand. The D.C. Circuit affirmed the EPA's position, but the Supreme Court reversed in a 5-4 decision that will reverberate for years.

First, it held that Massachusetts had standing under the tripartite test re-

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sands of scientists questioning the science of global warming that included fictitious names.¹²

One of the front groups, the Advancement of Sound Science Coalition, was originally formed to assist the tobacco industry in its long-running effort to deny the hazards of secondhand smoke.¹³ ExxonMobil has been the most prominent funder and participant in the campaign of deception and denial about global warming,¹⁴ but many other corporations have been involved, including General Motors, the Southern Company, and the major trade associations for coal, electric, automobile, and oil companies.¹⁵

Turning point

Slowly but surely, the law has begun reacting to the harms and threats of global warming, and 2007 may go down as the year in which the legal pieces began falling into place.

In April 2007, the U.S. Supreme Court decided *Massachusetts v. EPA*, widely regarded as one of the most important environmental decisions of our time.¹⁶ A coalition of states and environmental groups had petitioned the EPA, urging it to regulate GHG emissions from automobiles. The EPA rejected the

requiring injury, causation, and redressability. It was immaterial, the Court held, that the injury at issue—inundation of Massachusetts's coastline from rising sea level—was widely shared as long as it was concrete and particularized and either actual or imminent. It found that Massachusetts satisfied these requirements because it already was losing coastline from global warming and would continue to lose more as the process accelerated.

Causation was satisfied because the EPA did not dispute the connection between GHG emissions from automobiles and global warming; thus the agency's decision not to regulate contributed to Massachusetts's injuries, the Court found. It rejected the EPA's argument that the amount of emissions at issue was too small to make a difference, finding that this claim was based on the “erroneous assumption that a small incremental step, because it is incremental, can never be attacked in a federal judicial forum.”¹⁷

The Court found that the amount of carbon dioxide emitted by U.S. automobiles, 1.7 billion tons annually, is “an enormous quantity” and that the 6 percent share of worldwide emissions this represents is “a meaningful contribu-

tion to greenhouse gas concentrations” when “judged by any standard.”¹⁸

Redressability was satisfied, the Court held, because reducing emissions reduces the risk of injury by slowing global warming even if it does not eliminate the risk. The Court noted “the enormity of the potential consequences associated with man-made climate change” in calibrating the redressability analysis and observed that the “risk of catastrophic harm, though remote, is nevertheless real.”¹⁹

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On the merits, the Court ruled that carbon dioxide and other GHGs are “pollutants” under the Clean Air Act and thus the EPA has authority to regulate them. It rejected the agency’s arguments based on “postenactment congressional actions and deliberations” and found that the EPA had failed to identify “any action remotely suggesting that Congress meant to curtail its power to treat greenhouse gases as air pollutants.”²⁰

Finally, the Court rejected as irrelevant the EPA’s “laundry list of reasons not to regulate,” such as the bizarre bargaining-chip theory of international relations in which the president is supposedly counting on higher domestic emissions in order to extract concessions from other nations.²¹

The case has been remanded to the EPA to decide the petition on reasons grounded in the Clean Air Act. The agency initially announced that, in response to the Court’s decision, it would regulate automobile greenhouse gas emissions under the Clean Air Act.²² But the EPA then reneged when Congress increased fuel economy; it is now even trying to block California and other states from implementing greenhouse gas limits on motor vehicle emissions.²³

In December 2007, the EPA denied a

waiver application from California that would have enabled the state to set its own motor vehicle greenhouse gas emissions limits under the Clean Air Act—the first time in the act’s history that California has been denied such authority. In so doing, the EPA administrator overruled his own staff and ignored their legal advice.²⁴ California filed suit against the EPA seeking to reverse the waiver denial.

Massachusetts v. EPA will assist environmental plaintiffs in global warming

cases in at least three ways. First, those seeking injunctive relief—via either statutory or tort law—should be able to establish standing in the same manner as *Massachusetts*. Second, the argument that even a substantial fraction of an industry’s share of emissions is “too small” to make a difference has now been squelched. Third, the Supreme Court rejected the argument that courts cannot resolve global warming disputes because Congress’s post-Clean Air Act resolutions have reserved for Congress all decision-making power, to be exercised at some uncertain future date.

Three lower court decisions handed down last year also provide new fuel for global warming litigation.

The Ninth Circuit, in *Center for Biological Diversity v. National Highway Traffic Safety Administration*, struck down the Department of Transportation’s (DOT) fuel economy standards because the agency failed to analyze the effects of its rule on global warming.²⁵ The court rejected the DOT’s argument that it need not conduct an analysis because other sources of emissions also contribute to the problem. It wrote, “The fact that climate change is largely a global phenomenon that includes actions that are outside of [the DOT’s] control . . . does

not release the agency from the duty of assessing the effects of its actions on global warming within the context of other actions that also affect global warming.”²⁶ The court specifically rejected the agency’s suggestion that it need do nothing because its regulation would control less than 1 percent of the emissions.

Two federal district courts rejected lawsuits by the automobile industry seeking to strike down state laws regulating GHG emissions. In these cases, General Motors, DaimlerChrysler Corp., and the trade associations representing domestic and foreign automakers contended that state laws regulating GHGs from cars are preempted by the federal fuel economy law and by federal foreign policy.

In one of these cases, *Green Mountain Chrysler Plymouth Dodge Jeep v. Crombie*, a Vermont federal court admitted extensive scientific evidence regarding the cause and consequences of man-made global warming over the automaker’s strenuous *Daubert* objections.²⁷ “That global warming is taking place as a result of human emissions of carbon dioxide and other greenhouse gases, and that its consequences are likely to be harmful, is widely accepted in the scientific community,” the court held.²⁸

In *Central Valley Chrysler Jeep v. Goldstone*, a federal court in California entered summary judgment for the state.²⁹ It noted that there is “a growing consensus that human-caused greenhouse gas emissions must be curtailed more rather than less and sooner rather than later.”³⁰ It added:

Given the level of impairment of human health and welfare that current climate science indicates may occur if human-generated greenhouse gas emissions continue unabated, it would be the very definition of folly if [the] EPA were precluded from action simply because the level of decrease in greenhouse gas output is incompatible with existing mileage standards under [the Energy, Policy, and Conservation Act].³¹

Both the Vermont and California decisions also rejected the automakers’ argument that there is an express national foreign policy against adopting unilateral binding limitations on GHG

emissions in favor of a comprehensive international response to the issue, with one of the courts declaring it had “searched in vain for such a policy.”³²

Liability theories

Tort cases based on global warming seek to apply long-established doctrines of public nuisance and joint and several liability. A public nuisance is simply an unreasonable interference with rights common to the general public. Environmental harms—like those from global warming, such as flooding, heat deaths, and ecological harm—are typical public nuisance injuries. In fact, the modern framework of environmental regulation is simply a codification of public nuisance.³³ The standard for proving a public nuisance case is low—it requires showing only an awareness of the harm.³⁴

Major battles over the scope of nuisance law in recent years have yielded mostly positive results for plaintiffs. Nuisance claims have been allowed to proceed in litigation over the gasoline additive MTBE,³⁵ and Rhode Island prevailed at trial in a public nuisance claim against lead pigment manufacturers.³⁶

Cases addressing the scope of public nuisance claims against handgun manufacturers have yielded less positive results for plaintiffs, largely due to the criminal misuse of the defendants’ products by third parties as an intervening cause.³⁷ This factor does not affect environmental cases where pollution occurs due to the intended use of the product or commodity.

In multiple-polluter cases, the plaintiff’s injury is often indivisible, and the burden is on the defendants to apportion liability; if they cannot, then liability is joint and several.³⁸ Global warming injuries are classic examples of indivisible injuries because GHGs from multiple sources mix in the atmosphere, and the inseparable mix causes the injuries.

A series of 19th-century cases against river polluters established the principle that each polluter is jointly and severally liable and each may be separately enjoined—even if, due to the large number of nonparty polluters, the defendant’s pollution alone would not have

caused the nuisance, and even if the water quality improvement from the injunction will be immeasurable.³⁹

Over the past 50 years or so, this principle of joint and several liability in multiple-polluter cases has grown into a damages doctrine.⁴⁰ It has also become the rule in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Superfund) cases as a matter of federal common law that fills a gap in that environmental statute.⁴¹ Congress intentionally left a gap in CERCLA as to joint and several li-

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ability for the courts to fill, which they have done under federal common law by turning to the same body of indivisible-injury law used by state courts in multiple-polluter and other multiple-tort-feasor cases. Under this regime, every contributor to a body of pollution is jointly and severally liable for the entire harm unless the polluter can establish that the harm is divisible, which usually is impossible to do.⁴²

Defendants in global warming tort cases will probably find it impossible to establish a basis for allocating liability—while the sources and amount of some emissions are reasonably well known today, those from decades ago cannot be determined with any accuracy. How much carbon dioxide did the American Electric Power Co. emit in 1956? Almost certainly no one knows. Under the indivisible-injury rule, liability is thus joint and several.⁴³

Roadblocks to recovery

The political question doctrine prevents federal courts from deciding cases that raise questions that the Constitution expressly assigns to the legislative and executive branches of government. Many courts have dismissed global warming tort cases under the

political question doctrine but their reasoning has been questionable.

For example, the first tort case on global warming, *Connecticut v. American Electric Power Co.*, was brought in 2004 by eight states, the City of New York, and three land trusts against five electric power corporations that together emit 10 percent of all U.S. carbon dioxide.⁴⁴ The plaintiffs alleged public and private nuisance claims and sought an injunction requiring the utilities to reduce their emissions to mitigate harm to the plaintiffs’ forests, coastlines, and water

supplies.

The district court dismissed the case based on the political question doctrine. The court found that the issue of global warming may be addressed only by Congress and the president because of the existence of international negotiations on the topic. The case is now on appeal in the Second Circuit, whose decision will likely address issues of standing and preemption, as well as the political question doctrine.

Another case focuses on California’s snowpack, a vital source of freshwater for the state. The snowpack is in decline due to man-made global warming. California has brought a public nuisance case against automobile manufacturers, seeking damages to reimburse the state for money spent preparing for the inevitable injuries to its water supply and other natural resources, and to compensate for damage to the resources.⁴⁵ This case, too, was dismissed on the basis of the political question doctrine; the opinion essentially adopted the *Connecticut* court’s reasoning.

Although the political question doctrine has dealt early blows to global-warming tort suits, it seems unlikely to present any serious, long-term threat to their viability. In *Connecticut*, the defen-

dants themselves repeatedly disclaimed reliance on the doctrine. And the Supreme Court has expressly distinguished interstate pollution cases from “political questions” and held that the judiciary is “empowered to resolve [them] in the first instance.”⁴⁶ Furthermore, it is black-letter law that a case that merely involves a political issue does not necessarily raise a political question.⁴⁷ The reasoning of the political question dismissals is unlikely to carry the day in the long run.

Like many issues resolved by the judi-

states should apply. Damages cases should continue to be controlled by federal common law except in the unlikely event that Congress were to enact a global warming damages liability regime applicable to past emissions. The Second Circuit’s decision in *Connecticut* will shine light on the vertical choice of law issue by determining whether the plaintiffs properly have invoked the federal common law of public nuisance or whether the case instead should be pursued under state common law.

ger of losing the forest by closing our eyes to the felling of the individual trees?”⁵⁶

For 17 years, *City of Los Angeles* stood as a warning to those seeking to litigate global warming. Finally, last year, a unanimous Ninth Circuit in *Center for Biological Diversity* not only required the DOT to consider global warming impacts in its fuel economy standards but also struck them down as arbitrary and capricious for failing to do so. It approvingly quoted Wald’s forest-for-the-trees metaphor, which it termed “not only precise but persuasive.”⁵⁷

Perhaps now the warning should go out to those who are permanently damaging our planet and putting us all at grave risk. ■

Notes

1. Working Group I, Intergovernmental Panel on Climate Change (IPCC), Summary for Policymakers *Climate Change 2007: The Physical Science Basis* 7, 10 (2007) [hereinafter IPCC 2007], www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-spm.pdf.
2. Dispersal is not immediate, however, and some local thickening of the greenhouse gas layer occurs near large emissions sources.
3. World Resources Inst., *Climate Analysis Indicators Tool* (2007) (database), <http://cait.wri.org>.
4. Energy Info. Admin., *Emissions of Greenhouse Gases in the United States 2006*, at 6 (Nov. 2007), www.eia.doe.gov/oiarf/1605/ggrpt/index.html [hereinafter EIA GHG Emissions 2006]; U.S. Census Bureau, Intl. Data Base, *U.S. and World Population Clocks—POPClocks*, www.census.gov/ipc/www/idb/worldpopinfo.html. China will soon surpass the United States in total annual emissions; this might have already occurred in 2006. See Mitchell Landsberg, *Study Says China Tops U.S. in Greenhouse Gas Emissions*, L.A. Times (June 21, 2007), www.climateark.org/shared/reader/welcome.aspx?linkid=78347.
5. IPCC 2007, *supra* n. 1, at 13.
6. EIA GHG Emissions 2006, *supra* n. 4, at 1, 16.
7. Ceres, Nat. Resources Def. Council & Pub. Serv. Enter. Group, *Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States—2004*, at 3 (Apr. 2006), www.nrdc.org/air/pollution/benchmarking/2004/benchmark2004.pdf.
8. Friends of the Earth Intl., *Exxon’s Climate Footprint: The Contribution of Exxonmobil to Climate Change Since 1882* (Jan. 2004), www.foei.org/en/publications/pdfs/exxons_climate_footprint.pdf. The 5 percent figure should be taken with a large grain of salt as it is doubtful that anyone knows how much oil was produced by ExxonMobil’s predecessor entities decades ago.
9. Shi-Ling Hsu, *A Realistic Evaluation of Climate Change Litigation through the Lens of a Hypo-*

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cial branch, global warming has been a matter of political debate. But as Alexis de Tocqueville observed, “Scarcely any political question arises in the United States that is not resolved, sooner or later, into a judicial question.”⁴⁸

Choice of law

Finally, global warming tort cases raise an important “vertical choice of law” question—whether to apply the federal common law of public nuisance or state law. The Supreme Court has held that the federal common law of public nuisance applies to interstate pollution and gives rise to federal-question jurisdiction.⁴⁹ However, it also has held that such federal common law is preempted when the EPA is actively regulating the pollutant in question under a federal statute.⁵⁰ When Congress and the EPA preempt federal nuisance law, it is clear that state public nuisance law survives and may be applied as long as it is the law of the state where the source of the pollution is located.⁵¹

In injunctive and damages cases regarding GHGs, federal common law should apply. If the EPA someday begins regulating GHGs, this would change: In injunctive cases against regulated sources, the law of the source

Global warming litigation is here to stay and is gaining momentum. An attorney tracking the issue for the American Bar Association recently assembled a chart attempting to list and categorize cases dealing with some aspect of global warming; the chart contains more than 60 cases, most filed or decided in just the law few years.⁵²

At press time, a new tort case had been filed: The Inupiat Eskimo village of Kivalina, Alaska, has sued 25 energy companies for contributing to global warming.⁵³ The sea ice that formerly protected the village from coastal storms is melting and the village is now battered by storms; a massive erosion problem has resulted and the village must relocate at a cost of hundreds of millions of dollars.⁵⁴

One case on the chart, *City of Los Angeles v. NHTSA*, was an early and unsuccessful attempt to force the DOT to consider the impact of its fuel economy standards on the climate.⁵⁵ In that 1990 case, D.C. Circuit Chief Judge Patricia Wald dissented, stating, “[W]e cannot afford to ignore even modest contributions to global warming. If global warming is the result of the cumulative contributions of myriad sources, any one modest in itself, is there not a dan-

thetical Lawsuit, U. Col. L. Rev. 32-33 (Jan. 4, 2008), http://works.bepress.com/cgi/viewcontent.cgi?article=1005&context=shi_ling_hsu.

10. John M. Broder, *Industry Flexes Muscle, Weaker Energy Bill Passes*, N.Y. Times A29 (Dec. 14, 2007).

11. Pub. L. No. 110-140, 121 Stat. 1492 (Dec. 19, 2007).

12. See e.g. John H. Cushman Jr., *Industrial Group Plans to Battle Climate Treaty*, N.Y. Times A1 (Apr. 26, 1998) (discussing American Petroleum Institute's planned campaign to battle industry-wide rules on climate change); see also David A. Grossman, *Warming Up to a Not-So-Radical Idea: Tort-Based Climate Change Litigation*, 28 Colum. J. Envtl. L. 1, 4 n.12 (2003) (stating that industry has "been devoting enormous resources to confounding the public with an appalling public relations campaign of deception and disinformation") (internal quotation omitted); Matthew L. Wald, *Pro-Coal Ad Campaign Disputes Warming Idea*, N.Y. Times D2 (July 8, 1991) (outlining a campaign to "'reposition global warming as theory' not fact"); Union of Concerned Scientists, *Scientists' Report Documents ExxonMobil's Tobacco-Like Disinformation Campaign on Global Warming Science* (Jan. 3, 2007), www.ucsusa.org/news/press_release/ExxonMobil-GlobalWarming-tobacco.html.

13. George Monbiot, *The Denial Industry*, Guardian 6 (Sept. 19, 2006), www.guardian.co.uk/environment/2006/sep/19/ethicalliving.g2.

14. See e.g. Union of Concerned Scientists, *supra* n. 12.

15. See e.g. Bob Burton & Sheldon Rampton, *Thinking Globally, Acting Vocally: The International Conspiracy to Overheat the Earth*, 4 PR Watch Newstr. (1997), www.prwatch.org/prwissues/1997Q4/warming.html; see also Wald, *supra* n. 12; Cool the Planet, *Summary of Activities, Global Climate Coalition: 1996-1999* (July 1999) (on file with author).

16. 127 S. Ct. 1438 (2007).

17. *Id.* at 1457.

18. *Id.* at 1457-58.

19. *Id.* at 1458.

20. *Id.* at 1460.

21. *Id.* at 1462-63.

22. The White House, President George W. Bush, *Briefing by Conference Call on the President's Announcement on CAFE and Alternative Fuel Standards* (May 14, 2007), www.whitehouse.gov/news/releases/2007/05/20070514-6.html.

23. Juliet Eilperin, *EPA Chief Denies California Limit on Auto Emissions; Rules Would Target Greenhouse Gases*, Wash. Post A1 (Dec. 20, 2007).

24. *Id.*

25. 508 F.3d 508 (9th Cir. 2007).

26. *Id.* at 550 (quotation omitted).

27. 508 F. Supp. 2d 295 (D. Vt. 2007), *appeal pending*, Nos. 07-4342, 07-4360 (2d Cir. filed Oct. 5 & Oct. 9, 2007).

28. *Id.* at 341.

29. 2007 U.S. Dist. LEXIS 91309 (E.D. Cal. Dec. 11, 2007).

30. *Id.* at *52.

31. *Id.* at *52-55.

32. *Crombie*, 508 F. Supp. 2d at 296.

33. See *Cox v. City of Dallas*, 256 F.3d 281, 291 (5th Cir. 2001).

34. See e.g. William L. Prosser & W. Page Keeton, *The Law of Torts* §87 (5th ed. 1984).

35. See e.g. *In re Methyl Tertiary Butyl Ether Prods. Liab. Litig.*, 379 F. Supp. 2d 348 (S.D.N.Y. 2005).

36. *State v. Lead Indus. Assn.*, 2007 R.I. Super. LEXIS 32 (R.I. Super. Feb. 26, 2007).

37. See e.g. *City of Chi. v. Beretta U.S.A. Corp.*, 821 N.E.2d 1099 (Ill. 2004); but see *City of Cincinnati v. Beretta U.S.A. Corp.*, 768 N.E.2d 1136 (Ohio 2002).

38. See *Restatement (Second) of Torts* §433A (1965).

39. See e.g. *People v. Gold Run Ditch & Mining Co.*, 4 P. 1152 (Cal. 1884) (en banc); *Lockwood Co. v. Lawrence*, 77 Me. 297 (1885); *Woodyear v. Schaefer*, 57 Md. 1 (1881).

40. See e.g. *Michie v. Great Lakes Steel Div., Nail Steel Corp.*, 495 F.2d 213 (6th Cir. 1974) (imposing joint and several liability in air pollution case); *Vel-sicol Chem. Corp. v. Rowe*, 543 S.W.2d 337 (Tenn. 1976) (finding joint and several liability for emis-

sions from chemical plant that affected nearby residents); *Restatement (Second) of Torts* §433A (1965).

41. See e.g. *United States v. Alcan Aluminum Corp.*, 990 F.2d 711, 721-22 (2d Cir. 1993); *United States v. Chem-Dyne Corp.*, 572 F. Supp. 802, 808 (S.D. Ohio 1983).

42. *Id.*

43. *Restatement (Second) of Torts* §433A (1965).

44. 406 F. Supp. 2d 265, 268 (S.D.N.Y. 2005), *on appeal*, Nos. 05-5104-cv, 05-5119-cv (2d Cir. filed Sept. 22, 2005).

45. *Cal. v. Gen. Motors Corp.*, 2007 WL 2726871 (N.D. Cal. Sept. 17, 2007), *on appeal*, No. 07-16908 (9th Cir. filed Oct. 24, 2007).

46. *Ohio v. Wyandotte Chems. Corp.*, 401 U.S. 493, 496 (1971).

47. *Baker v. Carr*, 369 U.S. 186, 217 (1962) ("The doctrine of which we treat is one of 'political questions,' not one of 'political cases.'").

48. Alexis de Tocqueville, *Democracy in America*, vol. 1, ch. 16 (1835).

49. See e.g. *Ill. v. City of Milwaukee*, 406 U.S. 91 (1972) (*Milwaukee I*).

50. See e.g. *City of Milwaukee v. Ill.*, 451 U.S. 304 (1981) (*Milwaukee II*).

51. See e.g. *Intl. Paper Co. v. Ouellette*, 479 U.S. 481 (1987).

52. See Arnold & Porter LLP, *Climate Change Litigation in the U.S.*, www.arnoldporter.com/public_document.cfm?id=9417&key=10H1; see also Michael B. Gerrard, *Global Climate Change and U.S. Law* (ABA 2007).

53. *Native Village of Kivalina v. ExxonMobil Corp.*, No. 08-cv-1138 (N.D. Cal. filed Feb. 26, 2008).

54. Govt. Accountability Off., *Alaska Native Villages: Most Are Affected by Flooding and Erosion, but Few Qualify for Federal Assistance* 29-30, No. GAO-04-142 (Dec. 2003), www.gao.gov/new.items/d04142.pdf.

55. 912 F.2d 478 (D.C. Cir. 1990) (per curiam), overruled on other grounds by *Fla. Audubon Socy. v. Bentsen*, 94 F.3d 658 (D.C. Cir. 1996).

56. *Id.* at 501 (Wald, C.J., dissenting).

57. 508 F.3d at 557.