Most of today’s environmental law violates the basic principles of ecology. Nature teaches the connectedness of all activities, but most current-generation law regulates separate pollutants with little consideration of ecosystems as a whole. The continuums of nature generally adapt gradually, but today’s environmental law makes sharp distinctions between safe and unsafe, attainment versus nonattainment areas, permissible versus impermissible levels of pollution.

—Donald Elliott

If you have traveled in the remote parts of the Deep South, I am sure you have seen the architecture of Tobacco Road—shacks built of whatever materials were available at the time, often by a series of owners. Maybe the roof is corrugated tin, but one wall is made from a billboard and the door step is a cinder block. No part matches any other part, and there are holes here and there. Still, it provides a measure of basic shelter, and there comes a point where it is easier to tack a new board over a gap that appears than to redesign the entire structure.

—Ronald Outen

Although U.S. environmental law often is portrayed as if it were invented by Congress during the 1970s, its roots run much deeper. Environmental law is an outgrowth of centuries of common law doctrines that seek to protect people and property from harm caused by the actions of others. Its common law roots help explain both the complexity of environmental law and the difficulties it confronts in seeking to preserve natural resources and to prevent harm that often is far removed in space and time from the actions that cause it.

Environmental law’s structural complexity is a product of centuries of evolving common law doctrine, federal and state statutes that direct agencies to issue a vast array of regulations, and even agreements between sovereign states. Most environmental statutes respond to particularly visible manifestations of broader ecological problems. Considered together, environmental statutes and common law principles provide regulatory authority that is at once piecemeal and overlapping. Thus, even though the environmental law articulates some of society’s noblest aspirations, its legal architecture may resemble more closely a shack on Tobacco Road than a Gothic cathedral.


**Environmental Pollution Laws and the Architecture of Tobacco Road, in National Research Council, Multimedia Approaches to Pollution Control: Symposium Proceedings 139 (1987).
The complex architecture of environmental law reflects not only the circumstances of its birth, but also the complexity of the problems it addresses and the difficulty of reconciling the competing values environmental policy implicates. Although there is a remarkable cross-disciplinary consensus in favor of collective action to address problems caused by “individually rational but collectively deficient” behavior, often there is sharp disagreement concerning the precise form that action should take. The diverse philosophies that animate environmental concerns and the immense uncertainties that surround forecasts of likely policy outcomes provide ample opportunity for controversy.

This chapter is designed to introduce the “big picture” of environmental law by providing a roadmap of sorts to help you navigate this legal labyrinth. After reviewing the roots of environmental law, it explores the principal federal environmental statutes and the wide range of alternative regulatory strategies they employ. The chapter concludes with a brief introduction to the process by which statutes are translated into regulations.

A. SOURCES OF ENVIRONMENTAL LAW

What is environmental law? Dan Tarlock argues that environmental law, “as now defined, is primarily a synthesis of pre-environmental era common law rules, principles from other areas of law, and post-environmental era statutes which are lightly influenced by the application of concepts derived from ecology and other areas of science, economics, and ethics.” A. Dan Tarlock, “Is There A There There in Environmental Law?” 19 J. Land Use & Envtl. L. 213, 222 (2004). Tarlock notes that environmental law lacks not only an internal set of rules, but also a clear constitutional foundation. He acknowledges that environmental law “looks like and is positive law.” However, Tarlock argues that it actually could be viewed as representing “a radical break with the Western legal tradition,” including both the common law and constitutionalism, because much of it seeks to protect natural systems and future generations that traditionally are not recognized as having legal personalities. Id. at 235. Dean James Huffman agrees that environmental law has radical roots, but he notes that “[w]hat was once the exclusive cause of radicals is now the day-to-day work of legions of button-down lawyers from Wall Street to San Francisco.” James L. Huffman, The Past and Future of Environmental Law, 30 Envtl. L. 23 (2000). Richard Lazarus observes that environmental law “has evolved from a radical intruder into an essential element of a mature legal system in a democratic society.” Richard J. Lazarus, The Making of Environmental Law 253 (2004).

There is broad agreement that environmental law cannot be reduced to a simple set of decision rules that can dictate how policy makers should act in the face of uncertainty. Tarlock maintains that “for the foreseeable future, environmental law will be a law about the process of decision rather than a process of evolving decision rules.” Id. at 219-220. It will “be a messy process of adapting the contingencies and limitations of science to ‘wicked’ problems informed by rebuttable principles.” Id. at 253-254. Continued controversy over environmental policy seems a given, even as the environmental law field has matured to the point where it is possible to outline fundamental principles described in this chapter. Because environmental regulation inevitably creates winners and
losers, it always will provide ample incentive for pushback by regulatory targets. While Dean Huffman assures us that “[e]nvironmental law is here to stay,” he foresees growing tensions between decentralization and internationalization, the ascendancy of market mechanisms, and the rise of “unexpected political alliances,” fueled in part by the environmental justice movement. 30 Envtl. L. at 24. Professor Lazarus questions “whether environmental law can maintain the passion and commitment needed to rebuff the never-ending efforts to make it more responsive to the concerns of the here and now at the expense of those in seemingly distant places and future times.” Lazarus, The Making of Environmental Law 254.

Environmental law today is a complex combination of common law, legislation, regulations, and international agreements. After centuries of wrestling with environmental conflicts, the common law now has been supplemented, and in some cases supplanted, by regulatory statutes that declare broad environmental goals while delegating to administrative agencies responsibility for developing specific policies to achieve them. Despite the ascendance of regulatory legislation, understanding of the common law roots of environmental law remains important for several reasons. The common law articulates foundational principles that have shaped the development of regulatory programs and it retains considerable vitality as a safety net when unregulated activities cause environmental harm. Common law notions also retain considerable influence, for better or worse, on courts reviewing environmental regulations and efforts to enforce compliance with them.

1. Common Law Roots

Prior to the explosion of environmental legislation in the 1970s, the common law was the legal system’s primary vehicle for responding to environmental problems. For centuries common law courts had wrestled with what is perhaps the quintessential question of environmental law: how to harmonize conflicts that inevitably occur when human activity interferes with the interests of others in the quality of their physical surroundings. The common law relied largely on nuisance law doctrines to resolve environmental controversies, although conduct that resulted in a physical invasion of property could be addressed as a trespass. Nuisance law is designed to protect against invasions of interests in the use and enjoyment of land, while trespass protects against invasions of interests in the exclusive possession of land.

A leading treatise’s declaration that nuisance law is an “impenetrable jungle,” W. Prosser, Handbook of the Law of Torts §86, at 571 (4th ed. 1971), no doubt reflects, in some respects, the difficulties courts face in attempting to harmonize the competing interests at stake in environmental controversies. The history of nuisance law illustrates the tension between competing perspectives on environmental problems that can be characterized as “moral outrage” and “cool analysis.” The early common law of nuisance held actors strictly liable when their actions interfered with property rights held by others. This common law version of moral outrage focused largely on whether certain interests had been invaded, not on the utility of the conduct that produced the invasion. As the Industrial Revolution intensified environmental conflicts, the common law more frequently employed balancing approaches, reflecting the cool analysis perspective, that considered not only the nature of the interference with
property rights but also the nature and utility of the conduct that generated the interference.

While applicable to related problems, private and public nuisance actions have distinct legal roots. Private nuisance actions focus on invasions of interests in the private use and enjoyment of land. Public nuisances were common law crimes that involved offenses against the state arising from actions that interfered with public property (e.g., obstruction of the king’s highway, encroachment on the royal domain) or that endangered the health or property of large numbers of people. Actions to abate private nuisances could be brought by private parties damaged by them. Public nuisances were subject to abatement actions by governmental authorities or by private parties who suffered special injury.

A. **PRIVATE NUISANCE**

Nontrespassory invasions of another’s interest in the private use and enjoyment of land are actionable as *private nuisances*. Unlike intentional trespass, where liability attaches even in the absence of a showing of harm, private nuisance liability requires a showing of significant harm. Moreover, the interference with property rights must be intentional and unreasonable or actionable under rules imposing strict liability on those engaging in abnormally dangerous activities as in *Fletcher v. Rylands*, L.R. 3 H.L. 330 (1868). As the Restatement of Torts explains, these requirements reflect a recognition that some conflicts are inevitable in a modern society:

> Life in organized society, and especially in populous communities, involves an unavoidable clash of individual interests. Practically all human activities unless carried on in a wilderness, interfere to some extent with others or involve some risk of interference, and these interferences range from the mere trifling annoyances to serious harms. It is an obvious truth that each individual in a community must put up with a certain amount of risk in order that all may get together. The very existence of an organized society depends upon the principle of “give and take, live and let live,” and therefore the law of torts does not attempt to impose liability or shift the loss in every case where one person’s conduct has some detrimental effect on another. Liability is imposed only in those cases where the harm or risk to one is greater than he ought to be required to bear under the circumstances at least without compensation. [Restatement of Torts (Second) §822 comment g (1978).]

Nuisance law has long wrestled with the difficult question of how to determine the level of harm or risk that requires compensation.

Actions for private nuisance evolved from the ancient assize of nuisance, which was designed to secure the free enjoyment of property. In the early fifteenth century the assize of nuisance was displaced by an action on the case for nuisance. While procedurally simpler than the assize, actions on the case provided only a damages remedy. Suits in equity were necessary in order to obtain injunctions ordering the abatement of private nuisances; such actions were rarely brought prior to the mid-nineteenth century.

An influential early case in the development of nuisance law was a seventeenth-century decision involving a pig sty built adjacent to William Aldred’s property. In Aldred’s Case, 77 Eng. Rep. 816 (1611), the pig sty was held to be a private nuisance because the wretched stench that it generated
interfered with Aldred’s enjoyment of his property. While the decision did not imply that all unpleasant odors emanating from the property of others were actionable, it established that if a nontrespassory invasion of property rights was sufficiently great, air pollution was actionable as a private nuisance. As Lord Holt explained in declaring the failure to repair a wall separating a privy from a neighbor’s property to be a nuisance, “every man must so use his own as not to damnify another.” Tenant v. Goldwin, 92 Eng. Rep. 222 (1702). This principle—that no one has the right to use their property in a manner that causes harm to another—has come to be known as the “sic utere” principle because it is derived from a Roman law maxim (“sic utere tuo ut alienum non laedas”).

Early nuisance law performed a kind of zoning function by initially encouraging noxious activities to move away from populated areas. As the Industrial Revolution progressed, environmental insults became more difficult to avoid simply by relocating noxious activities. This created a tension between common law notions of strict liability and approaches that would balance the value of activities that generated pollution against the rights of victims. The clearest example of this tension is the 1858 decision of the Court of Common Pleas in Hole v. Barlow, 4 C.B.N.S. 334 (1858). Citing fears that nuisance actions could bring industry to a halt in England’s great manufacturing towns, the court refused to hold a brickmaking operation liable as a private nuisance despite the pollution it produced. The court upheld a jury instruction that “no action lies for the use, the reasonable use, of a lawful trade in a convenient and proper place even though some one may suffer annoyance from its being carried on.” While this sharp departure from precedent threatened to eviscerate private nuisance doctrine, it was soon overruled. The decision in Bamford v. Turnley, 122 Eng. Rep. 27 (1862), returned to the strict liability premise that private property may not be used to cause harm to another. The court held that pollution from a brick kiln erected by a defendant while constructing a house was actionable as a nuisance. The court rejected the defendant’s argument that operation of the brick kiln was justified because of its convenience for the defendant. But it left open the prospect that pollution caused by factories might not be held to a similarly strict standard.

While not deviating from the black-letter principle of Aldred’s Case, the common law gradually tempered private nuisance doctrines by increasing the severity of harm required and by adjusting notions of reasonableness. As industrialization changed the conditions of urban environments, courts expected individuals to become more tolerant of discomfort produced by industrial activity. To qualify as a private nuisance, the degree of interference with a plaintiff’s “comfortable and convenient enjoyment” of land had to be substantial. Because the standards of substantiality and reasonableness could vary with the location and circumstances of the pollution, nuisance law became a kind of zoning device. As Lord Thesiger explained in Sturges v. Bridgman, L.R. 11 Ch. D. 852 (1879): “What would be a nuisance in Belgrave Square would not necessarily be one in Bermondsey.” Judges observed that plaintiffs were not entitled to pollution-free air, but rather to “air not rendered to an important degree less compatible, or at least not rendered incompatible, with the physical comfort of human existence.” Walter v. Selfe, 4 De G. & Sm. 315, 322 (1851).

In St. Helens Smelting Co. v. Tipping, 11 H.L.C. 642 (1865), the owner of a large estate one and one-half miles from a copper smelter alleged that the smelter’s emissions had damaged his trees, crops, and animals and caused him substantial personal discomfort. The area around the smelter had been
singed out in a report by the Lords Select Committee on Noxious Vapors in 1863 as a “scene of desolation” caused by pollution from heavy industry. The report had stated that “[f]arms recently well-wooded, and with hedges in good condition, have now neither tree nor hedge left alive; whole fields of corn are destroyed in a single night, especially when the vapours fall upon them while in bloom; orchards and gardens, ... have not a fruit tree left alive. ...” Brenner, Nuisance Law and the Industrial Revolution, 3 J. Legal Stud. 403, 416 (1974). The court rejected the company’s argument that smelting may be carried on with impunity if the smelter is in a suitable location. As the lord chancellor explained: “The word ‘suitable’ unquestionably cannot carry with it this consequence, that a trade may be carried on in a particular locality, the consequence of which trade may be injury and destruction to the neighboring property.” The court held the company liable only for damage to the property that could be shown “visibly to diminish [its] value,” and not for mere personal discomfort that the pollution may have caused Tipping. American courts followed the English common law’s rejection of the notion, reflected in Hole v. Barlow, that activities causing substantial harm can be tolerated if they are conducted in a lawful and convenient place. Like the British courts, many American courts rejected the “coming to the nuisance” doctrine, which would have barred recovery to victims who complained about conditions that existed prior to their moving into an area. Relying on the principle that any unreasonable use of property to the injury of others is a nuisance, the Maryland Court of Appeals in 1890 explained its rejection of balancing approaches in the following terms:

The law, in cases of this kind, will not undertake to balance the conveniences, or estimate the difference between the injury sustained by the plaintiff and the loss that may result to the defendant from having its trade and business, as now carried on, found to be a nuisance. No one has a right to erect works which are a nuisance to a neighboring owner, and then say he has expended large sums of money in the erection of his works, while the neighboring property is comparatively of little value. The neighboring owner is entitled to the reasonable and comfortable enjoyment of his property, and, if his rights in this respect are invaded, he is entitled to the protection of the law, let the consequences be what they may. [Susquehanna Fertilizer Co. v. Malone, 73 Md. 268, 20 A. 900, 902 (1890).]

Thus, Maryland’s highest court upheld a judgment that noxious vapors from a large fertilizer factory that damaged the health and property of a neighboring family were actionable as a nuisance, even though several other fertilizer plants were located in the area.

This did not mean that U.S. courts would issue injunctions to shut down nuisances caused by economically important activities, particularly if they could afford to compensate their victims. In determining what relief to award, American courts generally were more inclined to balance environmental damage against the value of polluting activities than English courts. This has been interpreted by some legal historians as reflecting the American legal system’s efforts to promote industrial growth in the nineteenth century, L. Friedman, A History of American Law (1973); M. Horwitz, The Transformation of American Law, 1780-1860 (1977), though others have found a more mixed picture. Schwartz, Tort Law and the Economy in Nineteenth-Century America: A Reinterpretation, 90 Yale L.J. 1717 (1981). In any event, it is clear that courts
increasingly were confronted by conflicts caused by the environmental impact of industrial activity.

In a society that encouraged industrial growth, many courts were reluctant to award injunctions against private nuisances if they involved activities that had considerable economic value, as indicated in the decision below. The case arose from a series of lawsuits brought by landowners who lived in the vicinity of two copper smelters located in Ducktown, Tennessee, near the Georgia-Tennessee border. Copper had been discovered near Ducktown in 1843 by a prospector disappointed in the search for gold. Copper mines were developed in the early 1850s, and the area thrived for a time. An economic downturn and the absence of a rail link for transporting the ore caused the mines to close in 1879. After the bankruptcy of the Union Consolidated Mining Company, thousands abandoned Ducktown, leaving it a virtual ghost town. A remarkable engineering feat permitted construction of a railroad spur to Ducktown, and in 1891 the Ducktown Sulphur, Copper & Iron Company, a British corporation, purchased the assets of Union and reopened the mines. In 1893 and 1894 it opened copper smelters. In 1899 a group of New York investors formed the Tennessee Copper Company which began smelting copper in the Ducktown area in 1901. Charging that the smelters were private nuisances, nearby landowners filed three lawsuits against the companies seeking damages and an injunction to stop pollution from the smelters. In each case, the court of chancery appeals had directed that operation of the smelters be enjoined, reversing the trial court’s refusal to issue an injunction. Appeals were then heard by the Tennessee Supreme Court.

Madison v. Ducktown Sulphur, Copper & Iron Co.
113 Tenn. 331, 83 S.W. 658 (1904)

Mr. Justice Neil delivered the opinion of the Court.

The bills are all based on the ground of nuisance, in that the two companies, in the operation of their plants at and near Ducktown, in Polk county, in the course of reducing copper ore, cause large volumes of smoke to issue from their roast piles, which smoke descends upon the surrounding lands, and injures trees and crops, and renders the homes of complainants less comfortable and their lands less profitable than before. The purpose of all the bills is to enjoin the further operation of these plants. . . .

Ducktown is in a basin of the mountains of Polk county, in this State, not far from the State line of the States of Georgia and North Carolina. This basin is six or eight miles wide. The complainants are the owners of small farms situated in the mountains around Ducktown.

The method used by the defendants in reducing their copper ores is to place the green ore, broken up, on layers of wood, making large open-air piles, called “roast piles,” and these roast piles are ignited for the purpose of expelling from the ore certain foreign matters called “sulphurets.” In burning, these roast piles emit large volumes of smoke. This smoke, rising in the air, is carried off by air currents around and over adjoining land. . . .

The general effect produced by the smoke upon the possessions and families of the complainants is as follows, _viz._:

Their timber and crop interests have been badly injured, and they have been annoyed and discommoded by the smoke so that the complainants are
prevented from using and enjoying their farms and homes as they did prior to the inauguration of these enterprises. The smoke makes it impossible for the owners of farms within the area of the smoke zone to subsist their families thereon with the degree of comfort they enjoyed before. They cannot raise and harvest their customary crops, and their timber is largely destroyed.

The court of chancery appeals finds that the defendants are conducting and have been conducting their business in a lawful way, without any purpose or desire to injure any of the complainants; that they have been and are pursuing the only known method by which these plants can be operated and their business successfully carried on; that the open-air roast-heap is the only method known to the business or to science by means of which copper ore of the character mined by the defendants can be reduced; that the defendants have made every effort to get rid of the smoke and noxious vapors, one of the defendants having spent $200,000 in experiments to this end, but without result.

It is to be inferred from the description of the locality that there is no place more remote to which the operations referred to could be transferred.

It is found, in substance, that, if the injunctive relief sought be granted, the defendants will be compelled to stop operations and their property will become practically worthless, the immense business conducted by them will cease, and they will be compelled to withdraw from the State. It is a necessary deduction from the foregoing that a great and increasing industry in the State will be destroyed, and all of the valuable copper properties of the State become worthless.

While there can be no doubt that the facts stated make out a case of nuisance, for which the complainants in actions at law would be entitled to recover damages, yet the remedy in equity is not a matter of course. Not only must the bill state a proper case, but the right must be clear, and the injury must be clearly established, as in doubtful cases the party will be turned over to his legal remedy; and, if there is a reasonable doubt as to the cause of the injury, the benefit of the doubt will be given to the defendant, if his trade is a lawful one, and the injury is not the necessary and natural consequence of the act; and, if the injury can be adequately compensated at law by a judgment for damages, equity will not interfere.

A judgment for damages in this class of cases is a matter of absolute right, where injury is shown. A decree for an injunction is a matter of sound legal discretion, to be granted or withheld as that discretion shall dictate, after a full and careful consideration of every element appertaining to the injury.

The question now to be considered is, what is the proper exercise of discretion, under the facts appearing in the present case? Shall the complainants be granted, in the way of damages, the full measure of relief to which their injuries entitle them, or shall we go further, and grant their request to blot out two great mining and manufacturing enterprises, destroy half of the taxable values of a county, and drive more than 10,000 people from their homes? We think there can be no doubt as to what the true answer to this question should be.

In order to protect by injunction several small tracts of land, aggregating in value less than $1,000, we are asked to destroy other property worth nearly $2,000,000, and wreck two great mining and manufacturing enterprises, that are engaged in work of very great importance, not only to their owners, but to the State, and to the whole country as well, to depopulate a large town, and deprive thousands of working people of their homes and livelihood, and scatter them broadcast. The result would be practically a confiscation of the property of
the defendants for the benefit of the complainants—an appropriation without compensation. The defendants cannot reduce their ores in a manner different from that they are now employing, and there is no more remote place to which they can remove. The decree asked for would deprive them of all of their rights. We appreciate the argument based on the fact that the homes of the complainants who live on the small tracts of land referred to are not so comfortable and useful to their owners as they were before they were affected by the smoke complained of, and we are deeply sensible of the truth of the proposition that no man is entitled to any more rights than another on the ground that he has or owns more property than that other. But in a case of conflicting rights, where neither party can enjoy his own without in some measure restricting the liberty of the other in the use of property, the law must make the best arrangement it can between the contending parties, with a view to preserving to each one the largest measure of liberty possible under the circumstances. We see no escape from the conclusion in the present case that the only proper decree is to allow the complainants a reference for the ascertainment of damages, and that the injunction must be denied to them.

NOTES AND QUESTIONS

1. Despite the damage caused by the smelters, the Tennessee Supreme Court in Madison refused to issue an injunction to control their harmful emissions because they had considerable economic value to the community. Is this tantamount to allowing the smelters to condemn the plaintiffs’ property? How can you reconcile the court’s refusal to enjoin the emissions with the conclusion by Maryland’s highest court in Susquehanna Fertilizer Co. v. Malone that a property owner is “entitled to the reasonable and comfortable enjoyment of his property, and, if his rights in this respect are invaded, he is entitled to the protection of the law, let the consequences be what they may”?

2. The Tennessee Supreme Court’s decision in Madison demonstrates that landowners at least could recover damages in private nuisance actions when pollution caused sufficient harm to their property. In Madison there was virtually no discussion of the issue that has proved to be the most substantial obstacle to common law recovery in modern environmental cases today: proof of causal injury. Why was the causation issue not litigated more vigorously by the defendants in Madison?

3. While private nuisance actions offered some prospect of redress for pollution damage, their promise had been largely illusory at the time of the Madison litigation, particularly when the damage was caused by substantial industrial establishments. A study of private nuisance actions in late nineteenth-century England concluded that the law simply “was not being applied in industrial towns.” Brenner, Nuisance Law and the Industrial Revolution, 3 J. Legal Stud. 403, 419 (1974). Several factors diminished the practical value of nuisance law. Recovery generally was only permitted for actual, physical damage to property that caused a decline in its market value. Property values generally increased with industrialization even in contaminated areas, making recovery difficult. Lawsuits were prohibitively expensive for the average British worker. Environmental conditions in most factory towns were so bad that the requirement that nuisances be evaluated in light of the “state of the neighborhood” actually “militated against the recognition by the common law of
minimum standards of comfort and health.” Id. at 420. Fearful of discouraging industrialization, courts held factories liable only in rare cases where the pollution was so devastating that it produced a “scene of desolation” for miles around, as in Tipping’s Case. Id. at 416. Moreover, many of the largest polluters were public or quasipublic enterprises that were protected from liability because their actions were authorized by statute.

4. There is evidence that nuisance actions against polluting facilities were much more common in the United States than in Britain in the late nineteenth and early twentieth centuries. In addition to the Madison litigation, dozens of other private nuisances actions were filed against the Ducktown smelters during this period. While courts in the United States often awarded damages, instead of issuing injunction to shut down polluting facilities, private parties occasionally succeeded in shutting down polluters in cases where environmental damage was quite severe. See, e.g., McClung v. North Bend Coal & Coke Co., 1 Ohio Dec. 187 (C.P. Hamilton 1892), aff’d, 9 Ohio C.C. 259 (1895) (injunction obtained against coking operations that destroyed more than 200 evergreen trees and impaired the health of persons on the ancestral estate of President William Henry Harrison).

5. The early common law did not provide much protection against pollution of groundwater. Only in the rare cases where landowners could prove that a specific source of pollution caused groundwater to reach their land in a polluted condition were nuisance principles applied. Ballard v. Tomlinson, 29 Ch. D. 115 (1885) (common law liability for sewage discharged into well that resulted in pollution of the well of another). For similar reasons, the common law has not proved adequate for redressing nonpoint source pollution. See Columbia Avenue Saving Fund Co. v. Prison Commission of Georgia, 92 F. 801 (W.D. Ga. 1899) and cases cited therein (refusing to enjoin prison construction because the damage it would cause to nearby streams would be the product of nonpoint source pollution); United States v. Brazoria County Drainage District No. 3, 2 F.2d 861 (S.D. Tex. 1925) (drainage ditch that contributed to erosion not a common law nuisance).

6. The Restatement of Torts (Second) defines private nuisance as “a non-trespassory invasion of another’s interest in the private use and enjoyment of land.” Restatement of Torts (Second) §821D (1978). Only those who have property rights and privileges with respect to the use and enjoyment of the land may recover, and only if the harm they suffer is significant. Why does nuisance law require a showing of significant harm, while trespass law does not? The Restatement provides that to constitute a private nuisance the invasion of property rights must be either “intentional and unreasonable; or unintentional and otherwise actionable under the rules governing liability for negligent, reckless or ultrahazardous conduct.” §822. Why do intentional invasions of property rights that cause significant harm have to be unreasonable in order to be actionable as a private nuisance?

7. The traditional common law requirement for a private nuisance is a substantial and unreasonable interference with the private use and enjoyment of land. Is a decline in property values caused by proximity to a polluted site actionable at common law even if there is no proof that the pollution has seeped onto plaintiffs’ property? In Adkins v. Thomas Solvent Company, 487 N.W.2d 715 (Mich. 1992), the Michigan Supreme Court held that 22 property owners who lived near a contaminated site could not recover for the diminution of their property values because no contaminants actually had migrated to their
property and a hydrogeological barrier precluded such migration in the future. The court reasoned that

[i]f any property owner in the vicinity of the numerous hazardous-waste sites that have been identified can advance a claim seeking damages when unfounded public fears of exposure cause property depreciation, the ultimate effect might be a reordering of the polluter’s resources for the benefit of persons who have suffered no cognizable harm at the expense of those claimants who have been subjected to a substantial and unreasonable interference in the use and enjoyment of property. [Adkins v. Thomas Solvent Company, 487 N.W.2d 715, 727 (Mich. 1992).]

Two dissenting justices argued that depreciation of property values can constitute an actionable interference with the use and enjoyment of property when it can be shown to be the normal consequence of a defendant’s conduct. Cf. Livingston v. Jefferson County Board of Equalization, 640 N.W. 2d 426, 10 Neb. App. 934 (2002) (proximity to a confined animal feed operation (CAFO) should be considered when assessing the value of property for tax purposes).

8. When pollutants do physically invade the property of another, liability also may be premised on a theory of trespass. In Martin v. Reynolds Metals Co., 221 Ore. 86, 342 P.2d 790 (Ore. 1959), the Oregon Supreme Court affirmed an award of $91,500 in damages to farmland due to fluoride emissions from a nearby aluminum plant that settled on the land and poisoned cattle. The court held that the intrusion of fluoride particles constituted a trespass because the particles invaded the property owner’s interest in exclusive possession. In Martin the plaintiffs opted to pursue a trespass theory because the statute of limitations for trespass was more favorable than that applicable in nuisance actions. See also Borland v. Sanders Lead Co., Inc., 369 So. 2d 523 (Ala. 1979) (lead pollution constituting a trespass) and Bradley v. American Smelting & Refining Co., 104 Wash. 2d 677, 709 P.2d 782 (1985) (allowing a trespass claim based on the deposit of airborne pollutants from a copper smelter but only where “actual and substantial damage” can be shown).

9. In defining what constitutes an intentional invasion of property rights, the Restatement focuses on the foreseeability of harm. For certain kinds of activities that result in environmental harm, this may have important consequences. For example, the Restatement deems pollution of groundwater to be far less foreseeable than surface water pollution. It notes that invasions of property rights that result from discharges to lakes, streams, and surface waters ordinarily should be considered intentional, because such discharges are substantially certain to cause such an invasion, particularly if the pollution is continued for any length of time. However, invasions resulting from the pollution of groundwater “are ordinarily not intentional since the course of such waters is usually unknown and the actor can thus foresee no more than a risk of harm in most cases.” Restatement of Torts (Second), §832 comment f.

10. While groundwater contamination is more readily foreseeable than in the past, the foreseeability requirement can be a formidable obstacle to using the common law to recover for contamination caused by past dumping practices. In Cambridge Water v. Eastern Counties Leather, 1 All ER H.L. 53 (1994), a British leather company’s repeated spillage of perchloroethene (PCE) over a period of several decades resulted in contamination of an aquifer used by Cambridge Water to supply drinking water. Due to the contamination, the water company had to discontinue use of the aquifer and develop an alternative
water supply. The water company sued and was awarded a judgment of approximately £1 million by a court of appeal. The court held the leather company strictly liable for the damage it had caused. Citing Ballard v. Tomlinson, 29 Ch. D. 115 (1885), the court deemed it unimportant whether the leather company could foresee that its accidental spillages would cause groundwater contamination in violation of modern water quality standards. The House of Lords then allowed an appeal and reversed the court of appeal’s decision. After noting that Ballard v. Tomlinson involved harm that was foreseeable (sewage discharged into a well polluted another well), Lord Goff concluded that “foreseeability of harm is indeed a prerequisite of the recovery of damages in private nuisance, as in the case of public nuisance.” Id. at 72. He then considered whether the leather company could be held liable under the rule in Rylands v. Fletcher, 3 H.L. 330 (1868), imposing strict liability for harm caused by abnormally dangerous activities. However, he found that “foreseeability of damage of the relevant type should be regarded as a prerequisite of liability in damages under the rule” in Rylands. 1 All ER H.L., at 76 (1994). Finding that the leather company could not reasonably have foreseen the damage that it caused the water company, Lord Goff concluded that the leather company could not be held liable. Although Cambridge Water argued that the leather company should at least be held liable for releases of PCE that continued after the discovery of the aquifer contamination, Lord Goff rejected this argument, noting that the PCE that actually had reached the groundwater probably had been released at a time when the contamination was not foreseeable.

Harmonizing Conflicting Interests: To Balance or Not to Balance in Fashioning Remedies for Nuisances?

The early common law assessed nuisance claims by focusing almost exclusively on the nature of the interference pollution caused to the property rights of its victims. Yet defendants continued to press courts to balance the hardship of pollution abatement against the damage to victims when considering requests for equitable relief. By 1927, this debate had reached the point where Judge Learned Hand described the state of nuisance law as one of “great confusion” with U.S. courts split over whether or not to balance comparative hardships between polluters and victims. Smith v. Staso Milling Co., 18 F.2d 736 (2d Cir. 1927). In Staso Milling, Judge Hand explained why he believed that the balancing approach was reasonable, particularly when courts were considering whether to grant injunctions against private nuisances:

The very right on which the injured party stands in such cases is a quantitative compromise between two conflicting interests. What may be an entirely tolerable adjustment, when the result is only to award damages for the injury done, may become no better than a means of extortion if the result is absolutely to curtail the defendant’s enjoyment of his land. Even though the defendant has no power to condemn, at times it may be proper to require of him no more than to make good the whole injury once and for all. [Id. at 738.]

Yet a balancing approach does not necessarily preclude injunctions against nuisances. In Staso Milling, Judge Hand affirmed an injunction barring a slate processing mill from polluting a stream. Even though construction of the plant had altered “the balance of convenience” in a manner that might normally
preclude an injunction, Hand noted that prior to building the plant the plant’s owners specifically had promised nearby property owners that it would not pollute the stream. Noting that no similar promise had been made with respect to air pollution, Hand indicated that an injunction barring the plant from releasing dust could be modified if the plant could demonstrate that no better technology was available for controlling emissions of dust.

While many American courts have enthusiastically embraced the balancing approach, some tension between strict liability and balancing has persisted in private nuisance cases. The evolution of the Restatement of Torts’ position illustrates this tension. The First Restatement adopted an explicit balancing approach for determining whether an interference with property rights was unreasonable. Section 826 of the First Restatement provided that intentional invasions of another’s interest in the use or enjoyment of land are unreasonable unless the utility of the actor’s conduct outweighs the gravity of the harm. This encouraged courts to balance the social value of a polluting activity against the damage it caused. After criticism of the First Restatement’s formulation, the Second Restatement added an alternative criterion of unreasonableness in section 826(b). It states that an intentional invasion is unreasonable if either the gravity of the harm outweighs the utility of the actor’s conduct or “the harm caused by the conduct is serious and the financial burden of compensating for this and similar harm to others would not make the continuation of the conduct not feasible.” This has supplemented what appeared to be a kind of risk-benefit calculus of reasonableness with an alternative test focusing on the financial feasibility of damages. A further embellishment was added by section 829 of the Second Restatement. It states that even in cases where compensation is beyond the financial capacity of an enterprise, an invasion should be deemed unreasonable if the harm it causes “is severe and greater than the other should be required to bear without compensation.” As a result, the Second Restatement’s definition of unreasonableness now embraces notions of fairness or moral outrage as well as feasibility and risk-benefit balancing. Each of these three notions is represented in current regulatory approaches for controlling pollution, as we will see in subsequent chapters.

Economists emphasize that because environmental problems involve interactions between polluters and victims, efficient solutions to nuisance problems involve remedies that minimize the joint costs or maximize the joint value of the interacting activities. If only the polluters determine the extent of harm, then a rule holding polluters strictly liable for the damages they cause is efficient because it will induce them to take the efficient amount of care while ensuring that the prices of their goods reflect their full social costs. However, if the victim’s behavior can affect the extent of damage (e.g., by moving away or by investing in measures that shield her from the effects of pollution), economists argue that strict liability is only efficient if a defense of contributory negligence is recognized, because victims otherwise will have no incentive to take actions that can avoid damage more cheaply. These arguments are explained in clear and nontechnical terms for the noneconomist in A.M. Polinsky, An Introduction to Law and Economics 92-93 (1983).

William Landes and Judge Richard Posner argue that the common law is best understood as an attempt by judges to promote efficient resource allocation. They argue that efficiency dictates that liability for private nuisances be imposed only “where the nuisance causes substantial damage that exceeds the cost of eliminating it and where, moreover, the defendant (injurer) can eliminate the
nuisance at a lower cost than the plaintiff (victim).” W. Landes & R. Posner, The Economic Structure of Tort Law 49 (1987). Landes and Posner conclude that nuisance law generally, but not always, conforms to this principle, particularly now that courts frequently balance the value of competing land uses, the suitability of the conduct to the character of the locality, and the relative costs of avoiding harm. They note that the requirement that harm be substantial serves to screen out cases in which damage is too small to warrant resort to the legal system for abating the nuisance. Id. at 49. Landes and Posner criticize as inefficient the alternative test of unreasonableness articulated in section 826(b) of the Second Restatement, but they note that few American courts have adopted it.

As noted in Chapter 1, the Coase Theorem states that if bargaining is costless and cooperative then any choice of an entitlement or remedy will lead to an efficient outcome. This observation is premised on the notion that parties can engage in exchanges that will lead to efficient outcomes. Ours, however, is not a world of zero transaction costs; imperfect information and strategic behavior make it difficult to reach efficient outcomes. Estimates of the damages caused by pollution, the benefits of polluting activity, and the costs of control alternatives are fraught with uncertainty. Polluters and their victims can gain strategic advantages by misrepresenting these parameters or by providing estimates that fall at different ends of the range of uncertainty. Moreover, as Judge Hand noted in Staso Milling, if victims always are entitled to injunctions against pollution they could use this entitlement as “a means of extortion” to hold out for more than the efficient level of compensation. In theory the common law offers a flexible, case-by-case assessment of liability that could permit courts to overcome some of the problems of strategic behavior. Economists argue that the common law can promote efficient outcomes by placing liability on the party that is the cheapest cost avoider. See Michelman, Pollution as a Tort: A Non-Accidental Perspective on Calabresi’s Costs, 80 Yale L.J. 647 (1971). This approach, however, may require courts to obtain accurate estimates of the damages and benefits of polluting activities, information that is not always readily available. For suggestions concerning how courts can minimize the impact of such uncertainty, see A.M. Polinsky, An Introduction to Law and Economics 24 (1983).

One approach for coping with imperfect information is for courts to structure flexible remedies that take advantage of market forces to determine which party can control pollution most efficiently. See Calabresi & Melamed, Property Rules, Liability Rules and Inalienability: One View of the Cathedral, 85 Harv. L. Rev. 1089 (1972); Rabin, Nuisance Law: Rethinking Fundamental Assumptions, 63 Va. L. Rev. 1209 (1977). The conditional injunction approach has been recommended on these grounds. It was used by the New York Court of Appeals in the famous decision of Boomer v. Atlantic Cement Co., 26 N.Y.2d 219, 257 N.E.2d 870 (1970). The court in Boomer issued a conditional injunction barring the operation of a cement plant whose air emissions had caused substantial damage to nearby property until the plant paid surrounding residents the full value of their permanent damages if the plant continued operation. The theory behind this approach was that the plant would opt to continue operations only if the operations had more economic value than the cost of the damage they produced. Further background information on the Boomer case can be found in Daniel A. Farber, The Story of Boomer: Pollution and the Common Law in Environmental Law Stories 7 (R. Lazarus & O. Houck eds., 2005). Farber reports that the plaintiff landowners ultimately recovered substantially more in
damages than would have been expected from the appellate decision and that the plant remains the second largest cement facility in the United States. Id., at 21, 25.

The notion that rights and liabilities should be allocated in a manner that promotes efficiency can be controversial because of its distributional consequences. Viewed from the moral outrage perspective, the Tennessee Supreme Court's refusal to enjoin the Ducktown smelter's emissions and the New York court's decision to permit the cement plant in *Boomer* to purchase the right to continue operation may seem outrageous to the victims of the pollution, even though they ultimately may receive damages. After all, as Judge Hand noted in *Staso Milling*, the polluter "has no power to condemn" the victim's property, but a damage award that allows the pollution to continue produces virtually the same result. Despite courts' concern for achieving efficient outcomes, distributional concerns also play a significant role in shaping environmental policy, as we will see throughout this casebook.

While the common law is most useful for addressing conflicts between a single source of pollution and a few neighbors, there is wide agreement that private nuisance actions alone are grossly inadequate for resolving the more typical pollution problems faced by modern industrialized societies. When numerous and diverse pollutants emanating from widely dispersed sources affect large populations, the common law is a poor vehicle for providing redress, as even staunch advocates of the economic perspective concede. See, e.g., R. Posner, *Economic Analysis of Law* 46-47 (2d ed. 1977). But see *The Common Law and the Environment: Rethinking the Statutory Basis for Modern Environmental Law* (R. Meiners & A. Morriss eds., 2000) (arguing that common law institutions are more capable of protecting the environment than is commonly believed and that they may be superior to reliance on regulatory statutes). The difficulty plaintiffs face is well described in the Report of the Lords Select Committee on Noxious Vapors in 1862, which noted that "partly in consequence of the expense such actions occasion, partly from the fact that where several works are in immediate juxtaposition, the difficulty of tracing the damage to any one, or of apportioning it among several, is [so] great as to be all but insuperable."

H.L. Select Committee on Noxious Vapours at v, quoted in Brenner, Nuisance Law and the Industrial Revolution, 3 J. Legal Stud. 403, 425 (1974). Even when the aggregate damage caused by pollution is quite large, the damage to any individual victim may be insufficient to make a lawsuit worthwhile. While the class action device provides a mechanism for dealing with such problems, it has not played a significant role in redressing environmental damage. In cases where pollution interferes with rights held in common by the public, the common law's response has been to rely on public nuisance actions, to which we now turn.

### B. Public Nuisance

The common law offers somewhat greater promise for protecting the environment when used by governmental entities to protect their citizens against public nuisances. The Second Restatement defines a public nuisance as "an unreasonable interference with a right common to the general public." Restatement of Torts (Second) §821B (1978). As with the doctrine of private nuisance, with public nuisance not all invasions of rights are actionable, only
unreasonable ones. In determining whether interference with a public right is unreasonable, the Restatement directs courts to consider whether the conduct: (1) involves a significant interference with the public health, safety, comfort, or convenience; (2) is illegal; or (3) is of a continuing nature or has produced a long-lasting effect on the public right that the actor has reason to know will be significant.

The doctrine of public nuisance was used most frequently in the early common law to prosecute those who obstructed public highways or encroached on the royal domain. The doctrine later expanded to embrace actions against those who fouled public waters or emitted noxious fumes. Following the Industrial Revolution, public nuisance actions were rarely prosecuted to abate pollution. When such actions were brought, courts were not "eager to find large enterprises guilty of public nuisances, because they feared the economic consequences of a policy of strict enforcement." Brenner, Nuisance Law and the Industrial Revolution, 3 J. Legal Stud. 403, 421 (1974). It is not surprising that many of the public nuisance actions that were brought by governmental authorities targeted nonresident polluters, as illustrated in the decisions below.

Two early Supreme Court decisions involved public nuisance actions brought by state authorities against out-of-state polluters. The first grew out of the burgeoning sewage disposal problem faced by many rapidly expanding American cities. In the late nineteenth century, most cities disposed of their sewage by simply dumping it untreated into the nearest lake or stream. As one American court had noted, "the history of sewers shows that from time immemorial the right to connect them with navigable streams has been regarded as part of the jus publicum." Newark v. Sayre Co., 60 N.J. Eq. 361, 45 A. 985 (1900). Not surprisingly, with rapid urbanization, sewage disposal became a major source of environmental conflict among cities and states that shared public waterways.

Chicago disposed of its raw sewage by dumping it into the Chicago River, which flowed into Lake Michigan, the source of the city's drinking water. When a cholera epidemic killed more than 1,400 Chicago residents in 1854 (more than 2 percent of the city's population), polluted drinking water was viewed as a likely culprit. To improve the quality of its drinking water, Chicago in 1867 built a water tunnel two miles out into Lake Michigan. However, this provided only temporary relief, as the lake became more contaminated with the city's sewage and diseases believed to be associated with contaminated drinking water increased to frightening levels. In 1891, the death rate from typhoid fever in Chicago reached 174 per 100,000 persons.

To resolve the city's sewage disposal problem, in 1892 the Illinois Drainage and Water Supply Commission began construction of a 28-mile canal to reverse the flow of the Chicago River. This ambitious project would link the river with the Des Plaines River, which drained into the Mississippi River. Chicago's raw sewage no longer would flow into Lake Michigan; it would empty into the Mississippi River instead.

Though hundreds of miles away, residents of St. Louis, Missouri became upset when they learned that the Mississippi River, their source of drinking water, would now become the recipient of the raw sewage from more than one million Chicago residents. Missouri filed a common law nuisance action against Illinois in the United States Supreme Court. Arguing that the sewage would endanger the health of its citizens, Missouri asked the Supreme Court to enjoin Illinois and the Sanitary District of Chicago from discharging sewage through the canal.
Illinois tried to have the case dismissed on jurisdictional grounds, arguing that it was not really a dispute between states subject to the Supreme Court’s original jurisdiction. The Supreme Court rejected Illinois’s arguments and held that it had jurisdiction. Missouri v. Illinois, 180 U.S. 208 (1901). As Justice Holmes later explained:

The nuisance set forth in the bill was one which would be of international importance—a visible change of a great river from a pure stream into a polluted and poisoned ditch. The only question presented was whether as between the States of the Union this court was competent to deal with a situation which, if it arose between independent sovereignties, might lead to war. Whatever differences of opinion there might be upon matters of detail, the jurisdiction and authority of this court to deal with such a case is not now open to doubt. Missouri v. Illinois, 200 U.S. 496, 518 (1906).

The Supreme Court appointed a special commissioner to hear evidence in the case, which dragged on for years as Chicago’s sewage poured through the canal and on to the Mississippi. Missouri’s lawyers argued that disease-producing bacteria contained in Chicago’s sewage had caused a 77 percent increase in typhoid fever deaths in St. Louis after the canal was opened in January 1900. Illinois argued that any increase in deaths from typhoid fever was an artifact of a change in reporting practices that for the first time had consolidated a host of fever-related deaths under the classification of typhoid fever. Illinois’s lawyers argued that the drainage canal actually had improved water quality in the Mississippi’s tributaries by increasing their volume and rate of flow. They maintained that any injury caused by bacteria in the Mississippi was the product of sewage dumped by other Missouri cities upriver from St. Louis. Missouri responded that any increase in the volume or rate of flow of the river’s tributaries served only to hasten the delivery of Chicago’s sewage and its accompanying bacteria.

Missouri v. Illinois
200 U.S. 496 (1906)

Mr. Justice Holmes delivered the opinion of the court.
This is a suit brought by the State of Missouri to restrain the discharge of the sewage of Chicago through an artificial channel into the Desplaines River, in the State of Illinois. That river empties into the Illinois River, and the latter empties into the Mississippi at a point about forty-three miles above the city of St. Louis. It was alleged in the bill that the result of the threatened discharge would be to send fifteen hundred tons of poisonous filth daily into the Mississippi, to deposit great quantities of the same upon the part of the bed of the last-named river belonging to the plaintiff, and so to poison the water of that river, upon which various of the plaintiff’s cities, towns, and inhabitants depended, as to make it unfit for drinking, agricultural, or manufacturing, purposes. . .

Before this court ought to intervene the case should be of serious magnitude, clearly and fully proved, and the principle to be applied should be one which the court is prepared deliberately to maintain against all considerations on the other side. See Kansas v. Colorado, 185 U.S. 125.

As to the principle to be laid down the caution necessary is manifest. It is a question of the first magnitude whether the destiny of the great rivers is to be the
sewers of the cities along their banks or to be protected against everything which threatens their purity. To decide the whole matter at once by an irrevocable fiat would be at least premature. If we are to judge by what the plaintiff itself permits, the discharge of sewage into the Mississippi by cities and towns is to be expected. We believe that the practice of discharging into the river is general along its banks, except where the levees of Louisiana have led to a different course. The argument for the plaintiff asserts it to be proper within certain limits. These are facts to be considered. Even in cases between individuals some consideration is given to the practical course of events. In the back country of England parties would not be expected to stand upon extreme rights. St. Helen’s Smelting Co. v. Tipping, 11 H.L.C. 642. See Boston Ferrule Co. v. Hills, 159 Massachusetts, 147, 150. Where, as here, the plaintiff has sovereign powers and deliberately permits discharges similar to those of which it complains, it not only offers a standard to which the defendant has the right to appeal, but, as some of those discharges are above the intake of St. Louis, it warrants the defendant in demanding the strictest proof that the plaintiff’s own conduct does not produce the result, or at least so conduce to it that courts should not be curious to apportion the blame.

We have studied the plaintiff’s statement of the facts in detail and have perused the evidence, but it is unnecessary for the purposes of decision to do more than give the general result in a very simple way. At the outset we cannot but be struck by the consideration that if this suit had been brought fifty years ago it almost necessarily would have failed. There is no pretense that there is a nuisance of the simple kind that was known to the older common law. There is nothing which can be detected by the unassisted senses—no visible increase of filth, no new smell. On the contrary, it is proved that the great volume of pure water from Lake Michigan which is mixed with the sewage at the start has improved the Illinois River in these respects to a noticeable extent. Formerly it was sluggish and ill smelling. Now it is a comparatively clear stream to which edible fish have returned. Its water is drunk by the fishermen, it is said, without evil results. The plaintiff’s case depends upon an inference of the unseen. It draws the inference from two propositions. First, that typhoid fever has increased considerably since the change and that other explanations have been disproved, and second, that the bacillus of typhoid can and does survive the journey and reach the intake of St. Louis in the Mississippi.

We assume the now prevailing scientific explanation of typhoid fever to be correct. But when we go beyond that assumption everything is involved in doubt. The data upon which an increase in the deaths from typhoid fever in St. Louis is alleged are disputed. The elimination of other causes is denied. The experts differ as to the time and distance within which a stream would purify itself. No case of an epidemic caused by infection at so remote a source is brought forward, and the cases which are produced are controverted. The plaintiff obviously must be cautious upon this point, for if this suit should succeed many others would follow, and it not improbably would find itself a defendant to a bill by one or more of the States lower down upon the Mississippi. The distance which the sewage has to travel (357 miles) is not open to debate, but the time of transit to be inferred from experiments with floats is estimated at varying from eight to eighteen and a half days, with forty-eight hours more from intake to distribution, and when corrected by observations of bacteria is greatly prolonged by the defendants. The experiments of the defendants’ experts lead them to the opinion that a typhoid bacillus could not survive the journey, while those on the
other side maintain that it might live and keep its power for twenty-five days or more, and arrive at St. Louis. Upon the question at issue, whether the new discharge from Chicago hurts St. Louis, there is a categorical contradiction between the experts on the two sides.

The Chicago drainage canal was opened on January 17, 1900. The deaths from typhoid fever in St. Louis, before and after that date, are stated somewhat differently in different places. We give them mainly from the plaintiff’s brief: 1890, 140; 1891, 165; 1892, 441; 1893, 215; 1894, 171; 1895, 106; 1896, 106; 1897, 125; 1898, 95; 1899, 131; 1900, 154; 1901, 181; 1902, 216; 1903, 281. It is argued for the defendant that the numbers for the later years have been enlarged by carrying over cases which in earlier years would have been put into a miscellaneous column (intermittent, remittent, typho-malaria, etc., etc.), but we assume that the increase is real. Nevertheless, comparing the last four years with the earlier ones, it is obvious that the ground for a specific inference is very narrow, if we stopped at this point. The plaintiff argues that the increase must be due to Chicago, since there is nothing corresponding to it in the watersheds of the Missouri or Mississippi. On the other hand, the defendant points out that there has been no such enhanced rate of typhoid on the banks of the Illinois as would have been found if the opening of the drainage canal were the true cause.

Both sides agree that the detection of the typhoid bacillus in the water is not to be expected. But the plaintiff relies upon proof that such bacilli are discharged into the Chicago sewage in considerable quantities; that the number of bacilli in the water of the Illinois is much increased, including the bacillus coli communis, which is admitted to be an index of contamination, and that the chemical analyses lead to the same inference. To prove that the typhoid bacillus could make the journey, an experiment was tried with the bacillus prodigiosus, which seems to have been unknown, or nearly unknown, in these waters. After preliminary trials, in which these bacilli emptied into the Mississippi near the mouth of the Illinois were found near the St. Louis intake and in St. Louis in times varying from three days to a month, one hundred and seven barrels of the same, said to contain one thousand million bacilli to the cubic centimeter, were put into the drainage canal near the starting point on November 6, and on December 4 an example was found at the St. Louis intake tower. Four others were found on the three following days, two at the tower and two at the mouth of the Illinois. As this bacillus is asserted to have about the same length of life in sunlight in living waters as the bacillus typhosus, although it is a little more hardy, the experiment is thought to prove one element of the plaintiff’s case, although the very small number found in many samples of water is thought by the other side to indicate that practically no typhoid germs would get through. It seems to be conceded that the purification of the Illinois by the large dilution from Lake Michigan (nine parts or more in ten) would increase the danger, as it now generally is believed that the bacteria of decay, the saprophytes, which flourish in stagnant pools, destroy the pathogenic germs. Of course the addition of so much water to the Illinois also increases its speed.

On the other hand, the defendant’s evidence shows a reduction in the chemical and bacterial accompaniments of pollution in a given quantity of water, which would be natural in view of the mixture of nine parts to one from Lake Michigan. It affirms that the Illinois is no better or no worse at its mouth than it was before, and makes it at least uncertain how much of the present pollution is due to Chicago and how much to sources further down, not complained of in the bill. It contends that if any bacilli should get through
they would be scattered and enfeebled and would do no harm. The defendant also sets against the experiment with the *bacillus prodigiosus* a no less striking experiment with typhoid germs suspended in the Illinois River in permeable sacs. According to this the duration of the life of these germs has been much exaggerated, and in that water would not be more than three or four days. It is suggested, by way of criticism, that the germs may not have been of normal strength, that the conditions were less favorable than if they had floated down in a comparatively unchanging body of water, and that the germs may have escaped, but the experiment raises at least a serious doubt. Further, it hardly is denied that there is no parallelism in detail between the increase and decrease of typhoid fever in Chicago and St. Louis. The defendants’ experts maintain that the water of the Missouri is worse than that of the Illinois, while it contributes a much larger proportion to the intake. The evidence is very strong that it is necessary for St. Louis to take preventive measures, by filtration or otherwise, against the dangers of the plaintiff’s own creation or from other sources than Illinois. What will protect against one will protect against another. The presence of causes of infection from the plaintiff’s action makes the case weaker in principle as well as harder to prove than one in which all came from a single source. . . .

We might go more into detail, but we believe that we have said enough to explain our point of view and our opinion of the evidence as it stands. What the future may develop of course we cannot tell. But our conclusion upon the present evidence is that the case proved falls so far below the allegations of the bill that it is not brought within the principles heretofore established in the cause.

**NOTES AND QUESTIONS**

1. Why did Missouri fail to convince the Supreme Court that Chicago’s sewage discharges constituted a public nuisance? Did the discharge of raw sewage into a canal that eventually flows into the Mississippi affect the quality of drinking water in St. Louis? If so, was it an unreasonable interference with the rights of Missouri’s citizens? Should it make any difference that Chicago’s sewage would not have reached the Mississippi but for construction of the canal?

2. What is the relevance of Justice Holmes’s statement that “even in cases between individuals some consideration is given to the practical course of events. In the back country of England parties would not be expected to stand upon extreme rights”? Does this suggest that some balancing of interests is appropriate in public nuisance cases?

3. Following the opening of the canal, the death rate from typhoid fever in Chicago fell from more than 80 per 100,000 to less than 10 per 100,000. But Missouri claimed that the canal had improved public health in Chicago only at the expense of citizens of St. Louis. How persuasive was the statistical evidence Missouri presented to demonstrate that the sewage discharges had caused a substantial increase in typhoid fever deaths in St. Louis? What other evidence could Missouri have presented to demonstrate that the sewage discharges had harmed its residents? Suppose that Missouri had been successful in proving that the opening of the canal had caused a substantial increase in the incidence of typhoid fever in St. Louis, but that Illinois was able to prove that it produced an even larger decrease in typhoid fever deaths in Chicago. Would Missouri be entitled to the injunction that it sought?
4. As Chicago continued to grow, it had to divert ever larger amounts of water from Lake Michigan to flush out the increased volumes of sewage in the drainage canal. In 1924, Wisconsin, Michigan, and New York invoked the Supreme Court’s original jurisdiction to sue Illinois and the Sanitary District for diverting too much water from Lake Michigan. They successfully argued that Illinois’s diversions had lowered the levels of Lakes Michigan, Huron, Erie, and Ontario, their connecting waterways, and the St. Lawrence River more than six inches, causing serious injury to their citizens and property. Ironically, Illinois was joined as a defendant by the state of Missouri, which intervened because of its interest in keeping as much water as possible flowing through the drainage canal to the Mississippi River. Former Justice Charles Evans Hughes, who had just finished serving as Secretary of State in the Harding and Coolidge administrations, was appointed by the Court to serve as special master. Based on his findings confirming the allegations of the upstream states, the Court ruled against Illinois in January 1929. The Court concluded that the upstream states were entitled to equitable relief, Wisconsin v. Illinois, 278 U.S. 367 (1929), and it ultimately issued an injunction requiring Chicago to build sewage treatment plants to reduce its need to divert water from Lake Michigan. Wisconsin v. Illinois, 281 U.S. 179 (1930) and 281 U.S. 696 (1930).

5. Justice Holmes notes that Missouri’s own cities, including cities upstream of St. Louis, routinely discharged raw sewage into the Mississippi. What is the significance of this observation? Would the outcome of this case have been any different if Missouri had required its cities to employ more sophisticated treatment technology to protect the Mississippi from pollution? Thomas Merrill describes the decision in Missouri v. Illinois as an endorsement of “the reverse golden rule: in a transboundary pollution case, the affected state cannot demand that the source state adhere to a higher standard than the affected state applies to its own citizens.” Thomas W. Merrill, Golden Rules for Transboundary Pollution, 46 Duke L.J. 931, 1000 (1997).

6. In a subsequent case, the Court denied relief to New York when it sought an injunction to prevent New Jersey from discharging raw sewage into New York Bay. The Court declared that before it would act “to control the conduct of one state at the suit of another, the threatened invasion must be of serious magnitude and it must be established by clear and convincing evidence.” New York v. New Jersey, 256 U.S. 296, 309 (1921). The Court emphasized that New York had failed to prove that there were visible suspended particles, odors, or a reduction in the dissolved oxygen content of the Bay sufficient to interfere with aquatic life. It also observed that New York itself discharged sewage from 450 sewers directly into adjacent waters.

7. New Jersey was more successful when it sued to stop New York City from ocean dumping of garbage. A special master found that New York City had caused enough garbage to wash upon New Jersey shores to fill 50 trucks, damaging fish nets and making swimming impracticable. The Supreme Court issued an injunction prohibiting the city from dumping garbage off the coast of New Jersey effective June 1, 1933. New Jersey v. City of New York, 284 U.S. 585 (1931). The Court subsequently extended this deadline for a year to give the city more time to build garbage incinerators. New Jersey v. City of New York, 290 U.S. 237 (1933).

8. Is the judiciary an appropriate institution for formulating pollution control policy, or is such a task better left to administrative agencies with more specialized expertise? As we will see, a major obstacle to effective pollution control has been the reluctance of politically accountable officials to implement
policies that may adversely affect local industries. Could judges, who are more insulated from political forces, do a more effective job of formulating environmental policy?

9. Governmental entities have themselves been among the most persistent violators of environmental regulations. Efforts to force them to comply with the environmental laws perennially come up against the argument that there isn’t enough money to do so. Confronted with this argument in a public nuisance action in 1858, a British court said of local authorities: “If they have not funds enough to make further experiments, they must apply to Parliament for power to raise more money. If, after all possible experiments, they cannot [dispose of their sewage] without invading the Plaintiff’s rights, they must apply to Parliament for power to invade his rights.” A.G. v. Birmingham Borough Council, 70 Eng. Rep. 220, 4 K. J. 528, 541 (Vice Ch. Ct. 1858). See also Wisconsin v. Illinois, 289 U.S. 395, 406 (1933) (holding the state of Illinois responsible for providing the necessary funds to complete construction of sewage treatment works for Chicago).

10. A year after it decided Missouri v. Illinois, the Supreme Court was again confronted with a common law nuisance action involving interstate pollution. This time the controversy involved a source of pollution already familiar to us—sulfur dioxide emissions from the very Ducktown, Tennessee copper smelters involved in Madison v. Ducktown Sulphur, Copper & Iron Co. Invoking the Court’s original jurisdiction, the state of Georgia brought a common law nuisance action against the smelters, which, as you may recall, were located directly across the Georgia-Tennessee border. In 1904, the year that the Tennessee Supreme Court had decided not to enjoin operation of the smelters, Georgia filed suit in the Supreme Court, complaining that the smelters’ emissions crossed the border and caused considerable property damage in Georgia. Georgia asked the Supreme Court to enjoin operation of the smelters. In response to Georgia’s lawsuit, the companies pledged to change their method of operation to reduce their emissions. Georgia then agreed to dismiss its lawsuit without prejudice. But after the smelters installed tall smokestacks that simply transported the pollution across a wider swath of territory, Georgia again filed suit.

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**Georgia v. Tennessee Copper Co.**

206 U.S. 230 (1907)

Mr. Justice Holmes delivered the opinion of the court.

This is a bill in equity filed in this court by the State of Georgia in pursuance of a resolution of the legislature and by direction of the Governor of the State, to enjoin the defendant Copper Companies from discharging noxious gas from their works in Tennessee over the plaintiff’s territory. It alleges that in consequence of such a discharge a wholesale destruction of forests, orchards, and crops is going on, and other injuries are done and threatened in five counties of the State. It alleges also a vain application to the State of Tennessee for relief. A preliminary injunction was denied, but, as there was ground to fear that great and irreparable damage might be done, an early day was fixed for the final hearing and the parties were given leave, if so minded, to try the case on affidavits. This has been done without objection, and, although the method would be unsatisfactory if our decision turned on any nice question of fact, in the view that we take we think it unlikely that either party has suffered harm.
A. Sources of Environmental Law

The case has been argued largely as if it were one between two private parties; but it is not. The very elements that would be relied upon in a suit between fellow-citizens as a ground for equitable relief are wanting here. The State owns very little of the territory alleged to be affected, and the damage to it capable of estimate in money, possibly, at least, is small. This is a suit by a State for an injury to it in its capacity of quasi-sovereign. In that capacity the State has an interest independent of and behind the titles of its citizens, in all the earth and air within its domain. It has the last word as to whether its mountains shall be stripped of their forests and its inhabitants shall breathe pure air. It might have to pay individuals before it could utter that word, but with it remains the final power. The alleged damage to the State as a private owner is merely a make-weight, and we may lay on one side the dispute as to whether the destruction of forests has led to the gullying of its roads.

The caution with which demands of this sort, on the part of a State, for relief from injuries analogous to torts, must be examined, is dwelt upon in Missouri v. Illinois, 200 U.S. 496, 520, 521. But it is plain that some such demands must be recognized, if the grounds alleged are proved. When the States by their union made the forcible abatement of outside nuisances impossible to each, they did not thereby agree to submit to whatever might be done. They did not renounce the possibility of making reasonable demands on the ground of their still remaining quasi-sovereign interests; and the alternative to force is a suit in this court. Missouri v. Illinois, 180 U.S. 208, 241.

Some peculiarities necessarily mark a suit of this kind. If the State has a case at all, it is somewhat more certainly entitled to specific relief than a private party might be. It is not lightly to be required to give up quasi-sovereign rights for pay; and, apart from the difficulty of valuing such rights in money, if that be its choice it may insist that an infraction of them shall be stopped. The States by entering the Union did not sink to the position of private owners subject to one system of private law. This court has not quite the same freedom to balance the harm that will be done by an injunction against that of which the plaintiff complains, that it would have in deciding between two subjects of a single political power. Without excluding the considerations that equity always takes into account, we cannot give the weight that was given them in argument to a comparison between the damage threatened to the plaintiff and the calamity of a possible stop to the defendants’ business, the question of health, the character of the forests as a first or second growth, the commercial possibility of reducing the fumes to sulphuric acid, the special adaption of the business to the place.

It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted on a great scale by sulphurous acid gas, that the forests on its mountains, be they better or worse, and whatever domestic destruction they have suffered, should not be further destroyed or threatened by the act of persons beyond its control, that the crops and orchards on its hills should not be endangered from the same source. If any such demand is to be enforced this must be, notwithstanding the hesitation that we might feel if the suit were between private parties, and the doubt whether for the injuries which they might be suffering to their property they should not be left to an action at law.

The proof requires but a few words. It is not denied that the defendants generate in their works near the Georgia line large quantities of sulphur dioxide which becomes sulphurous acid by its mixture with the air. It hardly is denied and cannot be denied with success that this gas often is carried by the wind great
distances and over great tracts of Georgia land. On the evidence the pollution of the air and the magnitude of that pollution are not open to dispute. Without any attempt to go into details immaterial to the suit, it is proper to add that we are satisfied by a preponderance of evidence that the sulphurous fumes cause and threaten damage on so considerable a scale to the forests and vegetable life, if not to health, within the plaintiff State as to make out a case within the requirements of Missouri v. Illinois, 200 U.S. 496. Whether Georgia by insisting upon this claim is doing more harm than good to her own citizens is for her to determine. The possible disaster to those outside the State must be accepted as a consequence of her standing upon her extreme rights.

It is argued that the State has been guilty of laches. We deem it unnecessary to consider how far such a defense would be available in a suit of this sort, since, in our opinion, due diligence has been shown. The conditions have been different until recent years. After the evil had grown greater in 1904 the State brought a bill in this court. The defendants, however, already were abandoning the old method of roasting ore in open heaps and it was hoped that the change would stop the trouble. They were ready to agree not to return to that method, and upon such an agreement being made the bill was dismissed without prejudice. But the plaintiff now finds, or thinks that it finds, that the tall chimneys in present use cause the poisonous gases to be carried to greater distances than ever before and that the evil has not been helped.

If the State of Georgia adheres to its determination, there is no alternative to issuing an injunction, after allowing a reasonable time to the defendants to complete the structures that they now are building, and the efforts that they are making, to stop the fumes. The plaintiff may submit a form of decree on the coming in of this court in October next.

Injunction to issue.

NOTES AND QUESTIONS

1. Why did Georgia succeed in getting an injunction from the United States Supreme Court when plaintiffs in Madison v. Ducktown Sulphur, Copper & Iron Co. had been refused such relief by the Tennessee Supreme Court? Justice Holmes suggests that in fashioning a remedy for a public nuisance, the Court has less latitude to balance the equities because the plaintiff is a sovereign state. What is his rationale for this conclusion? Is this why the Court ultimately held that Georgia was entitled to an injunction?

2. Why did Georgia succeed in the Tennessee Copper case when Missouri failed to get the Supreme Court to enjoin Chicago’s discharge of sewage in Missouri v. Illinois? Did Georgia simply have better evidence than Missouri that the pollution had caused damage to its citizens? Did it make any difference that the defendants in Tennessee Copper were two private companies rather than another sovereign state?

3. In Tennessee Copper, Justice Holmes warned: “Whether Georgia by insisting upon this claim is doing more harm than good to her own citizens is for her to determine. The possible disaster to those outside the State must be accepted as a consequence of her standing upon her extreme rights.” What did he mean by this? Recall Justice Holmes’s comment in Missouri v. Illinois that if Missouri had won the case many other suits would follow and Missouri might find itself a defendant in cases brought by downstream states.
4. In a separate opinion, Justice John Marshall Harlan argued that the Court should apply the same standard in nuisance cases brought by public authorities as it would in private nuisance actions. He wrote: “If this were a suit between private parties, and if, under the evidence, a court of equity would not give the plaintiff an injunction, then it ought not to grant relief, under like circumstances, to the plaintiff, because it happens to be a state, possessing some powers of sovereignty.” However, he concurred in the majority’s decision, explaining that “Georgia is entitled to the relief sought, not because it is a state, but because it is a party, which has established its right to such relief by proof.” Do you agree that courts should apply the same standard in deciding nuisance cases regardless of whether or not the plaintiff is a public entity? Why do you think the common law developed different standards to govern public and private nuisances?

5. In addition to actions by governmental authorities, public nuisance actions can be brought by private parties if they can demonstrate that the nuisance has harmed them in a manner not shared with the general public. William Prosser notes that the traditional “special injury” requirement for private actions derived from the ancient notion that private parties should not be able to vindicate the rights of the sovereign and from a desire to prevent a multitude of actions to redress the same nuisance. Prosser, Private Action for Public Nuisance, 52 Va. L. Rev. 997 (1966). As courts and legislatures broadened citizen rights of action to redress environmental damage, the special injury requirement has come under fire. As Professor Denise Antolini notes, the “traditional doctrine presents a paradox: the broader the injury to the community and the more the plaintiff’s injury resembles an injury also suffered by other members of the public, the less likely the plaintiff can bring a public nuisance lawsuit.” Denise E. Antolini, Modernizing Public Nuisance: Solving the Paradox of the Special Injury Rule, 28 Ecol. L.Q. 755, 761 (2001). While the Restatement (Second) of Torts suggested that the special injury requirement should not bar actions seeking equitable relief or class actions brought against public nuisances by private individuals, Restatement (Second) of Torts §821C and comment j (1978), this approach has not been embraced by courts. “Although courts still struggle with application of the different-in-kind test (often bending the rule to avoid unfair results), the traditional doctrine is nonetheless repeated like a mantra in virtually every public nuisance case.” Antolini, 28 Ecol. L.Q. at 861. Professor Antolini argues that courts should adopt an “actual community injury” standard that would permit recovery of damages or injunctive relief in a private action for a public nuisance, if the plaintiff “suffered an actual or threatened injury in common with the community that was the subject of the nuisance,” with “injury” defined as “substantial interference with community values,” which would not be limited to pecuniary loss and could include environmental and aesthetic injury. Id. at 862-863.

6. Faced with the threat of an injunction, the Tennessee Copper Company eventually settled with the state of Georgia by setting up a fund to compensate those injured by its emissions and by agreeing to restrict its operations during the growing season (April to October). The other smelting company, the Ducktown Sulphur, Copper & Iron Company, refused to restrict its operations, claiming that it already had spent $600,000 constructing “purifying works” to reduce the percentage of sulfur emitted from the ores from 85.5 percent to 41.5 percent. Despite this investment, Ducktown released more than 13,000 tons of sulfur emissions in 1913. In 1914 Georgia applied to the Supreme Court for
a final injunction against Ducktown. While noting that it could not determine precisely how much of a reduction in Ducktown’s emissions would be necessary to prevent harm to property in Georgia, the Court issued a final injunction on June 1, 1915. Georgia v. Tennessee Copper Co., 237 U.S. 474 (1915). The Court specified that no more than 20 tons of sulfur per day could be emitted during the period from April to October and no more than 40 tons per day during the rest of the year. 237 U.S. at 678. The Court appointed an inspector to monitor Ducktown’s operations. A year later, in response to the inspector’s report, the Court modified the injunction to permit releases of 25 tons of sulfur per day from April to October, and 50 tons per day during the rest of the year. 240 U.S. 650 (1916). In light of the Court’s conclusion that it could not determine what level of emissions reduction would prevent harm to property in Georgia, what basis do you think it had for specifying emissions limits in its injunction?

7. Both the Tennessee Copper and Ducktown companies ultimately settled with the State of Georgia by agreeing to participate in an administrative compensation system where a board of arbitrators would rule on claims of damage caused by the smelters’ emissions. The companies and the State each appointed one arbitrator to rule on claims of injury, with an umpire designated by the two arbitrators to resolve disagreements between the other two. While the companies posted bonds to ensure that they could provide $25,000 per year in compensation, review of the records of the arbitral tribunal reveals that it actually awarded only a tiny amount of compensation. Between 1921 and 1928 it approved 140 out of 203 claims filed (approximately 69 percent), but it awarded only an average of $189 per year in damages, approximately 10 percent of the total amount of claims made annually. Percival, Resolución de Conflicto Ambiental: Lecciones Aprendidas de la Historia de la Contaminación de las Fundiciones de Minerales, in Prevención y Solución de Conflicto Ambiental: Vías Administrativas, Jurisdiccionales y Alternativas 399 (Lexis Nexis 2004).

8. Causation was not a significant issue in the litigation because the environmental effects of the open roast-heap smelting process were strikingly visible. The smelter emissions destroyed virtually all vegetation over a vast swath of land, transforming the Ducktown area into a bizarre moonscape of barren red hills that is apparent even today after decades of intensive reforestation efforts. Although the Supreme Court’s injunction ultimately was relaxed in 1918 with Georgia’s consent due to unusual demand for copper during World War I, fear of liability helped advance the development of a new pollution control technology, the lead chamber process, that permits sulfur to be reclaimed and used to produce sulfuric acid. Indeed, the technology proved so successful that the production of sulfuric acid eventually replaced copper as the area’s major product. While all copper mining in the area ceased in 1987, the area’s largest employer today is a Swiss chemical company that continues to use the old Tennessee Copper production facilities to produce sulfuric acid.

9. Interstate pollution remains a serious problem, but the Supreme Court no longer is in the business of establishing emissions limits in federal common law nuisance actions. Why would the Supreme Court be reluctant to hear such actions? Consider the following comment by the Court in refusing the injunction sought by New York against New Jersey’s sewage disposal practices:

We cannot withhold the suggestion, inspired by the consideration of this case, that the grave problem of sewage disposed presented by the large and growing populations living on the shores of New York Bay is one more likely to
be wisely solved by cooperative study and by conference and mutual concession on the part of the representatives of the States so vitally interested in it than by proceedings in any court however constituted. [New York v. New Jersey, 256 U.S. 296, 313 (1921).]

Do you agree with the Court’s conclusion?

10. In Illinois v. City of Milwaukee, 406 U.S. 91 (1972) (Milwaukee I), the Supreme Court confirmed that federal common law nuisance actions could be brought against polluting governmental entities, but it reversed its previous willingness to hear such actions under its original jurisdiction. The Court held that the federal district courts were the proper forum for hearing a nuisance action by Illinois charging four Wisconsin cities with polluting Lake Michigan. While rejecting the argument that new federal environmental legislation had preempted federal common law, the Court noted:

It may happen that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance. But until that comes to pass, federal courts will be empowered to appraise the equities of the suits alleging creation of a public nuisance by water pollution. While federal law governs, consideration of state standards may be relevant. Thus, a State with high water-quality standards may well ask that its strict standards be honored and that it not be compelled to lower itself to the more degrading standards of a neighbor. There are no fixed rules that govern; these will be equity suits in which the informed judgment of the chancellor will largely govern. [406 U.S. at 107-108.]

Not long after this decision, the explosion of federal environmental protection legislation led the Court to slam the door on most federal common law actions, as we will see below.

11. Even in cases of public nuisance, the common law has proved to be a crude mechanism at best for controlling the onslaught of modern-day pollution. An excellent account of the history and shortcomings of common law actions to redress air pollution problems is provided by Noga Morag-Levine, Chasing the Wind: Regulating Air Pollution in the Common Law State (2003). Most of what we study today as environmental law consists of federal and state statutes, which often create elaborate regulatory schemes implemented by administrative agencies. Common law principles, however, have had an important impact on many current regulatory programs. And as scientific advances make it easier to measure pollutants and to trace their impacts on the environment, common law actions may become more popular (as already seems to be occurring in certain areas). Thus, although most of our attention will be focused on the large and complex body of environmental statutes, it is important not to lose sight of the big picture that includes the common law, which can still serve as an important tool for addressing regulatory gaps left by public law. For example, in February 2006, a Rhode Island jury found former manufacturers of lead paint liable, decades after their product has been banned, for the continuing harm caused by the presence of lead paint in the housing stock. Charles Forelle, Rhode Island Wins Lead-Paint Suit, Wall St. J., Feb. 23, 2006, at D7. Theories of anticipatory nuisance also have been used in an effort to forestall the introduction of genetically modified corn seeds because of the difficulty of controlling the unauthorized spread of genetically modified organisms through the food chain. Molly McDonough, Growing Use of Nuisance, ABA J., Aug. 2003, at 16. See also Donald G. Gifford, Public Nuisance as a Mass Products Liability Tort, 71 U. Cin. L. Rev. 741 (2003).
2. Regulatory Legislation

A. Environmental Statutes: A Historical Perspective

The federal statutes that dominate environmental law today are the product of a remarkable burst of legislative activity that began in 1970, the year of the first Earth Day celebration. But, as noted above, the historical roots of environmental law extend much further back in time. The historical evolution of environmental law in the United States can be divided into roughly six major phases, as indicated below.

SIX STAGES IN THE HISTORY OF U.S. ENVIRONMENTAL LAW

1. The Common Law and Conservation Era: Pre-1945

Until the end of World War II, environmental law was largely a product of common law, as discussed above, with federal legislative efforts concentrated on the development and later the conservation of public resources. We call this period the Common Law and Conservation Era.

In nineteenth-century America, regulatory legislation was left largely to state and local governments. State laws and local ordinances to protect public health and to require the abatement or segregation of public nuisances were common, although they were poorly coordinated and rarely enforced in the absence of a professional civil service. Like the early English antipollution laws, American smoke abatement ordinances did not clearly specify what levels of emissions were proscribed. See, e.g., Sigler v. Cleveland, 4 Ohio Dec. 166 (C.P. Cuyahoga 1896) (holding that an ordinance outlawing “dense smoke” was unconstitutionally overbroad because it was so vague that it could ban all smoke).

Most federal legislation that affected the environment did so by promoting development of natural resources. The Homestead Act of 1862 and the Mining Act of 1872 unabashedly encouraged rapid development of public resources by authorizing private parties to lay claim to public land and the mineral resources on it. Land grants to encourage railroad construction turned over up to 180 million acres of public lands to private developers. R. Robbins, Our Landed Heritage: The Public Domain, 1776-1970 (1976). While the concerns of preservationists and conservationists helped spur establishment of the first national park in 1872, support also came from the railroads, which were seeking to promote tourism and to further the development of western lands. The establishment of the national forest system in 1891 marked a turning point of sorts, for it withdrew forest lands from development under the Homestead Act.

During this period, Congress did adopt some regulatory legislation, including the Rivers and Harbors Act of 1899 and the Pure Food and Drug Act of 1906. However, these statutes were not motivated primarily by concern over public health or environmental protection, but rather by a desire to promote commerce. Congress banned discharges of refuse to navigable waters not out of
concern for water quality, but rather to prevent obstructions to the free flow of commerce, which at that time was largely conducted on waterways. When it enacted the Pure Food and Drug Act in 1906 and the Federal Insecticide Act of 1910, Congress's primary concern was not to protect public health, but rather to prevent consumers from being defrauded by products that were not what they were advertised to be.

Congress was not entirely oblivious to public health concerns during this period. In an unusual case when a public health problem was particularly visible and obvious, Congress was capable of acting. For example, in 1838 Congress acted to impose safety regulations to prevent steamship boilers from exploding. Several decades later, when it was discovered that the use of white phosphorus in match manufacturing caused many workers to be inflicted with a horribly disfiguring disease called phossy-jaw, because it literally ate away that area of the face, Congress acted again. The Esch-Hughes Act of 1912 sought to eliminate the use of white phosphorus in match manufacturing to prevent this disease. Because Congress did not believe at the time that it had the constitutional authority to directly prohibit such an activity, it imposed a federal excise tax to make it prohibitively expensive to use white phosphorus in match manufacturing.

The period from 1945-1962 coincides with the second phase in the history of U.S. environmental law, the period of Federal Assistance for State Problems. Although federal law imposed few regulations on private industry that were animated by environmental concerns, after World War II the federal government became involved in encouraging the states to adopt pollution control measures of their own. The Water Quality Act of 1948 provided grants to states for water pollution control. In 1956, over President Eisenhower's veto, Congress provided funding for the construction of sewage treatment plants by municipalities. This funding was premised on the notion that cities otherwise would be reluctant to build sewage treatment plants that would primarily benefit downstream cities. While this eventually became a major program of federal financial assistance, it did not create any system of federal regulation. Instead, the federal government sought to encourage the states to regulate on their own.

The federal programs in the 1950s and 1960s were premised on the notion that environmental problems were the responsibility of state and local governments. The primary federal role was to assist with research and funding while letting the states decide how to control pollution. With expanding economic activity in the post-World War II era, the interstate character of pollution became increasingly apparent. The notion that pollutants do not respect state or even national boundaries was brought home by scientists' warnings that the entire planet was being dangerously poisoned by radiation from nuclear tests in the atmosphere. The premise that the federal role in pollution control should be a nonregulatory one became increasingly tenuous.

When Congress adopted legislation in 1955 directing the Department of Health, Education, and Welfare (HEW) to conduct a five-year program of research on the effects of air pollution, it continued to emphasize that pollution control was primarily a state responsibility. By 1960 Congress had begun to appreciate the national dimensions of the air pollution problem. Recognizing that a large percentage of the pollution came from products marketed nationwide, Congress mandated a federal study to determine what levels of automobile emissions were safe. In 1963, when it enacted an early version of the Clean Air Act, Congress acknowledged the need for federal involvement in efforts to protect interstate air quality. The Act directed HEW to publish national air quality
criteria, and it also authorized a cumbersome conference procedure for dealing with interstate air pollution problems.

The third phase in the history of U.S. environmental law, the period from 1962-1970, constitutes the Rise of the Modern Environmental Movement. This is often traced from the publication of Rachel Carson’s *Silent Spring*, which alerted the public to the possibility that pesticides could be accumulating in the food chain in a way that could cause severe, long-term environmental damage. In 1967, the Environmental Defense Fund was formed by a group of scientists who sought to have DDT banned on the ground that it was precisely that kind of pesticide. Another group, the Natural Resources Defense Council, was the product of efforts to force the Federal Power Commission to consider environmental concerns when licensing an electric power project that would have destroyed a particularly scenic and historic stretch of the Hudson River at Storm King Mountain. At the time, no federal agencies shouldered primary responsibility for responding to concerns about environmental protection. The new environmental groups went to court to try to require government agencies to be more responsive to environmental concerns.

The growing popularity of outdoor recreation and increased concern over the environmental impact of public works produced landmark legislation during this period. In 1960, Congress adopted the Multiple-Use Sustained Yield Act, which directs federal agencies to manage the national forests to serve the multiple uses of “recreation, range, timber, watershed, and wildlife and fish purposes.” Growing concern for the preservation of natural areas was reflected in the subsequent enactment of the Wilderness Act in 1964 and the Wild and Scenic Rivers Act in 1968. Other federal laws reflected public interest in protecting social and cultural values from the impact of public works programs. For example, section 4(f) of the Department of Transportation Act of 1966 required that special effort be made to prevent federally funded construction projects from damaging parks, recreation areas, wildlife refuges, and historic sites.

To the extent that federal law was regulatory in character prior to 1970, most targets of environmental regulation were government agencies rather than private industry. In legislation like the National Historic Preservation Act of 1966, Congress sought to ensure that government agencies respected social and cultural values when pursuing development projects. These laws laid the groundwork for the subsequent enactment of the landmark National Environmental Policy Act (NEPA), which was signed into law on January 1, 1970. NEPA required federal agencies to take environmental concerns into account when taking any action with a significant impact on the environment. This served as a catalyst for forcing federal agencies that previously had been unresponsive to environmental concerns to incorporate them in their decision-making processes.

The fourth phase of the history of U.S. environmental law encompasses the decade of the 1970s, which has been called “the environmental decade” because it marked the period when virtually all the major federal regulatory legislation to protect the environment was first enacted. While environmental issues had hardly been mentioned by either candidate during the 1968 presidential campaign, by 1970 “the environment[al] cause had swollen into the favorite sacred issue of all politicians, all TV networks, all goodwilled people of any party.” Theodore White, The Making of the President 45 (1973). President Nixon’s embrace of environmental causes may have been motivated more by political opportunism than genuine environmental concern, but his
administration’s environmental accomplishments were considerable, including
the creation of EPA and the establishment of major federal regulatory programs,
including the Clean Air Act and Clean Water Act. For a description of this
history, see Richard J. Lazarus, The Making of Environmental Law 67-97
(2005). Further perspective on this extraordinary period is provided in an enter-
taining memoir by Russell Train, who served as the second administrator of EPA.

We call this fourth phase in the history of U.S. environmental law Erecting
the Federal Regulatory Infrastructure because it featured an explosion of federal
regulatory legislation adopted between 1970 and 1980. These statutes estab-
lished the ground rules for environmental protection efforts by mandating
that environmental impacts be considered explicitly by federal agencies, by
prohibiting actions that jeopardize endangered species, and by requiring the
establishment of the first comprehensive controls on air and water pollution,
toxic substances, and hazardous waste. The rapid growth of environmental legis-
lation in the 1970s was accompanied by a parallel opening up of the courts to
judicial review of agency decisions that affected the environment and to citizen
suits to force implementation and enforcement of the new laws. This gave con-
cerned citizens sorely needed tools for challenging agency action and for ensur-
ing that previously unresponsive agencies implemented the ambitious new
legislative directives.

A chronology of the major federal environmental statutes is presented
below. While the statutes listed are among the principal statutes covered in
this casebook, they are by no means a comprehensive catalog of all federal
environmental legislation.

A. Sources of Environmental Law

CHRONOLOGY OF SIGNIFICANT FEDERAL
ENVIRONMENTAL LEGISLATION

1. National Environmental Policy Act (NEPA): Signed into law on
January 1, 1970; establishes broad national environmental policy
goals; requires federal agencies to assess environmental impacts of
significant actions; establishes Council on Environmental Quality.

2. Clean Air Act. Clean Air Amendments of 1970 establish basic
framework for federal regulation of air pollution; replace Clean Air
Act of 1963 and Air Quality Act of 1967, which had authorized HEW
to publish air quality criteria to be used by states in setting standards;
set deadlines for EPA to promulgate national ambient air quality
standards to be implemented by the states, national emission stan-
dards for hazardous air pollutants, and auto emission standards;
authorized citizen suits. The Act was substantially amended in 1977
and 1990 to require implementation of more stringent controls in
areas that had failed to attain national standards, to address the acid
rain problem (in 1990), and to make other substantial changes in the
framework for federal regulation of air pollution.

3. Federal Water Pollution Control Act (Clean Water Act): Enacted
in 1972, it bans the unpermitted discharge of pollutants into surface
waters, requires application of technology-based controls on discharg-
ers, and establishes a national permit program, the National
Pollutant Discharge Elimination System (NPDES), which is implemented by states subject to EPA supervision; authorized grants for construction of sewage treatment plants; authorizes citizen suits. Reauthorized and substantially amended by the Clean Water Act Amendments of 1977 and the Water Quality Act of 1987.

4. **Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA):** 1972

Federal Environmental Pesticide Control Act, which amended 1947 legislation, establishes basic framework for pesticide regulation; requires registration of pesticides and authorizes EPA to ban unreasonably dangerous pesticides. Amended in 1988 to require more expeditious review of pesticides previously registered and in 1996 by the Food Quality Protection Act to strengthen protections against pesticide residues on food.

5. **Marine Protection, Research, and Sanctuaries Act of 1972 (Ocean Dumping Act):** Prohibits ocean dumping of wastes except with a permit at sites designated by EPA.

6. **Endangered Species Act (ESA):** Enacted in December 1973, this legislation prohibits federal action that jeopardizes the habitat of species in danger of extinction and prohibits the taking of any such species by any person.

7. **Safe Drinking Water Act (SDWA):** Enacted in 1974; requires EPA to set limits for maximum allowable levels of contaminants in public drinking water systems. Amended in 1986 to require more expeditious promulgation of standards and in 1996 to provide more flexibility in standard-setting.

8. **Toxic Substances Control Act of 1976 (TSCA):** Provides EPA with comprehensive authority to regulate or prohibit the manufacture, distribution, or use of chemical substances that pose unreasonable risks; requires premanufacture notification of EPA for new chemicals or significant new uses of existing chemicals.


10. **Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA):** Establishes strict liability system for releases of hazardous substances and creates a “Superfund” to finance actions to clean up such releases. Amended in 1986 to increase the size of the Superfund, impose numerical goals and deadlines for cleanup of Superfund sites, and specify standards and procedures to be followed in determining the level and scope of cleanup actions, and in 2002 to encourage redevelopment of brownfields sites.

11. **Emergency Planning and Community Right-to-Know Act (EPCRA):** Enacted in 1986, this statute requires corporations to provide local authorities with detailed information concerning their use of any of several hundred toxic substances and to report annually the quantities of such chemicals released into the environment.
The federalizing of environmental law began with President Nixon signing the National Environmental Policy Act (NEPA), 42 U.S.C. §§4321-4370a, on national television on January 1, 1970. Declaring that “each person should enjoy a healthful environment,” the statute established as “the continuing policy of the Federal Government . . . to use all practicable means and measures . . . to create conditions under which man and nature can exist in harmony. . . .” NEPA revolutionized environmental policy making not by imposing any substantive environmental controls, but rather by mandating changes in the decision-making process of federal agencies. The statute requires agencies to incorporate environmental concerns into their decision making by requiring them to perform detailed assessments of the environmental impacts of, and to consider alternatives to, any “major Federal actions significantly affecting the quality of the human environment.” While NEPA only mandated consideration of environmental impacts, Congress soon declared certain impacts to be presumptively unacceptable when it forbade the taking of endangered species of fish, wildlife, or plants by enacting the Endangered Species Act in 1973. Once it became clear that citizens could enforce these requirements in court, they became a powerful new tool for challenging development projects.

Following the enactment of NEPA, Congress launched a succession of far-reaching regulatory programs to control pollution. In December 1970, Congress adopted the Clean Air Act, 42 U.S.C. §§7401-7642, and in October 1972 the Federal Water Pollution Control Act, 33 U.S.C. §§1251-1376, subsequently renamed the Clean Water Act. These statutes replaced what had been relatively modest federal research and financial assistance programs with comprehensive regulatory schemes to control air and water pollution throughout the nation. The Environmental Protection Agency (EPA), established by executive order in 1970, was directed to identify air pollutants that threatened public health or welfare and to establish national ambient air quality standards to be implemented by the states. In the Clean Water Act, Congress prohibited all unpermitted discharges of pollutants into the waters of the United States, it required EPA to implement technology-based effluent limits on dischargers, and it established a national permit system to be implemented by EPA or states subject to EPA supervision. Both acts spawned breathtakingly complex national regulatory programs. These programs have grown even more complicated over time as Congress, EPA, and state regulators have made adjustments in them in response to problems with their implementation.

While the first federal environmental statutes focused on control of conventional pollutants, growing public concern over toxic substances spurred enactment of a series of additional statutes that focused on protection of public health. Congress enacted the Safe Drinking Water Act (SDWA) in 1974, and in 1976 it enacted both the Toxic Substances Control Act (TSCA), 15 U.S.C. §§2601-2629, and the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §§6901-6987. The Safe Drinking Water Act requires EPA to establish regulations to protect public health from contaminants in public water supplies. TSCA authorizes the most explicitly far-reaching regulatory controls, which can be imposed on any chemical substance found by EPA to present an unreasonable risk to health or the environment. RCRA (which is a part of legislation also known as the Solid Waste Disposal Act) requires EPA to establish controls ensuring the safe management of hazardous waste from “cradle to grave.”

Although EPA was formed in 1970 to consolidate environmental protection responsibilities in a single federal agency, EPA is not the only regulatory
agency with substantial responsibilities for protecting public health and the environment. The Food and Drug Administration, which is now under the direction of the Department of Health and Human Services, has long been responsible for ensuring the safety of food, drugs, and cosmetics under the federal Food, Drug, and Cosmetic Act. In 1970 Congress created the Occupational Safety and Health Administration as part of the Department of Labor and charged it with ensuring the safety of the workplace. The Nuclear Regulatory Commission and the Department of Energy are responsible for protecting the public from risks posed by atomic material under the Atomic Energy Act. While the laws administered by these agencies usually are referred to as health and safety laws rather than environmental legislation, they are extremely important for the control of substances, products, and activities that pose environmental risks. Other agencies with substantial environmental responsibilities include the Department of the Interior, which is responsible for managing most public lands; the Department of Transportation, which regulates the transport of hazardous materials under the Hazardous Materials Transportation Act; the Council on Environmental Quality, charged with coordinating federal environmental policy and assisting federal agencies with NEPA compliance; the U.S. Army Corps of Engineers, which operates a permit program for dredge and fill activities under section 404 of the Clean Water Act; and the Department of Energy, which administers the National Energy Policy and Conservation Act.

Perhaps the final chapter in the erection of the federal regulatory infrastructure was the enactment in 1980 of the Comprehensive Environmental Response, Compensation, and Liability Act, known as CERCLA or the Superfund law. This legislation went beyond the traditional command-and-control regulatory approach to controlling pollution and established a system of strict joint, and several liability for broad classes of parties associated with the release of hazardous substances. CERCLA creates powerful incentives for businesses to prevent releases of hazardous substances to avoid future liability.

Figure 2.1 provides a crude illustration of the jurisdictional reach of the major federal environmental laws. It illustrates that the regulatory authorities available for responding to an environmental problem generally depend on its location or the medium affected by the problem or the characteristics of the pollutant or product thought to be the source of the problem. For example, the Occupational Safety and Health Administration has jurisdiction over workplace hazards; the Consumer Product Safety Commission has authority to regulate hazards in consumer products; foods, drugs, and cosmetics are regulated by the federal Food and Drug Administration (FDA).

The regulatory authorities available to EPA to control pollution are largely dependent on where pollutants are discharged and the nature and source of each pollutant. The Clean Air Act authorizes the use of ambient air quality standards to control pollutants that come from numerous or diverse sources and that threaten public health or welfare. The types of controls that can be imposed depend on whether the source is a mobile or a stationary source of pollution; more stringent controls are imposed on new sources than on existing sources. EPA’s jurisdiction under the Clean Water Act covers virtually all discharges of pollutants into the “waters of the United States,” although the Army Corps of Engineers is given jurisdiction under the Act over the discharge of dredged or fill material into navigable waters. The Ocean Dumping Act gives EPA jurisdiction over the transport and dumping in ocean waters of materials other than dredged material. The Safe Drinking Water Act gives EPA
jurisdiction over contaminants in public water supply systems, while FIFRA allows EPA to regulate the licensing and use of pesticides.

In theory, the Toxic Substances Control Act (TSCA) is the broadest source of EPA’s regulatory authority because it authorizes EPA to ban or to restrict the manufacture, marketing, use, or disposal of any “chemical substance or mixture” (with the exception of pesticides and products regulated by the FDA). TSCA thus authorizes EPA to regulate chemicals through all phases of their “life cycle,” from manufacture through use and disposal in any environmental medium. Thus it appears to cover all of the activities shown in the diagram. While RCRA’s coverage is somewhat more narrowly confined to solid wastes that are deemed hazardous by EPA, it too authorizes extensive controls. RCRA mandates regulation of hazardous wastes from “cradle to grave,” including controls on disposal of it in any environmental medium (e.g., land disposal, incineration).
Complaints are often heard that the fragmented structure of environmental law makes it difficult to pursue coordinated regulatory responses to cross-media contamination. Often there is considerable overlap among the various laws that may be used to address a particular environmental problem. Congress has not laid out a single grand scheme or unifying principle that establishes priorities for regulation under the various statutes. Rather, it has directed that agencies implement a variety of programs under several statutes, while urging them to try to coordinate their actions with other agencies and within themselves.

From 1980-1990, the fifth phase in the history of environmental law featured Congress Extending and Refining Regulatory Strategies it had launched to protect the environment during the 1970s. As the initial environmental laws were reauthorized by Congress, they were broadened, strengthened, and made more specific. Comprehensive amendments to RCRA were adopted in 1984, to CERCLA and the Safe Drinking Water Act in 1986, to the Clean Water Act in 1987, and to the Clean Air Act in 1990.

Many of the amendments enacted during this period tried to force the federal environmental agencies to implement the environmental laws in a more expeditious fashion. Faced with an executive branch less sympathetic to environmental concerns, Congress imposed new deadlines for agencies to act and it established specific sanctions for agencies which failed to carry out the laws. “Hammer” provisions written into some laws specified regulations that would take effect automatically if an agency failed to adopt regulations of its own by a particular date. For example, the Hazardous and Solid Waste Amendments of 1984 said that all land disposal of hazardous waste would be banned by certain dates unless a specific determination was made that certain levels of treatment were sufficient to avoid future environmental problems. Sanctions for violating the environmental laws also were increased dramatically, with substantial criminal penalties imposed on those who intentionally violate the laws.

During this period there also was a move toward more innovative forms of regulation. The Emergency Planning and Community Right-to-Know Act, 42 U.S.C. §§11001-11050, enacted in 1986, requires industries to report annually the volume of their releases of hundreds of toxic substances. The Act creates a national inventory of toxic releases that must be made accessible to the public, using information as a tool for mobilizing public pressure to reduce toxic emissions. The Clean Air Act Amendments of 1990 provide the first large-scale experiment with emissions trading approaches long advocated by economists as a more efficient means for reducing pollution. While mandating significant reductions in sulfur dioxide emissions, the law creates emissions allowances that may be bought and sold to ensure that the reductions are obtained in the cheapest manner possible. During this period Congress also amended several environmental statutes to broaden the role of Native American tribes in environmental policy. EPA is now authorized to treat tribes in the same manner as it treats states under the Clean Air Act, the Clean Water Act, the Comprehensive Environmental Response, Compensation and Liability Act, and the Safe Drinking Water Act.

Beginning around 1991, the pendulum that swung so powerfully toward environmental protection during the 1970s and 1980s appeared to be moving in the other direction with a Congress and a judiciary decidedly more skeptical about environmental regulation. We call this a period of Regulatory Recoil and Reinvention.

The 1994 congressional elections gave the Republicans control of both houses of Congress under a leadership decidedly antagonistic toward
environmental regulation. However, their aggressive efforts to repeal major provisions of the federal environmental statutes backfired, as demonstrated in 1995 when legislation to dramatically weaken the Clean Water Act passed the House but was killed because of public outcry and President Clinton’s veto threat.

Unable to directly repeal the environmental statutes, the congressional leadership concentrated on measures to make it more difficult to adopt new regulations or to enforce existing laws. These included appropriations riders that temporarily prevented the listing of new endangered species and that suspended environmental safeguards for timber harvesting on federal lands. They also included legislation to make it more difficult to regulate state and local governments and small businesses. In March 1995 Congress enacted the Unfunded Mandates Reform Act, which makes it procedurally more difficult to impose new regulatory requirements on state and local governments in the absence of federal funding for compliance. In March 1996 Congress enacted the Small Business Regulatory Enforcement Fairness Act (SBREFA), which makes it more difficult for EPA to issue regulations that affect small businesses.

To defuse pressures to weaken the environmental laws, the Clinton administration launched a series of initiatives to “reinvent regulation” to make it more flexible and less costly. Efforts to find common ground between industry and environmental groups over legislative reforms were successful in August 1996 when food safety reform legislation (the Food Quality Protection Act of 1996) and legislation to reauthorize the Safe Drinking Water Act were enacted by overwhelming margins in Congress. Each piece of legislation was the product

FIGURE 2.2

TOLES. Copyright 1995 The Buffalo News. Reprinted with permission of UNIVERSAL PRESS SYNDICATE. All rights reserved.
of significant compromises between industrial and environmental interests that produced consensus legislation with broad support from traditionally antagonistic groups.

Significant amendments to CERCLA to encourage cleanup and redevelopment of brownfields were adopted unanimously by Congress in 2001 and signed into law by President George W. Bush in January 2002. Small Business Liability Relief and Brownfields Revitalization Act, Pub. L. No. 107-118. Because the two major political parties remain sharply divided on many environmental issues, the ability of Congress to enact comprehensive legislation in the future may turn on the success of similar consensus-building approaches. With Republicans regaining control of both houses of Congress after the 2002 elections, environmental groups have concentrated their efforts on blocking environmentally damaging legislation by Senate filibusters, if necessary, to stop measures to open ANWR to oil drilling (discussed in Chapter 1) or legislation weakening the Endangered Species Act, which passed the House of Representatives in 2005.

B. THE IMPACT OF REGULATORY LEGISLATION ON COMMON LAW ACTIONS

With the advent of comprehensive federal regulatory statutes, courts soon faced questions concerning the impact of public law on common law actions. While statutes may supplant common law if legislative bodies so intend, legislative intent is often deliberately left murky because legislators are loath to disturb the products of decades of judicially developed doctrine. Thus, the relationship between environmental statutes and the common law can be a complicated one.

As noted above, the Supreme Court in Illinois v. City of Milwaukee, 406 U.S. 91 (1972) (Milwaukee I) delegated jurisdiction over federal common law nuisance actions between states to the federal district courts. Thus, following the Supreme Court’s decision in Milwaukee I, Illinois pursued its common law nuisance action in federal district court. While this action was pending, the federal Clean Water Act was enacted. This legislation established a comprehensive regulatory scheme to control water pollution by requiring all dischargers of pollutants into surface waters to obtain a permit, usually from a state environmental agency operating under federal oversight. Milwaukee ultimately obtained a permit limiting the discharges from its sewage treatment plants. While Milwaukee argued that the permit precluded Illinois’s nuisance action, Illinois maintained that the permit limits were too lax and that the discharges remained a nuisance at common law.

In 1977, the district court rejected Milwaukee’s defense, ruling that Milwaukee’s discharge of inadequately treated sewage was a nuisance under federal common law and ordering the city to control its discharges more stringently than required by its Clean Water Act permit. The Seventh Circuit affirmed the district court’s holding that the Clean Water Act had not preempted the federal common law of nuisance, but it held that the district court should not have required more stringent limits on discharges of treated sewage than required by the city’s permit. The case then returned to the Supreme Court, which addressed the impact of the Clean Water Act’s regulatory scheme on federal common law nuisance actions in City of Milwaukee v. Illinois, 451 U.S. 304 (1981) (Milwaukee II).

In Milwaukee II the Supreme Court held that Illinois’s federal common law nuisance action had been preempted by the federal Clean Water Act. Writing for
the Court, Justice Rehnquist noted that legislative preemption of federal common law did not implicate the same federalism concerns that require clear expressions of congressional intent before state law may be preempted. Illinois had argued that there was clear evidence that Congress had not intended to preempt federal common law based on the savings clause in the citizen suit provision of section 505(e) of the Clean Water Act, which provides: “Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief (including relief against the Administrator or a State agency).” However, the Supreme Court read this language narrowly to mean “that nothing in §505, the citizen-suit provision, should be read as limiting any other remedies which might exist . . . [I]t means only that the provision of such suit does not revoke other remedies. It most assuredly cannot be read to mean that the Act as a whole does not supplant formerly available federal common-law actions but only that the particular section authorizing citizen suits does not do so.” 451 U.S. at 328-329 (emphasis in original).

Citing the comprehensive nature of the Clean Water Act’s regulatory scheme and the technical complexities courts would have to confront to formulate pollution control standards, Justice Rehnquist concluded that Congress implicitly had supplanted federal common law by adopting a comprehensive regulatory scheme for water pollution control. “Congress’ intent in enacting the Amendments was clearly to establish an all-encompassing program of water pollution regulation. Every point source discharge is prohibited unless covered by a permit, which directly subjects the discharger to the administrative apparatus established by Congress to achieve its goals.” Justice Rehnquist concluded that “[t]he establishment of such a self-consciously comprehensive program by Congress, which certainly did not exist when Illinois v. Milwaukee was decided, strongly suggests that there is no room for courts to attempt to improve on that program with federal common law.” Milwaukee II, 451 U.S. at 318-319 (emphasis in original). He went on to note that application of federal common law would be “peculiarly inappropriate in areas as complex as water pollution control. . . . Not only are the technical problems difficult—doubtless the reason Congress vested authority to administer the Act in administrative agencies possessing the necessary expertise—but the general area is particularly unsuited to the approach inevitable under a regime of federal common law. Congress criticized past approaches to water pollution control as being ‘sporadic’ and ‘ad hoc,’ S. Rep. No. 92-414, p. 95 (1971), 2 Leg. Hist. 1511, apt characterizations of any judicial approach applying federal common law, see Wilburn Boat Co. v. Fireman’s Fund Ins. Co., 348 U.S. 310, 319 (1955).” Milwaukee II, 451 U.S. at 325.

Justice Rehnquist noted that Illinois was free to pursue its case for more stringent controls on Milwaukee’s discharges before the Wisconsin state agency responsible for issuing Milwaukee a permit under the Clean Water Act. But he maintained that “[i]t would be quite inconsistent with this scheme if federal courts were in effect to ‘write their own ticket’ under the guise of federal common law after permits have already been issued and permittees have been planning and operating in reliance on them.”

The Court soon confronted the question whether the Clean Water Act preempted state common law actions in International Paper Company v. Ouellette, 479 U.S. 481 (1987). The Ouellette litigation commenced when Harmel Ouellette, a Vermont resident, appeared in the office of Peter Langrock, a country lawyer in a two-person firm. Ouellette complained that he and his wife,
who owned property in Vermont fronting on Lake Champlain, no longer could
tolerate the stench generated by pollution from a paper mill located across the
lake in New York. Langrock filed a private nuisance action in Vermont state
court on behalf of 150 lakeshore property owners. The defendant, International
Paper Company (IPC), removed the action to federal court, where it maintained
that the Clean Water Act preempted state common law in light of the Supreme
Court’s *Milwaukee II* decision. The case ultimately went to the U.S. Supreme
Court, which rendered the following decision.

**International Paper Co. v. Ouellette**

479 U.S. 481 (1987)

JUSTICE POWELL delivered the opinion of the court.

[W]e turn to the question presented: whether the Act pre-empts Vermont
common law to the extent that law may impose liability on a New York point
source. We begin the analysis by noting that it is not necessary for a federal
statute to provide explicitly that particular state laws are pre-empted. Hillsborough
courts should not lightly infer pre-emption, it may be presumed when the federal
legislation is “sufficiently comprehensive to make reasonable
the inference that Congress ‘left no room’ for supplementary state regulation.”
Ibid. In addition to express or implied pre-emption, a state law also is invalid to the
extent that it “actually conflicts with a . . . federal statute.” Ray v. Atlantic Richfield
Co., 435 U.S. 151, 158 (1978). Such a conflict will be found when the state
law “stands as an obstacle to the accomplishment and execution of the full pur-
poses and objectives of Congress.” Hillsborough County v. Automated Medical
Laboratories, Inc., supra, at 713.

Given that the Act itself does not speak directly to the issue, the Court must
be guided by the goals and policies of the Act in determining whether it in fact
preempts an action based on the law of an affected State. After examining the
CWA as a whole, its purposes and its history, we are convinced that if affected
States were allowed to impose separate discharge standards on a single point
source, the inevitable result would be a serious interference with the achieve-
ment of the “full purposes and objectives of Congress.” See Hillsborough County v. Automated Medical Laboratories, Inc., supra, at 713. Because we do
not believe Congress intended to undermine this carefully drawn statute
through a general saving clause, we conclude that the CWA precludes a court
from applying the law of an affected State against an out-of-state source.

... In this case the application of Vermont law against IPC would allow
respondents to circumvent the NPDES permit system, thereby upsetting the
balance of public and private interests so carefully addressed by the Act.

An interpretation of the saving clause that preserved actions brought
under an affected State’s law would disrupt this balance of interests. If a New
York source were liable for violations of Vermont law, that law could effectively
override both the permit requirements and the policy choices made by the
source State. The affected State’s nuisance laws would subject the point source
to the threat of legal and equitable penalties if the permit standards were less
stringent than those imposed by the affected State. Such penalties would compel
the source to adopt different control standards and a different compliance
schedule from those approved by the EPA, even though the affected State had not engaged in the same weighing of the costs and benefits.

Our conclusion that Vermont nuisance law is inapplicable to a New York point source does not leave respondents without a remedy. The CWA precludes only those suits that may require standards of effluent control that are incompatible with those established by the procedures set forth in the Act. The saving clause specifically preserves other state actions, and therefore nothing in the Act bars aggrieved individuals from bringing a nuisance claim pursuant to the law of the source State. By its terms the CWA allows States such as New York to impose higher standards on their own point sources, and in Milwaukee II we recognized that this authority may include the right to impose higher common-law as well as higher statutory restrictions. 451 U.S., at 328 (suggesting that “States may adopt more stringent limitations . . . through state nuisance law, and apply them to in-state dischargers”).

An action brought against IPC under New York nuisance law would not frustrate the goals of the CWA as would a suit governed by Vermont law. First, application of the source State’s law does not disturb the balance among federal, source-state, and affected-state interests. Because the Act specifically allows source States to impose stricter standards, the imposition of source-state law does not disrupt the regulatory partnership established by the permit system. Second, the restriction of suits to those brought under source-state nuisance law prevents a source from being subject to an indeterminate number of potential regulations. Although New York nuisance law may impose separate standards and thus create some tension with the permit system, a source only is required to look to a single additional authority, whose rules should be relatively predictable. Moreover, States can be expected to take into account their own nuisance laws in setting permit requirements.

NOTES AND QUESTIONS

1. Ouellette preserves the ability of plaintiffs to bring state common law actions against polluters so long as the law of the source state, rather than the receiving state, is applied. As Dan Farber observes in discussing Ouellette, “after hanging by its fingernails from a cliff in Milwaukee II, the common law came roaring back in the final episode.” Farber, The Story of Boomer, Environmental Law Stories 40 (2005). Preemption of state common law remedies by state regulatory statutes remains extremely rare.

2. The requirement that the state common law of the source state be applied did not significantly disadvantage the plaintiffs in Ouellette. On remand, New York nuisance law proved no more favorable to the paper company than Vermont’s would have been. International Paper hired an engineering firm, which conducted extensive “smell test” experiments in an effort to show that the plant’s air emissions were not a nuisance. Langrock countered with the testimony of tolltakers working at the Crown Point Bridge who said out-of-state drivers persistently asked, “What the hell is that awful smell?” when they arrived at the tollbooth. With evidence showing that International Paper had violated its air and water permits more than 1,000 times, plaintiffs pressed for punitive damages. The company ultimately settled with the plaintiffs for $5 million, including the establishment of a trust fund for environmental projects in the Lake Champlain area. The colorful story of this litigation is
recounted by Peter Langrock, the plaintiffs’ lawyer, in P. Langrock, Addison County Justice: Tales from a Vermont Courthouse (1997).


4. An important part of the rationale for preemption in *Milwaukee II* was the pervasive regulatory scheme provided by the Clean Water Act’s NPDES permit program. The Act requires permits for all discharges of pollutants to surface waters from point sources. The Ninth Circuit in National Audubon Society v. Department of Water, 869 F.2d 1196 (9th Cir. 1989), held that the Clean Water Act preempts a federal common law nuisance action against the Los Angeles Department of Water and Power for damage it caused by diverting water from Mono Lake. The court, however, reserved judgment on the question whether the federal Clean Air Act would preempt a federal common law nuisance action against the Department for air pollution. The Ninth Circuit held that a federal common law action was not available under the facts of the case because, unlike the situation in Georgia v. Tennessee Copper Co., there was no interstate dispute involved. A dissenting judge argued that there is a uniquely federal interest in preserving air quality even in intrastate disputes. Plaintiffs had argued that a federal common law nuisance action for interstate water pollution should be available to them because the Clean Water Act does not apply to the action they challenged since no NPDES permit was required for the water diversions they challenged.

5. The Supreme Court has not determined whether the federal Clean Air Act preempts federal common law nuisance actions for interstate air pollution, though some lower courts have suggested that it might. See U.S. v. Kin-Buc, Inc., 532 F. Supp. 699 (D.C.N.J 1982). In New England Legal Foundation v. Costle, 666 F.2d 30, 32 n. 2 (2d Cir. 1981), the Second Circuit reserved judgment on this question while noting that the Clean Air Act, unlike the Clean Water Act, did not regulate pollution from all sources. Prior to enactment of the 1990 Amendments, the Clean Air Act did not employ a federal permit program. Now that it does, is it likely that a court would find that it preempts federal common law?

6. In July 2004 eight states (Connecticut, New York, California, Iowa, New Jersey, Rhode Island, Vermont, and Wisconsin) and the City of New York filed a federal and state common law nuisance action against six of the largest electric utilities in the United States. The suit alleges that power plants operated by the defendant utilities contribute 10 percent of U.S. emissions of carbon dioxide (CO2), a greenhouse gas that contributes to global warming and climate change. The plaintiff states claim that global warming already has begun to alter the climate of the United States and that it will cause significant harm to them. They seek to hold defendants jointly and severally liable for contributing to global warming and an injunction ordering them to cap their emissions of CO2 and then to reduce them by a specified percentage each year for at least a decade. The case raises the question whether the Clean Air Act preempts the federal common law of nuisance for interstate air pollution. While the Act now has a comprehensive permit program like that of the Clean Water Act, the Clean Air Act has not been used to regulate emissions of CO2 and during the Bush
administration EPA’s general counsel has taken the position that the agency has no authority to regulate CO₂ emissions under the Clean Air Act. On September 15, 2005, federal district judge Loretta Preska dismissed the states’ lawsuit without reaching the preemption issue. Connecticut v. American Electric Power Co., 406 F. Supp. 2d 265 (S.D.N.Y. 2005). Judge Preska held that the case presented nonjusticiable political questions. She distinguished previous interstate nuisance cases like Georgia v. Tennessee Copper and New Jersey v. New York City, by noting that none “has touched on so many areas of national and international policy” as the climate change litigation. 406 F. Supp. 2d at 272. Judge Preska concluded that the “explicit statements of Congress and the Executive on the issue of global climate change in general and their specific refusal to impose the limits on carbon dioxide emissions Plaintiffs now seek to impose by judicial fiat confirm that making the ‘initial policy determination[s]’ addressing global climate change is an undertaking for the political branches.” Id. at 274. “Because resolution of the issues presented here requires identification and balancing of economic, environmental, foreign policy, and national security interests,” she concluded that the cases “present non-justiciable political questions that are consigned to the political branches, not the Judiciary.” Id.

C. ENVIRONMENTAL FEDERALISM: THREE MODELS OF FEDERAL-STATE RELATIONS

While the growth of environmental regulation largely has been driven by federal legislation, states and Native American tribes continue to play an important role in the development and implementation of environmental policy. Even though the federal environmental laws often require states to meet minimum national standards, they generally do not preempt state law except in narrowly defined circumstances. State common law remains an important tool for seeking compensation for environmental damage. Some of the most innovative environmental protection measures are the product of state legislation, such as California’s Proposition 65 (see Chapter 4), New Jersey’s Environmental Cleanup and Responsibility Act (discussed in Chapter 3), and Michigan’s Environmental Protection Act.

The federalization of environmental law was a product of the concern that state and local authorities lacked the resources and political capability to control problems that were becoming national in scope. Congress has employed three general approaches for accomplishing its environmental protection objectives. The first approach is to provide federal financial assistance to encourage states to adopt environmental standards on their own. While this approach proved largely ineffective for controlling air and water pollution, it remains the principal federal approach to issues such as land use management where political opposition to federal regulation is particularly acute. Federal programs encourage state and local planning for land use and solid waste management under the Coastal Zone Management Act, the Clean Water Act, and Subtitle D of the Resource Conservation and Recovery Act. The power of this tool for motivating states to act depends largely on the amount of federal financial assistance involved. As federal funding for such programs has declined, this approach has become a less significant vehicle for promoting state action.

The second model, which currently is the predominant approach to federal-state relations under the environmental statutes, can be called a
"cooperative federalism" approach. Under this model, federal agencies establish national environmental standards and states may opt to assume responsibility for administering them or to leave implementation to federal authorities. The Clean Air Act, the Clean Water Act, RCRA, and the Safe Drinking Water Act require EPA to establish minimum national standards, while authorizing delegation of authority to implement and administer the programs to states that demonstrate that they can meet minimum federal requirements. In states that choose not to seek program delegation, the programs are operated and enforced by federal authorities. Federally recognized Native American tribes also may qualify for EPA approval to be treated "in the same manner as a state" to manage delegated programs under the Clean Air Act, Clean Water Act, and Safe Drinking Water Act, but not under the Resource Conservation and Recovery Act. See D. Pingaro, Tribal Environmental Protection Activity Under EPA-Administered Programs, 8 Env. L. News 11 (Summer 1999).

Statutes requiring the establishment of minimum federal standards have long been thought to be necessary to prevent regulatory competition among states from undermining environmental quality. Professor Richard Revesz has presented a powerful challenge to this "race-to-the-bottom" rationale in Revesz, Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation, 67 N.Y.U. L. Rev. 1210 (1992). Based on economic models positing that state regulatory standards would be set at levels where the benefits of increased employment would at least offset the costs of increased environmental degradation, Revesz argues that there is no theoretical basis for believing that regulatory competition would induce states to set suboptimally low standards. He also notes that there is little empirical support for the notion that environmental standards have a substantial effect on industry location decisions. Revesz, "Federalism and Regulation: Some Generalizations" in Regulatory Competition and Economic Integration: Comparative Perspectives (D. Esty & D. Geradin eds., 2000). Professor Kirsten Engel responds that even if regulatory standards have little effect on industrial location, a "race-to-the-bottom" would occur because state officials believe that they do based on the results of a survey of state regulators. K. Engel, State Environmental Standard-Setting: Is There a "Race" and Is It "To the Bottom"?, 48 Hastings L.J. 271 (1997).

A third approach to environmental federalism eschews state administration of federal standards in favor of federal control. Preemption of state law has been employed sparingly in the federal environmental laws. It usually is reserved for regulation of products that are distributed nationally, as businesses favor nationally uniform regulation to avoid having to comply with balkanized regulatory standards. Examples include regulation of chemicals under the Toxic Substances Control Act (TSCA), pesticide registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), provisions of the Clean Air Act governing vehicle emissions, regulation of nuclear materials under the Atomic Energy Act, and regulation of hazardous materials transportation under the Hazardous Materials Transportation Act. While these laws generally provide that federal regulation preempts inconsistent state standards, the question of whether state standards are inconsistent with federal regulations can be a difficult one. See, e.g., Silkwood v. Kerr-McGee Corp., 464 U.S. 238 (1984) (holding that award of punitive damages under state law for exposure to nuclear material not preempted by the Atomic Energy Act); Cipollone v. Liggett Group, Inc., 505 U.S. 504 (1992) (Federal Cigarette Labeling and Advertising Act preempted
only claims based on failure to warn and neutralization of federally mandated 
warnings but not claims based on express warranty, intentional fraud and mis-
representation, or conspiracy); Huron Portland Cement Co. v. Detroit, 352 U.S. 
440 (1960) (upholding municipality’s smoke abatement ordinance as applied to 
ships on the Great Lakes against claims it interfered with interstate commerce 
and was preempted by federal safety regulation of seagoing vessels); Burbank v. 
Lockheed Air Terminal, Inc., 411 U.S. 624 (1973) (holding that Noise Control 
Act and Federal Aviation Act preempted a local noise abatement ordinance that 
effectively barred jet aircraft from taking off at night); Pacific Gas & Elec. v. 
California Energy Comm’n, 461 U.S. 190 (1983) (upholding California state 
initiative that blocked licensing of new nuclear power plants pending develop-
ment of facility for disposal of high-level nuclear waste on ground that it is an 
economic measure rather than a safety regulation in conflict with Atomic Energy 
(Occupational Safety and Health Act preempted state hazardous waste licensing 
in certain circumstances); United States v. Locke, 529 U.S. 89 (2000) (federal 
Ports and Waterways Safety Act preempts Washington state regulations that 
imposed training, English proficiency, navigation watch, and casualty reporting 
requirements on oil tanker crews operating in state waters). See also D. Spence & 
that judges have been too predisposed to preempt state and local environmental 
regulations because they have failed to distinguish between those that seek to 
internalize locally generated costs and those that seek to shift costs to other 
jurisdictions).

In Engine Manufacturers Association v. South Coast Air Quality Manage-
ment District, 541 U.S. 246 (2004), the Court reversed a Ninth Circuit decision 
that had rejected an industry challenge to regulations requiring operators of 
public and private fleets of more than 15 vehicles to buy only low-emission or 
alternative fuel vehicles. By an 8-to-1 vote the Court agreed with the claim of 
diesel engine manufacturers and oil companies that the regulations issued by 
the South Coast Air Quality Management District are preempted by the federal 
Clean Air Act. In 2005 the Court decided another preemption case, Bates v. Dow 
Agrosciences, LLP, 544 U.S. 431 (2005). The case involved the question whether 
the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) preempts state 
tort claims against the manufacturer of the “Strongarm” herbicide that alleged-
ly damaged the crops of 29 Texas peanut farmers. The farmers argued that 
FIFRA should not be held to preempt state law claims premised on the manu-
facture of a defective herbicide, while the manufacturer argued that the claims 
are based on a failure to warn, which should be preempted by FIFRA’s labeling 
requirements. The farmers claimed that Dow had not disclosed that the herbi-
cide in question damaged crops planted in soil with pH content above a certain 
level, in violation of the Texas Deceptive Trade Practices Act (DTPA). Both the 
district court and the U.S. Court of Appeals for the Fifth Circuit held that Bates’s 
claims for breach of warranty, fraud, violation of the DTPA, and failure to warn 
were all preempted by FIFRA’s express preemption clause. The Supreme Court 
reversed and remanded. The Court held that section 136v(b) of FIFRA pre-
empts only those statutory or common law rules “that would impose a labeling 
requirement that diverges from those set out in FIFRA and its implementing 
regulations. It does not, however, pre-empt any state rules that are fully consistent 
with federal requirements.” The Court remanded the case to the Court of
Appeals to determine whether the plaintiffs’ fraud and failure-to-warn claims were preempted.

Claims that federal environmental regulation has been too intrusive on state and local prerogatives have become a prominent part of the current political ferment over federalism. Recently there has been considerable debate over how responsibility for environmental protection should be divided in our federal system and how to improve relations between federal agencies and the states. State officials have lobbied for devolution of greater authority from federal to state authorities. EPA has sought to be more responsive to state concerns, but it finds itself in a difficult position. As the National Academy of Public Administration describes the problem: “EPA’s paradox is that it must maintain national programs and seek national consistency while simultaneously attempting to make its programs and standards fit an incredibly diverse and dynamic nation.” Resolving the Paradox of Environmental Protection: An Agenda for Congress, EPA & the States xii-xiii (1997).

Those who challenge calls to devolve more responsibility for environmental protection to the states cite several reasons for their opposition. First, there are economies of scale in having national regulatory programs. Professor Daniel Esty questions whether “we really want every state or hamlet to determine for itself whether polychlorinate biphenyls create additional cancer risks greater than $10^{-6}$, and if so, at what cost these risks are worth worrying about.” Esty, Revitalizing Environmental Federalism 95 Mich. L. Rev. 570, 573 (1996). Second, national programs are better able to deal with transboundary pollution. “[I]nsofar as the central reason for environmental regulation is to mitigate the impact of market failures that emerge from uninternalized externalities, drawing more lines on the map only multiplies the potential for transboundary spillovers.” Id. Third, fairness and equal protection concerns may support “the establishment of baseline national standards so that Americans are not exposed to fundamentally unequal levels of environmental risk.” Steinzor, Unfunded Environmental Mandates and the “New (New) Federalism”: Devolution, Revolution, or Reform? 81 Minn. L. Rev. 101, 172 (1996). Professor Peter Swire notes that it may be easier to focus public attention on environmental problems and enact legislation at the national level so that citizen preferences can overcome the concentrated interests of regulated industry. Swire, The Race to Laxity and the Race to Undesirability: Explaining Failures in Competition Among Jurisdictions in Environmental Law, 14 Yale L. & Policy Rev./Yale J. Reg. 167 (1996).

State and local officials have become increasingly upset about the cost of implementing federal requirements, such as regulations implementing the Safe Drinking Water Act. Arguing that it is unfair for the federal government to impose “unfunded mandates,” state and local officials lobbied Congress to restrict this practice. In March 1995, Congress overwhelmingly approved legislation making it more difficult to impose federal mandates on state and local governments. The legislation, known as the Unfunded Mandate Reform Act of 1995, Pub. L. No. 104-4, 109 Stat. 48 (1995), requires that more detailed cost estimates be provided for federal mandates and makes it easier for opponents of such provisions to defeat them in Congress. The law requires the Congressional Budget Office (CBO) to provide estimates of the future cost of legislative mandates if they may exceed $50 million annually for state or local governments or the private sector. Any member of Congress can raise a point of order demanding that mandates estimated to cost state or local governments more than $50 million annually be stricken from legislation unless federal funding is
provided or the mandate is specifically approved by a majority vote. Mandates for which future federal funding is promised are to expire if the funding is not subsequently provided.

The legislation also imposes new requirements on agencies issuing regulations that impose federal mandates. The law requires federal agencies, prior to publishing a notice of proposed rulemaking, to prepare assessments of the anticipated costs and benefits of any mandate that may cost state or local governments or the private sector more than $100 million annually. It also prohibits federal agencies from issuing regulations containing federal mandates that do not employ the least costly method or that do not have the least burdensome effect on governments or the private sector unless the agency publishes an explanation of why the more costly or burdensome method was adopted. These provisions are subject to judicial review if the underlying agency action already is reviewable in court.

States have become more aggressive at challenging federal mandates in court. In the case that follows, the state of New York argued that the federal government infringed on its Tenth Amendment rights when it directed in the Low-Level Radioactive Waste Policy Act that states that failed to make arrangements to dispose of low-level radioactive wastes by January 1, 1993, must “take title” to all such waste generated within their borders.

New York v. United States
505 U.S. 144 (1992)

JUSTICE O'CONNER delivered the opinion of the Court.

... Petitioners do not contend that Congress lacks the power to regulate the disposal of low level radioactive waste. Space for radioactive waste disposal sites is frequently sold by residents of one State to residents of another. Regulation of the resulting interstate market in waste disposal is therefore well within Congress’ authority under the Commerce Clause. Cf. Philadelphia v. New Jersey, 437 U.S. 617, 621-623 (1978). Petitioners likewise do not dispute that under the Supremacy Clause Congress could, if it wished, preempt state radioactive waste regulation. Petitioners contend only that the Tenth Amendment limits the power of Congress to regulate in the way it has chosen. Rather than addressing the problem of waste disposal by directly regulating the generators and disposers of waste, petitioners argue, Congress has impermissibly directed the States to regulate in this field.

As an initial matter, Congress may not simply “commandeer[r] the legislative processes of the States by directly compelling them to enact and enforce a federal regulatory program.” Hodel v. Virginia Surface Mining & Reclamation Assn., Inc., 452 U.S. 264, 288 (1981). In Hodel, the Court upheld the Surface Mining Control and Reclamation Act of 1977 precisely because it did not “commandeer” the States into regulating mining. The Court found that “the States are not compelled to enforce the steep-slope standards, to expend any state funds, or to participate in the federal regulatory program in any manner
whatsoever. If a State does not wish to submit a proposed permanent program that complies with the Act and implementing regulations, the full regulatory burden will be borne by the federal Government.” Ibid. . . .

While Congress has substantial powers to govern the Nation directly, including in areas of intimate concern to the States, the Constitution has never been understood to confer upon Congress the ability to require the States to govern according to Congress’ instructions. . . .

In providing for a stronger central government . . . the Framers explicitly chose a Constitution that confers upon Congress the power to regulate individuals, not States. As we have seen, the Court has consistently respected this choice. We have always understood that even where Congress has the authority under the Constitution to pass laws requiring or prohibiting certain acts, it lacks the power directly to compel the States to require or prohibit those acts. The allocation of power contained in the Commerce Clause, for example, authorizes Congress to regulate interstate commerce directly; it does not authorize Congress to regulate state governments’ regulation of interstate commerce.

2

This is not to say that Congress lacks the ability to encourage a State to regulate in a particular way, or that Congress may not hold out incentives to the States as a method of influencing a State’s policy choices. Our cases have identified a variety of methods, short of outright coercion, by which Congress may urge a State to adopt a legislative program consistent with federal interests. Two of these methods are of particular relevance here.

First, under Congress’ spending power, “Congress may attach conditions on the receipt of federal funds.” South Dakota v. Dole, 483 U.S., at 206. Such conditions must (among other requirements) bear some relationship to the purpose of the federal spending, id., at 207-208, and n.3; otherwise, of course, the spending power could render academic the Constitution’s other grants and limits of federal authority. Where the recipient of federal funds is a State, as is not unusual today, the conditions attached to the funds by Congress may influence a State’s legislative choices. Dole was one such case: The Court found no constitutional flaw in a federal statute directing the Secretary of Transportation to withhold federal highway funds from States failing to adopt Congress’ choice of a minimum drinking age.

Second, where Congress has the authority to regulate private activity under the Commerce Clause, we have recognized Congress’ power to offer States the choice of regulating that activity according to federal standards or having state law preempted by federal regulation. Hodel v. Virginia Surface Mining & Reclamation Assn., Inc., supra, 452 U.S., at 288. This arrangement, which has been termed “a program of cooperative federalism,” Hodel, supra, 452 U.S., at 289, is replicated in numerous federal statutory schemes. These include the Clean Water Act, the Occupational Safety and Health Act of 1970, the Resource Conservation and Recovery Act of 1976, and the Alaska National Interest Lands Conservation Act.

By either of these two methods, as by any other permissible method of encouraging a State to conform to federal policy choices, the residents of the State retain the ultimate decision as to whether or not the State will comply. If a State’s citizens view federal policy as sufficiently contrary to local interests, they
may elect to decline a federal grant. If state residents would prefer their government to devote its attention and resources to problems other than those deemed important by Congress, they may choose to have the Federal Government rather than the State bear the expense of a federally mandated regulatory program, and they may continue to supplement that program to the extent state law is not preempted. Where Congress encourages state regulation rather than compelling it, state governments remain responsive to the local electorate’s preferences; state officials remain accountable to the people.

By contrast, where the Federal Government compels States to regulate, the accountability of both state and federal officials is diminished. If the citizens of New York, for example, do not consider that making provision for the disposal of radioactive waste is in their best interest, they may elect state officials who share their view. That view can always be preempted under the Supremacy Clause if it is contrary to the national view, but in such a case it is the Federal Government that makes the decision in full view of the public, and it will be federal officials that suffer the consequences if the decision turns out to be detrimental or unpopular. But where the Federal Government directs the States to regulate, it may be state officials who will bear the brunt of public disapproval, while the federal officials who devised the regulatory program may remain insulated from the electoral ramifications of their decision. Accountability is thus diminished when, due to federal coercion, elected state officials cannot regulate in accordance with the views of the local electorate in matters not preempted by federal regulation.

With these principles in mind, we turn to the three challenged provisions of the Low-Level Radioactive Waste Policy Amendments Act of 1985.

Construed as a whole, the Act comprises three sets of “incentives” for the States to provide for the disposal of low-level radioactive waste generated within their borders. We consider each in turn.

[C The Court then concluded that the portions of the Act which authorized states to impose surcharges on radioactive waste received from other states, and eventually to deny access to such waste altogether, were within Congress’s power to authorize states to burden interstate commerce.]

C

The take title provision is of a different character. This third so-called “incentive” offers States, as an alternative to regulating pursuant to Congress’ direction, the option of taking title to and possession of the low-level radioactive waste generated within their borders and becoming liable for all damages waste generators suffer as a result of the States’ failure to do so promptly. In this provision, Congress has crossed the line distinguishing encouragement from coercion.

The take title provision offers state governments a “choice” of either accepting ownership of waste or regulating according to the instructions of Congress. Respondents do not claim that the Constitution would authorize Congress to impose either option as a freestanding requirement. On one hand, the Constitution would not permit Congress simply to transfer radioactive waste from generators to state governments. Such a forced transfer, standing alone, would in principle be no different than a congressionally compelled subsidy from state governments to radioactive waste producers. The same is
true of the provision requiring the States to become liable for the generators’
damages. Standing alone, this provision would be indistinguishable from an Act
of Congress directing the States to assume the liabilities of certain state resi-
dents. Either type of federal action would “commandeer” state governments
into the service of federal regulatory purposes, and would for this reason be
inconsistent with the Constitution’s division of authority between federal and
state governments. On the other hand, the second alternative held out to state
governments—regulating pursuant to Congress’ direction—would, standing
alone, present a simple command to state governments to implement legislation
enacted by Congress. As we have seen, the Constitution does not empower
Congress to subject state governments to this type of instruction.

Because an instruction to state governments to take title to waste, standing
alone, would be beyond the authority of Congress, and because a direct order to
regulate, standing alone, would also be beyond the authority of Congress, it
follows that Congress lacks the power to offer the States a choice between the
two. Unlike the first two sets of incentives, the take title incentive does not
represent the conditional exercise of any congressional power enumerated in
the Constitution. In this provision, Congress has not held out the threat of
exercising its spending power or its commerce power, it has instead held out
the threat, should the States not regulate according to one federal instruction,
of simply forcing the States to submit to another federal instruction. A choice
between two unconstitutionally coercive regulatory techniques is no choice at
all. Either way, "the Act commandeers the legislative processes of the States by
directly compelling them to enact and enforce a federal regulatory program."
Hodel v. Virginia Surface Mining & Reclamation Assn., Inc., supra, 452 U.S., at
288, an outcome that has never been understood to lie within the authority
conferred upon Congress by the Constitution.

Respondents emphasize the latitude given to the States to implement Con-
gress’ plan. The Act enables the States to regulate pursuant to Congress’ instruc-
tions in any number of different ways. States may avoid taking title by contracting
with sited regional compacts, by building a disposal site alone or as part of a
compact, or by permitting private parties to build a disposal site. States that host
sites may employ a wide range of designs and disposal methods, subject only to
broad federal regulatory limits. This line of reasoning, however, only under-
scores the critical alternative a State lacks: A State may not decline to administer
the federal program. No matter which path the State chooses, it must follow the
direction of Congress.

The take title provision appears to be unique. No other federal statute has
been cited which offers a state government no option other than that of imple-
menting legislation enacted by Congress. Whether one views the take title pro-
vision as lying outside Congress’ enumerated powers, or as infringing upon the
core of state sovereignty reserved by the Tenth Amendment, the provision is
inconsistent with the federal structure of our Government established by the
Constitution.

NOTES AND QUESTIONS

1. Justice O’Connor’s analysis appears founded on concern about main-
taining political accountability. Do you agree with her analysis that while direct
federal regulation leaves the federal government politically accountable, “where
the Federal Government directs the states to regulate, it may be state officials who will bear the brunt of public disapproval, while the Federal officials who devised the regulatory program may remain insulated from the electoral ramifications of their decision”?

2. In dissent, Justice White argued that it was ironic for the Court to invalidate part of the LLRWPA on grounds of federalism when enactment of the statute was “Very much the product of cooperative federalism” because it “reflected hard-fought agreements among states as refereed by Congress.” Is he right when he argues that the majority’s decision “gives Congress fewer incentives to defer to the wishes of state officials in achieving local solutions to local problems”?

3. The papers of the late Justice Harry A. Blackmun revealed for the first time information concerning the Court’s deliberations in New York v. United States. They confirm how strongly Justices O’Connor, Kennedy, and Scalia felt about the “take title” provision’s affront to state sovereignty and an interesting debate between O’Connor and Kennedy concerning whether the Tenth Amendment is but a mirror image of the commerce clause or rather an independent limit on federal authority. See Robert V. Percival, Environmental Law in the Supreme Court: Highlights from the Blackmun Papers, 35 Envtl. L. Rep. 10637, 10650 (2005).

4. The Court’s decision has not had a major impact on the federal environmental laws because they usually offer states a choice between regulating according to federal standards or having state standards preempted by federal ones. One rare exception was the subject of ACORN v. Edwards, 81 F.3d 1387 (5th Cir. 1996), a case in which the Fifth Circuit held that a provision in the Safe Drinking Water Act requiring states to establish programs for removal of lead contamination from school and day care drinking water systems violated the Tenth Amendment principles outlined in New York v. United States. The court held that the requirement “is an attempt by Congress to force States to regulate according to Congressional direction.” 81 F.3d at 1394. While noting that Congress is free to regulate directly drinking water coolers that move in interstate commerce, the court held that it could not force the states to establish a regulatory program under penalty of civil sanctions without violating the Tenth Amendment.

5. In Printz v. United States, 521 U.S. 898 (1997), the Supreme Court, by a 5-to-4 vote, held that the Brady Handgun Violence Protection Act’s requirements that state and local law enforcement officers conduct background checks of handgun purchasers was unconstitutional. Citing New York v. United States, the Court majority reiterated the notion that the federal government may not compel the states to enact or administer a federal regulatory program. While the four dissenters attempted to distinguish the Brady law as not requiring state or local officials to make policy, the Court majority concluded that the entire object of the law was to direct the functioning of the state executive, which would compromise the dual sovereignty structure of federalism established by the Constitution.

6. Which environmental problems are appropriate subjects for federal regulation and which should be left to state, tribal, or local authorities? Economist Wallace Oates argues that responsibility “should be assigned to the smallest jurisdiction whose geographical scope encompasses the relevant benefits and costs” of the problem. W. Oates, Thinking About Environmental Federalism, 130 Resources 14 (Winter 1998). Do you agree? Because ecosystem boundaries
rarely conform to political boundaries, problems that involve interstate externalities clearly warrant federal intervention. How strong is the federal interest in establishing minimum national standards for the quality of drinking water municipalities provide, as Congress has done in the Safe Drinking Water Act? In June 2003, the D.C. Circuit rejected arguments that the Safe Drinking Water Act exceeded Congress’s constitutional authority under the Commerce Clause. The state of Nebraska challenged EPA’s regulations setting maximum contaminant levels for arsenic in drinking water by arguing that Congress had no authority to regulate intrastate distribution and sale of drinking water. Noting that this was a facial challenge to the Act, the court stated that to succeed it would require a showing that under “no set of circumstances” could the Act be constitutional. Because a number of water utilities sell substantial volumes of drinking water across state lines, the court concluded that “the Act is a valid exercise of power under the Commerce Clause,” without addressing whether intrastate sales of drinking water had a sufficiently substantial impact on interstate commerce to justify federal regulation. Nebraska v. EPA, 331 F.3d 995 (D.C. Cir. 2003).

The Commerce Clause and Congressional Authority to Protect the Environment

In 1995, the Supreme Court for the first time in nearly 60 years overturned a federal law for exceeding Congress’s authority under the Commerce Clause. In United States v. Lopez, 514 U.S. 549 (1995), the Court held, by a bare 5-to-4 majority, that Congress does not have the authority under the Commerce Clause to prohibit the possession of firearms in the vicinity of schools. The Court stated that Congress has the authority to regulate three broad classes of activities under the Commerce Clause: (1) “the use of the channels of interstate commerce”; (2) intrastate activities that threaten “the instrumentalities of interstate commerce, or persons or things in interstate commerce”; and (3) “activities having a substantial relation to interstate commerce.” The Court added that the “proper test” for the third category is “whether the regulated activity ‘substantially affects’ interstate commerce.” Id. at 558-559.

While it now has become routine to raise Lopez challenges whenever federal regulatory authority is asserted, the decision has had scant impact on environmental law. The Lopez majority emphasized that the Gun-Free School Zones Act had “nothing to do with ‘commerce’ or any sort of economic enterprise, however broadly one might define those terms.” Id. at 561. Citing with approval Hodel v. Virginia Surface Mining & Reclamation Association, Inc., 452 U.S. 264 (1981), which upheld federal regulation of intrastate coal mining under the Surface Mining Control and Reclamation Act, the Chief Justice stated that “[w]here economic activity substantially affects interstate commerce, legislation regulating that activity will be sustained.” 514 U.S. at 560. Significantly, the Chief Justice did not question the validity of even Wickard v. Filburn, 317 U.S. 111 (1942), which he described as “the most far reaching example of Commerce Clause authority over intrastate activity,” because it “involved economic activity in a way that the possession of a gun in a school zone does not.” Id. In Wickard, the Court upheld federal regulation of the production and consumption of home-grown wheat because of its effect on the price and market for wheat sold in interstate commerce. Because Wickard remains good law, Lopez should
not significantly restrict federal authority to regulate businesses or individuals when they engage in virtually any activity that can be deemed economic. For an analysis of the likely implications of *Lopez* and *Morrison* on the environmental laws, see Schroeder, Environmental Law, Congress and the Court’s New Federalism, 78 Indiana L.J. 413-457 (2003).

*Lopez* has generated several challenges to other federal environmental laws. A challenge to the constitutionality of the federal Superfund legislation (the Comprehensive Environmental Response, Compensation and Liability Act, also known as CERCLA) on *Lopez* grounds was rejected in United States v. Olin Corp., 107 F.3d 1506 (11th Cir. 1997). The Eleventh Circuit reversed a district court decision declaring that CERCLA exceeded Congress’s authority under the Commerce Clause. The court found that regulation of intrastate, on-site waste disposal was an appropriate element of a broader attempt by Congress to protect interstate commerce from pollution. In National Association of Home Builders v. Babbitt, 130 F.3d 1041 (D.C. Cir. 1997) (pages ***-***), a divided panel of the D.C. Circuit rejected a *Lopez*-based challenge to Congress’s constitutional authority to apply section 9 of the Endangered Species Act to prohibit the taking of an endangered fly that was located entirely within a small area.

Since *Lopez* had cited Wickard v. Filburn with approval, most observers assumed that cumulative effects analysis could continue to be used to meet the substantially affects test. This assumption was called into question when the Court struck down a portion of the Violence Against Women Act in *Morrison* v. United States, 529 U.S. 598 (2000). By the same 5-to-4 lineup as in the previous cases, the Court held that Congress exceeded the limits of its commerce power when it created a private cause of action in federal courts for victims of gender-motivated violence. Unlike the situation in *Lopez*, Congress had made extensive findings concerning the impact of gender-motivated violence on interstate commerce, including lost days of work and women refraining from taking certain kinds of jobs or from working particular hours. However, in his majority opinion for the Court, Chief Justice Rehnquist rejected these findings as based on a line of “but for” causation that would allow Congress to regulate virtually anything, including “family law and other areas of traditional state regulation since the aggregate effect of marriage, divorce, and childrearing on the national economy is undoubtedly significant.” Arguing that Congress’s commerce power is far broader when economic activity is regulated, the Chief Justice noted that “[g]ender-motivated crimes of violence are not, in any sense of the phrase, economic activity.” While declining to hold expressly that the effects of noneconomic activity cannot be aggregated for purposes of Commerce Clause analysis, Rehnquist noted that “thus far in our Nation’s history our cases have upheld Commerce Clause regulation of intrastate activity only where that activity is economic in nature.” *Morrison* thus raises the prospect that Congress cannot constitutionally regulate intrastate activity that the Court deems noneconomic in character. The difficulty of distinguishing between economic and noneconomic activity is illustrated by Gibbs v. Babbitt, 214 F.3d 483 (4th Cir. 2000), where a divided panel of the Fourth Circuit upheld the authority of Congress to protect an experimental population of endangered red wolves from being harmed on private land. Construing the taking of red wolves by farmers as economic activity to protect farms, the majority concluded that the cumulative effect of individual takings would substantially affect interstate commerce. The court noted that many tourists and scientists cross state lines to view the wolves and that efforts to protect them ultimately might permit a renewed market to develop for wolf pelts. A dissenting judge argued that Congress did not have the power to regulate...
a handful of animals in one small region of one state because the activity had no economic character.

In March 2003 the U.S. Court of Appeals for the Fifth Circuit upheld the ESA’s prohibition on taking endangered species as applied to six species of invertebrates found only in caves in two counties in Texas. The court concluded that most of the activities the ESA seeks to prohibit to protect species are commercial in nature, thus allowing Wickard v. Filburn cumulative effects aggregation for the purposes of assessing how substantial an activity’s effects on interstate commerce are. It explained that the “ESA is an economic regulatory scheme; the regulation of intrastate takes of the Cave Species is an essential part of it. Therefore, Cave Species takes may be aggregated with all other ESA takes” and “such aggregation substantially affects interstate commerce.” GDF Realty Investments, Ltd. v. Norton, 326 F.3d 622, 640-641 (5th Cir. 2003). In a concurring opinion, Judge Dennis noted that the ESA is “a comprehensive program for the conservation of endangered and threatened species and the ecosystems upon which they depend.” As a result, he concluded that “Congress has the authority to make a rational determination to conserve such non-commercial, intrastate species as an essential or integral part of the comprehensive ESA program that regulates activities having a substantial impact on interstate commerce.” 326 F.3d at 641 (Dennis, J., concurring).

In April 2003 the D.C. Circuit rejected a developer’s challenge to the constitutionality of the ESA’s protection of the arroyo southwestern toad, holding that the case was governed by its previous decision upholding protection of the Delhi sands flower-loving fly (NAHB v. Babbitt, pages ***-***). The court rejected the developer’s argument that Morrison v. United States had undermined NAHB v. Babbitt. The court stated that the regulated activity for purposes of Commerce Clause analysis was the developer’s planned commercial housing development, rather than the toad, and that the ESA was designed in large part to preserve the commercial benefits of biodiversity. Rancho Viejo, LLC. v. Norton, 323 F.3d 1062 (D.C. Cir. 2003). In a concurring opinion, Chief Judge Douglas Ginsburg sought to qualify the court’s holding by questioning whether a lone hiker could be prohibited from taking an endangered species in a non-commercial context. “Our rationale is that, with respect to a species that is not an article in interstate commerce and does not affect interstate commerce, a take can be regulated if—but only if—the take itself substantially affects interstate commerce. Just as important, however, the lone hiker in the woods, or the homeowner who moves dirt in order to landscape his property, though he takes the toad, does not affect interstate commerce.” 323 F.3d at 1080 (Ginsburg, C.J., concurring). In July 2003, the D.C. Circuit denied a rehearing en banc in the Rancho Viejo case over the dissents of two of the nine judges, 334 F.3d 1158. Judge David Sentelle argued in dissent that “protecting a toad from a land owner pinning a fence on its own property” is not the kind of commercial activity that could be regulated under Congress’s power to regulate interstate commerce. Judge John Roberts, who subsequently became Chief Justice of the United States in 2005, also dissented. He argued that by focusing on “whether the challenged regulation substantially affects interstate commerce, rather than whether the activity being regulated does so,” the panel had adopted a rationale inconsistent with that employed by the Fifth Circuit in the GDF Realty case. “The panel’s approach in this case leads to the result that regulating the taking of a hapless toad that, for reasons of its own, lives its entire life in California constitutes regulating ‘Commerce . . . among the several States’” While conceding that the panel’s decision was consistent with National Association of Home
Builders v. Babbitt, Roberts argued that it was inconsistent with the rationale of *GDF Realty* and that en banc review “would also afford the opportunity to consider alternative grounds for sustaining application of the Act that may be more consistent with Supreme Court precedent.”

The one area in which the Court has addressed the effect of *Lopez* on environmental law, albeit somewhat obliquely, is with respect to the jurisdictional reach of the Clean Water Act. *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (*SWANCC*), 531 U.S. 159 (2001), which is discussed in Chapter 6, raised the question whether Congress has the constitutional authority to regulate isolated wetlands because they are used by migratory birds. Relying on *Lopez*, a county agency argued that Congress could not require it to obtain a federal permit under section 404(a) of the Clean Water Act to fill wetlands in an abandoned sand and gravel pit. Deciding *SWANCC* by the same 5-to-4 lineup that prevailed in *Lopez*, the Court ducked the constitutional issue by construing section 404(a) narrowly. The Court found that Congress had not expressed a clear intent to apply section 404(a) to isolated wetlands visited by migratory birds, which “would result in a significant impingement of the states’ traditional and primary power over lands and water use.” To avoid what it described as “significant constitutional and federalism questions,” the Court held that section 404(a)’s jurisdictional predicate—“waters of the United States”—did not include isolated wetlands where migratory birds are present. Thus, *SWANCC* narrows the jurisdictional reach of the Clean Water Act, while leaving the ultimate effect of *Lopez* on federal constitutional authority to protect the environment unresolved.

In June 2005, the Supreme Court decided *Gonzales v. Raich*, 545 U.S. 1 (2005), which upheld federal authority to prohibit the cultivation and use of marijuana for medical purposes. In an opinion by Justice Stevens that was joined by four other Justices, the Court held that Congress had a rational basis for concluding that the personal cultivation and use of marijuana would substantially affect interstate commerce because failure to regulate intrastate cultivation and use would leave a gaping hole in the comprehensive federal scheme for regulating illicit drugs. The Court majority emphasized that Congress clearly acted rationally in deciding that regulation of intrastate cultivation and use of marijuana was an essential part of the larger regulatory scheme. Justice Scalia, who did not join the majority opinion, filed a separate opinion concurring in the judgment. Scalia argued that Congress’s authority to regulate intrastate activities that substantially affect interstate commerce derives from the Necessary and Proper Clause. “Where necessary to make a regulation of interstate commerce effective, Congress may regulate even those intrastate activities that do not themselves substantially affect interstate commerce,” Scalia stated. One week after it decided *Gonzales v. Raich*, the Supreme Court denied review in the *GDF Realty* case, which it had held pending its decision concerning federal authority to prohibit cultivation and use of medical marijuana.

**NOTES AND QUESTIONS**

1. While no federal environmental law has been found to exceed Congress’s authority to regulate activities that substantially affect interstate commerce, there has been considerable uncertainty concerning the proper rationale for upholding federal authority under the Commerce Clause to protect endangered species. One source of confusion is the uncertainty concerning
the proper focus for analyzing whether interstate commerce is substantially
affected. Should the focus be on: (1) the commercial value of the resource or
species sought to be protected—in which case the more endangered a species is
the lesser may be the federal authority to protect it, or (2) the commercial
nature of the prohibited activity that threatens the species—which would
make it possible to ban commercial construction that threatens a species, but
perhaps not actions by hikers or dirt-bikers, or (3) the effect of the overall
regulatory program on interstate commerce—which would permit consider-
ation of the potentially enormous economic benefits of protecting biodiversity?
Which of these is the proper focus for analyzing the constitutional authority of
Congress to protect the environment under the Commerce Clause?

2. Does Gonzales v. Raich, 545 U.S. 1 (2005), effectively lay to rest any
doubt concerning the constitutionality of individual applications of the Endan-
gered Species Act to noneconomic, intrastate activity because they can be viewed
as necessary to preserve the integrity of a larger regulatory program that clearly
satisfies Commerce Clause requirements?

3. The Lopez and Morrison decisions have spawned numerous challenges to
federal regulatory authority based on the argument that Congress has exceeded
the bounds of its Commerce Clause authority. Virtually all of these challenges
have failed, though a few arsonists have been released from prison because of
the Supreme Court’s decision in Jones v. United States, 529 U.S. 848 (2000),
construing the federal arson statute as not applying to residential properties.
This may suggest that the Court’s efforts to revive limits on federal authority
have been primarily a symbolic “shot across the bow” to encourage Congress to
articulate more clearly the connection between activities it seeks to regulate and
interstate commerce. For a discussion of how Congress’s Commerce Clause
authorities can be harnessed to protect environmental values, see Robert V.
Percival, “Greening” the Constitution—Harmonizing Environmental and Con-
stitutional Values, 32 Env. L. 809 (2002).

B. APPROACHES TO REGULATION: 
ASSESSING THE OPTIONS

1. Regulation and Its Alternatives

Regardless of the philosophic perspective one brings to environmental
policy, there is broad agreement that some form of collective action should
be undertaken to address environmental problems for reasons explored in
Chapter 1. While this can provide a powerful rationale for government regula-
tion, it is important to bear in mind that collective action can assume a wide
variety of forms, not all of which involve centralized action by government. Some
communities are able to avoid the depletion of common resources without
government involvement by using informal and private means to discourage
overuse. These may include efforts to discourage outsiders from using the commons, see, e.g., To Protect Resources, Many Communities Use Informal Regula-
tions, Wash. Post, July 17, 1989, at A2 (noting that lobster trappers avoid
depletion of the lobster stock by using surreptitious violence to keep outsiders
away), or community norms that regulate its use by neighbors. See Ellickson, Of
Coase and Cattle: Dispute Resolution Among Neighbors in Shasta County, 38 Stan. L. Rev. 623 (1986) (study of cattle grazing patterns). Natural resources also can be protected from environmental damage by privatizing them—by creating enforceable property rights owned by someone with an incentive to protect the resource. The Nature Conservancy, for example, has been enormously successful in buying environmentally significant properties in order to preserve them.

Informal, community-based controls are most likely to protect common resources where such resources are concentrated in a small area and there is strong community support for limiting exploitation. If entry into the commons is difficult to control or community support is lacking, informal controls are unlikely to work. See, e.g., Ingrassia, Overfishing Threatens to Wipe Out Species and Crush Industry, Wall St. J., July 16, 1991, at Al (failure of informal controls to halt the depletion of fish stocks in the North Atlantic); Kerr, Geothermal Tragedy of the Commons, 253 Science 134 (July 12, 1991) (depletion of northern California geothermal resources). Privatization is more likely to succeed in protecting resources such as land (in which property rights can be easily defined) than in protecting the quality of air or water.

Thus, one should be cautious about drawing the simplistic conclusion that government regulation is always the appropriate response to the circumstances described by Hardin’s “Tragedy of the Commons.” One need not quarrel with the problem Hardin identifies—that truly unrestricted use of the commons will tend to deplete common resources—to appreciate the diversity of approaches, both governmental and nongovernmental, that can be used to combat it.

Kip Viscusi has identified four institutional mechanisms that may be used to control environmental risk: market forces, government regulation, liability, and social insurance. Viscusi, Toward a Diminished Role for Tort Liability: Social Insurance, Government Regulation, and Contemporary Risks to Health and Safety, 6 Yale J. on Reg. 65 (1989). These categories provide a useful framework for organizing our discussion of society’s options for responding to environmental problems when informal controls fail. Each of the institutions Viscusi identifies plays a role in environmental policy with varying emphasis depending on the nature of the problem to be addressed.

While most of the focus of environmental policy has been on government regulation, nonregulatory alternatives are becoming increasingly important complements to regulatory policy. Indeed, government now frequently uses regulation to enhance the effectiveness of the other institutional mechanisms for protecting the environment. For example, some regulatory legislation now requires information disclosure to harness the market power of informed consumers as a means to prevent environmental damage. Other regulations require that insurance be purchased by those engaging in activities that create environmental risk to ensure that the liability system can provide compensation for environmental damage. Thus, these four institutional mechanisms are best viewed not as discrete alternatives, but rather as part of a web of societal responses to environmental problems.

As illustrated in Figure 2.3, each of the four institutions has its own strengths and weaknesses as a vehicle for controlling environmental risks. Market forces can respond more quickly and flexibly than government regulation to discourage consumption of products that cause environmental damage, but markets are likely to be effective only when consumers are sufficiently well-informed about the link between a product and environmental damage to induce the marketing of less damaging substitutes. Unlike regulation, the
liability system can provide compensation to victims of environmental damage. This provides an incentive for potentially liable parties to prevent harm, the goal regulation seeks to pursue more directly by requiring or prohibiting certain conduct. The effectiveness of the liability system, both in providing compensation and deterring harm, is limited by the financial capability of parties, which can be expanded through the purchase of insurance. The availability of insurance may tend to reduce the insured’s incentives to prevent harm, though premiums priced to reflect differences in the riskiness of insured activity provide some incentive for investments in preventive measures.

When consumers are well-informed and free to choose, market forces can generate remarkably effective pressure to stop practices that cause

<table>
<thead>
<tr>
<th>Institutional mechanism</th>
<th>Advantages</th>
<th>Drawbacks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Forces</td>
<td>Can control risks rapidly and efficiently when consumers are well informed and have a choice of alternatives</td>
<td>Inadequate incentives to generate and disclose accurate information to consumers; many risks not tradeable in markets due to absence of transferable property rights</td>
</tr>
<tr>
<td>Common Law Liability</td>
<td>Can provide compensation to victims of environmental damage; more efficient than regulation when private parties have better information than government about nature of risks and how to control them</td>
<td>Inadequate incentives to control risks due to difficulties of proving causal injury and recovering for harm that is widely dispersed or in excess of source’s capacity to provide compensation</td>
</tr>
<tr>
<td>Government Regulation</td>
<td>Can efficiently prevent environmental harm by internalizing external costs of risky activity; can be used to respond to equity concerns by altering the distribution of risks and benefits; can be used to generate better information about risks</td>
<td>Does not provide compensation to victims of environmental damage; difficult to tailor regulation to take into account relevant differences within classes of regulatory targets; can be counterproductive in the absence of accurate information about the nature of risks and control options</td>
</tr>
<tr>
<td>Insurance</td>
<td>Helps ensure that compensation will be available for victims of environmental damage</td>
<td>Can reduce incentives to prevent environmental damage</td>
</tr>
</tbody>
</table>

FIGURE 2.3
Comparison of Institutional Mechanisms for Controlling Environmental Risks
environmental damage. For example, although the Marine Mammal Protection Act limits the number of dolphins that tuna fishers can kill each year, environmentalists had long complained that the law was poorly enforced, particularly on foreign boats. They launched a boycott of tuna that succeeded when major seafood processors announced that they would no longer purchase tuna that had been captured using fishing practices that result in harm to dolphins.

In the absence of informed consumers, seafood processors who used “dolphin-safe” methods would be placed at a competitive disadvantage because it is more expensive to catch tuna using methods that avoid harm to dolphins who swim nearby. Indeed, the company that first announced the new policy stated that tuna prices would rise by 2 to 10 cents a can because of the higher costs of purchasing tuna caught using dolphin-safe methods. Because of their higher cost, companies could not be expected to employ dolphin-safe fishing methods in the absence of consumer pressure. To attract environmentally conscious consumers, firms that purchase only dolphin-safe tuna began labeling their products as dolphin-safe (see Figure 2.4).

Monitoring compliance with corporate pledges of voluntary action can be difficult when highly visible practices are not involved. To monitor compliance with “dolphin-safe” claims, an international monitoring program inspects tuna facilities and sends monitors out with fishing vessels. Congress has enacted the Dolphin Consumer Protection Information Act, 16 U.S.C. §1385, which prohibits companies from making false “dolphin-safe” claims. Concerned that some “green advertising” has been deceptive, the Federal Trade Commission (FTC) has adopted guidelines governing the use of environmental claims in advertising and marketing. The guidelines, which apply to any claims about the environmental attributes of products or packaging, are designed to offer guidance to companies and are not enforceable regulations. 57 Fed. Reg. 36,363 (1992).

Many states have laws that regulate “green marketing” claims. California’s statute is the most detailed. The law prohibits the use of terms such as “recycled,” “ozone friendly,” and “biodegradable” unless products meet certain specifications. For example, to be identified as “recycled,” a product must contain at least 10 percent of post-consumer material. Advertisers challenged the California law on grounds that it violated their First Amendment rights. But an appellate court held that the state’s interests in preventing deceptive advertising sufficed to justify the burden on commercial speech rights. Association of National Advertisers v. Lungren, 44 F.3d 726 (9th Cir. 1994).

Several countries now have government-sponsored eco-labeling programs. Germany’s Blue Angel program awards environmental seals of approval to

FIGURE 2.4
Tuna Label Logo

StarKist
DOLPHIN SAFE™
products based on life-cycle analysis of their environmental impacts. The European Union has established an ambitious eco-labeling program modeled on the German approach. Products deemed environmentally superior are identified with a flower logo containing an “E” in the flower’s pistil. In the United States, private organizations, including Green Seal, Inc. and Scientific Certification Systems, have established environmental certification programs. For a critique of government involvement in eco-labeling, see Menell, Structuring a Market-Oriented Federal Eco-Information Policy, 54 Md. L. Rev. 1435 (1995).

Common law liability has been the principal alternative to government regulation for protecting the environment. Even the staunchest supporters of market mechanisms for controlling risk, who describe themselves as “free market environmentalists,” emphasize the importance of liability standards for defending property rights against environmental insults. As discussed at the beginning of this chapter, the difficulties involved in proving a causal link between a particular action and damage to a particular plaintiff have limited the effectiveness of common law liability as a mechanism for controlling environmental risk. One strength of liability approaches is that they offer some prospect of compensating victims after damage is done, which the regulatory system does not. And the prospect of having to pay compensation can serve as a powerful deterrent to spur investment in efforts to prevent environmental harm.

Economists argue that the decision concerning the relative emphasis to place on liability and regulation is analogous to a choice between letting the market regulate the price of outputs and organizing a firm to control inputs into the production process. Liability rules establish the price of environmental damage (the output), while regulations seek to control the activities (inputs) that create such damage. While the former approach might seem more appealing to market enthusiasts, regulation of inputs is not as unusual as it might seem. Indeed, the very reason why firms are organized is that resort to markets has its own costs, and companies find it is cheaper to control inputs into the production process by resorting to a nonmarket substitute, the formation of firms. Calabresi, The Pointlessness of Pareto: Carrying Coase Further, 100 Yale L.J. 1211 (1991). In some circumstances it is simply more efficient to resort to nonmarket mechanisms to achieve our goals. Of course, in the environmental arena the choice is not really between free markets and government regulation. Instead, as Judge Richard Posner notes, “the choice is between two methods of public control, the common law system of privately enforced rights and the administrative system of direct public control.” R.A. Posner, Economic Analysis of Law 271 (2d ed. 1977). The question of how to find the proper mix of liability and regulation is one of the fundamental challenges facing environmental policy makers.

Economist Steven Shavell argues that four factors should be considered in assessing the relative efficiency of liability and regulation as mechanisms for controlling risk. Shavell, Liability for Harm Versus Regulation of Safety, 13 J. Legal Stud. 357 (1984). The first is the relative knowledge of private parties and the public concerning the benefits of risky activities and the costs of reducing risks. Shavell argues that liability tends to be more efficient than regulation in controlling risk when a private actor is in a better position than the government to assess the risks of an activity and to determine the level of care to exercise. Regulation is favored when the government is in a better position than a private actor to assess risks and to determine what precautions to employ.

The second factor Shavell identifies is the capacity of private parties to provide compensation for the full amount of harm their actions produce. If an activity can
cause more damage than the actor is capable of repaying, fear of liability will not provide sufficient incentive for private investment in an efficient level of precautions. Shavell’s third consideration is the chance that some private parties will escape suit for the harm that they cause. Parties unlikely to be held liable for harm they produce, such as those who cause harm that is widely dispersed or difficult to trace, will not have adequate incentive to reduce risks to an efficient level in the absence of regulation.

The fourth consideration Shavell identifies is the relative administrative costs of the tort system and of direct regulation. Despite complaints about the administrative costs of the tort system, he notes that the liability system’s administrative costs usually are incurred only if harm occurs, while the administrative costs of regulation are incurred regardless of the occurrence of harm. Applying these factors, Shavell advocates using regulation to prevent environmental harms where the government has a superior capability to assess risks and private parties are likely to escape liability for the harm their actions cause. He also suggests liability may be superior to regulation where private parties have better access to information about the true costs of prevention and neither governmental nor private parties are systematically better at estimating harm. Kaplow and Shavell, Property Rules Versus Liability Rules: An Economic Analysis, 109 Harv. L. Rev. 713, 750 (1996).

We now turn to a contemporary case study to illustrate the choices available to policy makers in determining the relative emphases to place on liability and regulation in preventing environmental damage.

Case Study: Liability, Regulation, and the Prevention and Remediation of Oil Spills

Until 1990, liability for oil spills in U.S. waters was governed by a confusing patchwork of five federal laws, three international conventions, three private international agreements, and dozens of state laws. The federal laws and international agreements were designed largely to limit the liability of shipowners in the event of a major spill, with the precise liability limits depending on where the oil came from (e.g., the Trans-Alaska Pipeline Act) or where it was spilled (e.g., the Deepwater Port Act, the Outer Continental Shelf Lands Act). The most extreme of these acts, the aptly named Limitation of Liability Act of 1851, limited liability to the value of the vessel after the casualty occurred. Courts strained to interpret this pre-Civil War relic expansively because of its potentially extreme consequences. For example, in the case of the wreck of the Torrey Canyon, which spilled 100,000 tons of crude oil into the English Channel in 1967, liability under this statute would have been just $50—the value of the sole lifeboat that survived the wreck.

Proposals to rationalize this patchwork of oil spill laws were bottled up in Congress for nearly two decades. This legislative gridlock finally was overcome only after the Exxon Valdez disaster. Consider the issues that confronted Congress in determining what mix of liability and regulation to impose when it enacted the Oil Pollution Act of 1990 (OPA 90), 33 U.S.C. §§2701-2761.

Question One: Who Should Be Held Liable for Oil Spills? Environmentalists argued that both shipowners and the oil companies that own the cargo
should be held strictly liable for oil spills to deter oil companies from shipping their oil in “rust buckets” manned by untrained crews. (Because Exxon happened to be the owner of the *Exxon Valdez*, this would not have made any difference with respect to liability for that spill.) Oil companies argued that only the owners and operators of vessels should be held strictly liable for spills. The oil companies maintained that holding cargo owners liable for oil spills would be akin to making persons who ship something by Federal Express responsible for damages in the event a Federal Express cargo plane crashed. With whom do you agree? Is the Federal Express analogy an apt one? Should the nature of the cargo make any difference?

During the debate leading to enactment of OPA 90, the Royal Dutch/Shell Group announced that it would stop using its own tankers to carry oil to the United States except for an offshore terminal near Louisiana. The company explained that it took this move because a “shipowner who is involved in a pollution incident in the U.S.A., even when he has behaved properly, responsibly and without negligence, may face claims which far outweigh the potential commercial reward from such trade.” Wald, Oil Companies Rethink Risk of Having Tankers, N.Y. Times, June 13, 1990, at A26. Does this reinforce the case for extending liability to cargo owners? By contrast, Arco Marine, a subsidiary of Atlantic Richfield, announced that it will ship oil only in its own ships. “We think we have better control that way, and therefore, have some control over the liability,” explained Jerry Aspland, president of Arco Marine. Id. Which decision is more likely to expose the company to liability—Royal Dutch/Shell’s or Arco Marine’s? Which decision is likely to reduce the chances that the company’s oil would be involved in a spill?

**Question Two: Should Liability Be Limited?** Liability limits, such as that embodied in the Limitation of Liability Act of 1851, were designed originally to facilitate the rapid development of shipping trade by reducing the risks facing shipping companies. Critics argue that liability limits unfairly subsidize large oil companies by relieving them of responsibility for paying the full costs of the environmental damage they cause. They maintain that the liability limits that existed prior to enactment of OPA 90 were absurdly low in light of the enormous damage that can be done by a large oil spill. For example, section 311 of the Clean Water Act, 33 U.S.C. §1321, limited liability to $150 per gross ton per vessel, which would have limited the liability of the *Exxon Valdez* to between $15 and $31 million for a spill that cost billions to clean up. (The Act makes liability unlimited if the spill results from “willful negligence.”)

Oil companies argue that unlimited liability creates an uninsurable risk that makes doing business extremely risky. Noting that the cost of the *Valdez* cleanup exceeded the net worth of many oil companies, the president of the American Petroleum Institute asks, “Could you afford to risk your whole company every time you move a ship?” Wald, Oil Companies Rethink Risk of Having Tankers, N.Y. Times, June 13, 1990, at A26. Is there any justification for a liability cap? If so, how would you determine at what level the cap should be set?

**Question Three: Should State Oil Spill Liability Laws Be Preempted?** At the time OPA 90 was enacted, two dozen states had their own oil spill liability laws, including 19 coastal states with laws that provide for unlimited liability. Disagreement over whether Congress should preempt these laws was largely responsible for the legislative gridlock that blocked enactment of new oil spill liability legislation for nearly two decades. The oil industry and the Bush Administration argued that the United States should join the most recent international
protocol, which would limit a shipowner’s liability to $61 million and preempt state laws providing for greater liability. The administration argued that foreign shippers would simply stop shipping to U.S. ports if state laws providing for unlimited liability were not preempted. Opponents of preemption argued that the shippers were bluffing, noting that oil had been shipped for years to states with unlimited liability laws. Proponents of preemption responded that the Exxon Valdez spill has changed everything because now shippers realize that cleanup costs from a single spill could be several billion dollars. Should state laws providing for unlimited liability be preempted?

**Question Four: What Role Should Regulation Play in Prevention of Oil Spills?**

Regulation seeks to prevent damage that fear of liability alone will not deter. What mix of regulation and liability should be employed to ensure that the appropriate amount of care is exercised? Liability will not be much of a deterrent for those who believe they can escape liability for their actions because of the difficulty of proving causation under the common law. Large oil spills are another matter, however, because their source is usually obvious, although precise assessments of the damage they wreak can be difficult. Professor Shavell notes that regulation is more efficient than liability for deterring accidents that cause more damage than responsible parties are capable of repaying. Except in circumstances where major multinational oil companies are the responsible parties, large oil spills certainly are capable of causing damage that exceeds the capacity of private parties to provide compensation. Indeed, arguments in favor of limited liability are premised on the notion that spills may be so expensive to clean up that it will be impossible to get adequate insurance to pay the full costs of a spill. In these circumstances, what regulations, if any, should be imposed to prevent oil spills or to minimize the damage they cause? From an economist’s perspective, regulation should be used to stimulate investment in safety to the point where further investment would cost more than the reduction in damage it would produce. See, e.g., Stigler, What an Oil Spill Is Worth, Wall St. J., April 17, 1990, at A22. How would you apply this principle to regulations designed to prevent oil spills?

**Question Five: Should Oil Tankers Be Required to Have Double Hulls?**

Congress previously had directed the Secretary of Transportation to consider whether or not to require oil tankers operating in U.S. waters to have double hulls. The oil and shipping industries fiercely resisted a double hull requirement, and no action was taken to impose one. Proponents of a double hull requirement argued that had the Exxon Valdez been equipped with a double hull, far less oil would have been spilled. Shipowners argued that the cost of outfitting ships with double hulls would be prohibitive, particularly if existing ships had to be retrofitted. Understandably more enthusiastic, the Shipbuilders Council of America claimed that double bottoms could be added to the entire American fleet for less than $2 billion, less than the amount Exxon spent cleaning up the Alaskan spill. They admitted that retrofitting existing ships with double hulls would be far more expensive than installing them on new vessels. Lowey, In ’88, 6 Oil Spills Every 7 Days, N.Y. Times, June 22, 1990, at A27. In the wake of the Valdez spill, one major oil company stunned the industry by announcing that it was ordering double hulls for all its new tankers. Should double hulls be required? If so, should they be required only on new ships, or should existing ships be retrofitted?

After a long and bitter legislative struggle, Congress ultimately addressed these issues when it enacted OPA 90, whose provisions are outlined below.
**PROVISIONS OF THE OIL POLLUTION PREVENTION, RESPONSE, LIABILITY, AND COMPENSATION ACT OF 1990**

**Parties Liable.** OPA 90 makes owners and operators of vessels or facilities that discharge oil strictly liable for cleanup costs and damages caused by such discharges. Liability was not extended to cargo owners. §1002, 33 U.S.C. §2702.

**Limitation of Liability.** Section 1004 of OPA 90 increases the federal liability limit to $1,200 per gross ton, an eight-fold increase over the cap formerly provided in section 311 of the Clean Water Act. OPA 90 also creates a new $1 billion Oil Spill Liability Trust Fund, funded by a five-cent-per-barrel tax on oil, to pay for cleanup costs in excess of the liability limit. The entire $1 billion fund can be paid out for a single spill, with up to $500 million available for payments for damage to natural resources. (Section 311 of the Clean Water Act formerly had authorized a $35 million compensation fund, but the fund contained only $4 million at the time of the Exxon Valdez spill.)

**State Liability Laws.** OPA 90 expressly disavows any intent to preempt state liability requirements with respect to oil spills and removal activities. §1018, 33 U.S.C. §2718.

**Regulations to Prevent Oil Spills.** Congress ultimately opted to impose a double hull requirement on virtually all oil tankers operating in U.S. waters. For existing ships, the double hull requirement is to be phased in over the next 20 years on a schedule that varies based on tankers’ size and age. The older and larger the ship, the sooner the requirement phases in. For example, beginning on January 1, 1995, single-hull tankers of at least 30,000 gross tons that were at least 28 years old had to be retrofitted or retired, as did smaller tankers that were at least 40 years old. Barges of less than 5,000 tons operating on inland waterways and ships that transfer their oil to smaller ships more than 60 miles offshore are exempt from the requirements.

**NOTES AND QUESTIONS**

1. The Oil Pollution Act of 1990 is widely viewed as an enormous success. It is credited with improving the safety of oil tankers operating in U.S. waters and its double hull requirement has now been adopted internationally. Two years after the legislation was enacted, a study by the Petroleum Industry Research Foundation found a “sea change” in the shipping industry’s safety practices, including improved operational procedures and new inspection regimes. Solomon, U.S. Oil Spills Have Declined Sharply, Study Says; Suffer Federal Law Is Cited, Wall St. J., Aug. 24, 1992, at A5A. A 1998 study by the National Research Council (NRC) of the National Academy of Sciences noted...
that there has been a substantial reduction in the amount of oil spilled in U.S. waters. The study concluded that this decline was the result of a number of actions that are in process or emerging, notably: an increased awareness among vessel owners and operators of the financial consequences of oil spills and a resulting increase in attention to policies and procedures aimed at eliminating vessel accidents; actions by port states to ensure the safety of vessels using their ports; increased efforts by ship classification societies to ensure that vessels under their classification meet or exceed existing requirements; improved audit and inspection programs by charterers and terminals; and the increased liability, financial responsibility, and other provisions of OPA 90.

National Research Council, Double-Hull Tanker Legislation: An Assessment of the Oil Pollution Act of 1990 (1998). The NRC study concluded that “complete conversion of the maritime oil transportation fleet to double hulls will significantly improve protection of the marine environment.” The committee estimated that the cost of this conversion worldwide will total approximately $30 billion over a 20-year period. This represents an additional cost of approximately 10 cents per barrel of oil transported. The capital costs of double hull tankers are estimated to be 9 to 17 percent higher than single hulls’ and their operating and maintenance costs are expected to be 5 to 13 percent greater.

2. As noted above, it had been argued that because OPA 90 does not extend liability to cargo owners “there is no incentive to charter safer, but perhaps more expensive tankers,” Anderson, Oil Pollution Act Fouls the Regulatory Waters, Wall St. J., Feb. 20, 1992, at A14. Thus, many predicted that the market would not support investments in safer tankers and that OPA 90 could prove counterproductive. The NRC study found that there has been a decline in the percentage of oil shipped in tankers owned by oil companies, a trend it attributed to “a decision by some major oil companies to leave the tanker business, in large part to avoid high-liability exposure as well as for other economic reasons.” Greenpeace International was sharply critical of the decision by Exxon Mobil in January 2001 to charter two single hulled tankers for five years each despite the availability of double hulled alternatives. A London tanker broker expressed surprise at Exxon Mobil’s decision. “I find it strange that such a profitable company can’t afford a double-hulled tanker,” given their record profits. The broker noted that double hull tankers cost only a few thousand dollars more per day to charter. Pete Harrison, Galapagos Oil Spill Renews Tanker Safety Debate, Reuters News Wire, Jan. 26, 2001.

3. The regulatory provisions of OPA 90 have been influential throughout the world. The International Maritime Organization adopted regulations that required all new oil tankers to have double hulls or equivalent safety features beginning in July 1993. The regulations were adopted after the organization released a study showing that double hulls would prevent any oil spillage in 80 percent of cases where tankers ran aground. Hudson, Tanker Safety Plans Are Mulled as Oil Spill Threatens Shetlands, Wall St. J., Jan. 8, 1993, at A7B. The international community has generally adopted the MARPOL regulations, which also require all existing oil tankers to be double hulled (or to use some approved alternative) by no later than 2023. As double hull requirements are gradually being phased in, the percentage of tankers in the world fleet with double hulls increased from 4 percent in 1990 to 10 percent in 1994, and 30 percent in 2001. More than 50 percent of very large crude oil carriers (VLCCs) (carriers of 200,000 tons or more) now have double hulls.
4. Is the key to the success of OPA’s double hull requirement the fact that it was phased in on a strict schedule over time? Contrast the success of the Oil Pollution Act’s scheduled phase-in of the double hull requirement with the sorry record of the Clean Air Act’s new source review program. In the Clean Air Act Congress did not specify a schedule for phasing in new pollution control technology, it simply required all new sources (or old sources making major modifications) to install the new pollution control technology. This created an incentive to continue to operate older, much dirtier sources far longer than initially anticipated and to try to disguise major modifications of those sources as routine maintenance activities that would not trigger new source review. See the discussion at page ***.

5. Despite increasing interest in nonregulatory strategies, there is wide agreement that some form of regulation is essential to prevent environmental degradation. We now turn to the question of what form that regulation should take. This has become a topic of considerable controversy in recent years as proponents of regulatory approaches that employ economic incentives harshly criticize command-and-control regulation.

2. The Regulatory Options

Environmental regulations have become so complicated that the field is beginning to resemble tax law, where practitioners must be specialists to comprehend fully the meaning of regulations. Before examining any particular scheme of environmental regulation, it is useful to try to identify some essential components of regulation, even if in highly idealized form, to provide a framework for comparing alternative options.

Figure 2.5 illustrates some of the essential elements of environmental regulation. Regulation usually is undertaken in response to a perception that a problem exists that requires a collective response. How societies become aware of problems and decide to initiate regulatory action is a very important, but poorly understood, part of the process. Regulatory action often is initiated in response to highly visible incidents of harm or widely publicized problems. For example, in 1954 public concern over unidentified flying objects inspired the French wine village of Chateauneuf-du-Pape to pass an ordinance prohibiting flying saucers from landing within the village limits.* While the goal of this ordinance apparently has been achieved—no flying saucers have landed in the village—this incident illustrates why there is concern that regulation often is not directed to the problems most deserving of attention. Regulatory priorities often are established in a seemingly ad hoc fashion as agencies respond to whatever issues command public attention at the time.

Once it has been determined that a problem deserves some form of collective response, three important issues must be confronted: (1) What conduct or activity should be targeted for collective action? (2) On what basis should judgments be made about how that conduct should be altered? (3) What form of collective action should be employed in an effort to alter that conduct? These issues are not an exhaustive catalog of all the components of regulation, and

*This incident has been made famous by a California winery, Bonny Doon Vineyards, which has named one of its wines “Le Cigare Volant” (The Flying Cigar) because it is based on the traditional grape blend that comprises Chateauneuf-du-Pape wine.
decisions concerning them need not be made in any particular sequence. But the classifications can serve as a useful starting point for study of environmental regulation by isolating some of the major points of dispute over the strengths and weaknesses of various regulatory alternatives. Thus, for present purposes we can think of an environmental regulation as a government directive given to a particular regulatory target based on some finding (basis for controls) that prohibits or requires some type of action (depending on the type of regulation employed).

Regulation can assume many forms, and it can be implemented through a wide array of instrumentalities. To understand how environmental regulation works it is useful to outline the range of possible options for each of the three components of regulation identified above.

A. REGULATORY TARGETS

The environmental statutes generally define what activities, products, pollutants, or entities (industrial facilities, individuals, government agencies) can be regulated. The categories listed below are all well-represented within the current universe of environmental regulation, as shown in Figure 2.6.

**Products.** Legislation aimed at products ranges from the very broad, such as the Toxic Substances Control Act (TSCA), under which EPA can regulate virtually any aspect of the life cycle of “any chemical substance or mixture”
### FIGURE 2.6
The Principal Federal Environmental Laws Classified by Type of Statute and Regulatory Targets

<table>
<thead>
<tr>
<th>1. Waste management and pollution control laws</th>
<th>Regulatory targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clean Air Act</td>
<td>Emissions of air pollutants</td>
</tr>
<tr>
<td>Clean Water Act</td>
<td>Discharges of pollutants into the navigable waters of the United States</td>
</tr>
<tr>
<td>Resource Conservation and Recovery Act</td>
<td>Generation, transportation, treatment, storage, and disposal of hazardous wastes</td>
</tr>
<tr>
<td>Comprehensive Environmental Response, Compensation, and Liability Act</td>
<td>Liability for responses to releases of hazardous substances and damage to natural resources</td>
</tr>
<tr>
<td>Safe Drinking Water Act</td>
<td>Contaminants in public drinking water supplies, underground injection of hazardous wastes</td>
</tr>
<tr>
<td>Ocean Dumping Act</td>
<td>Ocean dumping of material</td>
</tr>
<tr>
<td>Surface Mining Control and Reclamation Act</td>
<td>Surface coal mining operations on nonfederal lands</td>
</tr>
</tbody>
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<thead>
<tr>
<th>2. Health and safety laws</th>
<th>Regulatory targets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Occupational Safety and Health Act</td>
<td>Workplace hazards</td>
</tr>
<tr>
<td>Toxic Substances Control Act</td>
<td>Manufacture, processing, use, or disposal of any chemical substance or mixture except for pesticides, tobacco, food, and drugs</td>
</tr>
<tr>
<td></td>
<td>Distribution, sale, and use of pesticides</td>
</tr>
<tr>
<td></td>
<td>Storage and release of hazardous substances</td>
</tr>
<tr>
<td></td>
<td>Transportation of hazardous materials</td>
</tr>
<tr>
<td></td>
<td>Dangerous consumer products</td>
</tr>
<tr>
<td></td>
<td>Food additives, drugs, and cosmetics</td>
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<td>Atomic materials</td>
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<th>3. Resource management laws</th>
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<td>National Environmental Policy Act</td>
<td>Major federal actions significantly affecting the environment</td>
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<td>Actions that threaten endangered species</td>
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<td>Management of federal lands</td>
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<td>Development in coastal zones</td>
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<td>Management of national forests</td>
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<td>Wild and scenic rivers</td>
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<td>Wilderness areas</td>
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| Federal Insecticide, Fungicide, and Rodenticide Act |
| Emergency Planning and Community Right-to-Know Act |
| Hazardous Materials Transportation Act |
| Consumer Product Safety Act |
| Food, Drug, and Cosmetic Act |
| Atomic Energy Act |
B. Approaches to Regulation: Assessing the Options

(manufacture, processing, distribution, use, or disposal); to the rather specific, such as the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), governing just the substances mentioned in the Act’s title; to the very specific, such as the Lead-Based Paint Poisoning Prevention Act or the provisions of TSCA directed at particular substances (e.g., asbestos or PCBs).

Pollutants. Virtually all damaging residuals from industrial, commercial, and some domestic activities fall within the jurisdiction of some federal environmental statute, although it also seems that regulation never quite covers the entire universe of residuals, as illustrated by periodic outcries when a heretofore unregulated substance or activity causes widely publicized environmental damage.

Industrial Facilities. Federal regulation targeted at industrial facilities is perhaps the best known, and seemingly the easiest, form of regulation to enforce, for facilities are fewer in number than individuals. Consider the difference, for example, between the EPA’s requirement that the automobile industry install emission control devices at the factory and a regulation imposing no obligation on automobile manufacturers but requiring each car owner to install a comparable device. Industrial facilities may be a more attractive target for federal regulators because enforcement against them raises none of the federalism concerns that arise when the federal government tries to coerce state and local government into action. As environmental regulation becomes more comprehensive, small businesses frequently are becoming regulatory targets (e.g., gas station owners whose underground storage tanks are now regulated by RCRA subtitle I, dry cleaners affected by both RCRA and the 1990 Clean Air Act Amendments).

Government Agencies. In some cases government entities are regulated because they own certain kinds of facilities that have become part of the pollution problem (e.g., public water supply systems, sewage treatment plants, nuclear weapons production plants, schools with asbestos-containing materials). Regulations aimed at government quia government are best represented by NEPA, which requires federal agencies to change their decision-making processes to incorporate environmental concerns.

Individuals. There are few extant examples of federal regulation of private individuals who are not doing business as firms. Among the important exceptions are federal prohibitions generally applicable to all persons, such as the ban on unpermitted dredging and filling of wetlands and the federal prohibition on the taking of endangered species. Regulation of individual conduct is less popular than regulation of corporations for both political and practical reasons. Early attempts by EPA to solve some of the air pollution problem by imposing transportation control plans on cities in ways that would directly affect individual driving habits were barred by Congress after vehement protests. For a strong argument that environmental law needs to rethink its aversion to regulating the behavior of individuals, who now contribute a substantial share of many pollution problems, see Michael P. Vandenbergh, From Smokestack to SUV: The Individual as Regulated Entity in the New Era of Environmental Law, 57 Vand. L. Rev. 515 (2004).

Land Uses. The major pieces of federal lands legislation establish rules governing the management of public lands. While most private land use
decisions are regulated only at the local level, some of the federal environmental laws contain provisions that affect land use decisions, such as the Clean Water Act’s requirements that permits be obtained before dredge-and-fill operations are conducted in wetlands.

The choice of regulatory target can be a crucial determinant of the success of a regulatory scheme. A program that seeks to regulate a few easily identified targets will be much easier to implement and to enforce than one that attempts to regulate numerous, poorly identified, or widely dispersed entities. Environmental regulation inevitably creates winners and losers based on how the costs and benefits of regulation are distributed. This has important political and practical consequences. Politically powerful regulatory targets are more likely to be successful in lobbying against environmental regulation that will affect them.

B. BASES FOR CONTROLS

Although environmental regulations ultimately are aimed at improving environmental quality, the terms of each specific regulation are founded on methodologies that have different starting points, or bases. The environmental statutes employ three major approaches for determining how far to go in controlling a regulatory target.

Health (or Environment). Some statutes direct that controls be established on the basis of what is required to achieve a goal stated exclusively in health- or environment-related terms. For example, §109 of the Clean Air Act instructs EPA to set ambient air quality standards at a level requisite to protect human health with an “adequate margin of safety.” At least the first part of that instruction—requisite to protect human health—takes EPA on a search for a level of ambient air quality based on a medical assessment of the effects of air pollution on human health. In setting that level, EPA is not supposed to examine other issues that might be germane to setting a standard, such as how much it will cost to achieve that level of control or whether technology exists to do so. The Delaney Clauses of the federal Food, Drug, and Cosmetic Act also impose controls on a purely health-related basis by directing that no food or color additives be approved if they have been found to induce cancer in man or in animals.

Technology (or Feasibility). Other statutes tie the ultimate regulatory standard to the capabilities of technology. These might be viewed as the opposite of health-based standards, because instead of asking what is needed to protect health they ask what it is possible to do. For example, under the Clean Air Act (CAA), EPA issues performance standards for new sources that are based on the best control technology that has been adequately demonstrated (CAA §111(a)(1)(C)). Other statutes employ a hybrid approach that directs that health be protected to the extent feasible. For example, the Occupational Safety and Health Act directs OSHA to ensure “to the extent feasible” that no worker “will suffer material impairment of health or functional capacity.” Since it limits health-based regulation to what is feasible, this approach is best described as a feasibility-limited, health-based approach.

Balancing. While this category can capture a variety of values that may serve as bases for controls, they all share the common attribute of requiring some
comparison of the gains of a proposed standard with its costs. For example, the Toxic Substances Control Act requires EPA to protect against “unreasonable risks” to be determined by balancing the environmental and health effects of chemicals against the economic consequences of regulation.

Consider how the three bases for controls relate to one another. Figure 2.7 supplies a rough schematic representation that facilitates comparison of how each of the three options operates when used to control a pollutant that harms human health.

The figure shows two graphs, the right-hand one of which has been flipped on its y-axis so that the two curves drawn can be shown intersecting. The line descending from left to right is the Health curve. It indicates that the adverse health effects of pollution generally decline as emissions are reduced. A line from any point on the Health curve to the left-hand y-axis identifies the monetary value of the “marginal” health benefits, those gained by further emissions controls. The shape of the curve as drawn is suggestive only; many other configurations are possible. In the toxics field, one particular aspect of the curve as drawn is, however, salient. Current federal policy assumes that there is no safe level of exposure to most toxic air pollutants. Accordingly, you cannot get to zero health effects until you get to zero emissions.

In depictions of this kind, the line emanating from the left-hand origin, labeled “Technology,” is frequently designated “Costs of Abatement.” Costs are determined by the underlying technologies available for abating, so it is fair to designate this the Technology curve. Each point on this curve implies an underlying technology, which produces the incremental pollution reduction at that point on the curve, and at the marginal cost indicated by extending a line to the right-hand y-axis, but the same technology need not underlie each point. A rudimentary and inexpensive technology may suffice to eliminate 80 percent of emissions, for example, but after that point this becomes ineffective and another must be selected.
The Health and Technology curves are employed in health-based (H-based) and technology-based (T-based) regulation, respectively. H-based regulation is concerned with controlling emissions until a certain level of health-related safety is achieved. The process can be understood graphically as long as one understands this is an idealized simplification of the actual standard-setting procedures. An H-based regulator would first determine how much health protection is required. This determination could be represented as a point on the Health curve. A line from here down to and perpendicular to the \( x \)-axis then establishes the emissions reduction necessary to achieve the desired level of health protection. In a pure H-based system, costs are not examined.

Conversely, a T-based regulator works with the Technology curve. Over the years of refining environmental pollution regulation, we have formulated a variety of T-based requirements that pick out different points along the Technology curve. The Clean Water Act of 1972, for instance, imposed a two-phased set of controls on discharges into water: a standard of “best practicable technology” (BPT), to be achieved by 1977, and a tougher one of “best available technology economically achievable” (BAT) by 1983. The BAT process can be described for illustrative purposes, again bearing in mind this is an oversimplification.

BAT requires EPA to select the best technology that it concludes will work effectively. Then EPA estimates the emissions reduction that technology could achieve (which could be represented on the chart by locating that technology on the Technology curve and finding the level of emissions reduction associated with it). Finally, the Agency determines whether bearing those costs is “economically achievable” by industry. If they are, the level of control corresponding to the chosen technology (represented, again, by extending a line through the correct point on the technology curve, perpendicular to the horizontal axis) becomes the regulatory standard; if not, EPA must proceed leftward along the technology curve until an economically achievable point is reached.

Other T-based regulations use the Technology curve in different ways, but they all share the essential feature of ignoring the Health curve, just as H-based regulations ignore the Technology curve. In contrast, regulations based on balancing approaches are concerned with both curves, particularly where they intersect. The central idea behind balancing approaches is to determine, at least approximately, where to set emission controls so that any stricter control is not justified, because the incremental costs of control are greater than the incremental value of the health gains, and any more lenient controls are likewise unjustified, because the health losses would be greater than the savings in control costs. This point can be represented as the point where the two curves intersect.

C. TYPES OF REGULATION

Regulations must be expressed in directives that are specifically understandable by the regulatory target and enforceable by subsequent government intervention, if necessary. Among the major types of regulation (not all of them germane to all the categories of regulated activity) are:

**Design Standards or Technology Specifications.** These specify how a certain plant, piece of machinery, or pollution control apparatus should be designed. OSHA has written numerous design standards, such as the standard of 36 inches’ clearance between library shelves in law libraries. EPA writes fewer
of them, although some of its performance standards become de facto technology specifications. This can occur when EPA has written a regulation on the assumption that a particular technology exists whose performance can meet the regulation. A regulatory target may prudently decide its safest course to compliance is to install that technology. Then, should the target fail to comply, it can defend by attempting to place responsibility on EPA.

**Performance Standards or Emission Limits.** These set an objective, or performance level, for the regulatory target to meet, without specifying how. These include emission limits that specify the rate, amount, and kind of pollutants that may be emitted from a given source over a specific period of time. EPA’s new-source performance standards under the Clean Air Act and its various effluent limitations under the Clean Water Act are simply a few of the many environmental regulations that are nominally performance standards—but bear in mind that some of these routinely devolve into de facto design standards.

**Ambient or Harm-based Standards.** A very different type of performance standard than emissions limits, these play a significant enough role in regulatory decision making to merit separate mention. These establish a level of environmental quality to be achieved or maintained in some environment, be it a lake or stream, an airshed or an underground aquifer. As such, ambient standards are incomplete, because they are not directed at a particular regulatory target. Typically, federal ambient standards are contained in legislation that instructs the states to achieve those levels within a certain time period, but without specifying how the states are to do this—this is why ambient standards can be viewed as performance standards (whose target is the states). Of course, under New York v. United States, such legislation cannot compel states to comply, but states frequently do cooperate with such legislation. The option in case of non-compliance is for the federal government to make choices of pollution levels for individual sources, choices that states themselves prefer to make.

**Product Bans or Use Limitations.** These prohibit a product or activity or limit its use. They typically involve products such as chemicals, pesticides, or food additives. They also may include a land use strategy, as when the National Park Service bans autos in Yosemite National Park during certain times or bans off-road vehicles from specified wilderness areas. In occupational settings, use limits can be directed at workers.

**Marketable Allowances.** Economists have long advocated marketable allowances, which permit companies to buy and sell emission rights, using market forces to ensure that pollution is reduced in the least costly manner. The 1990 Amendments to the Clean Air Act embrace this approach by providing electric utilities with tradeable allowances to emit sulfur dioxide. These allowances are based on the theory that companies that can reduce emissions most cheaply will do so and sell their allowances to companies for whom such reductions would be more expensive.

**Challenge Regulation or Environmental Contracting.** While not widely employed in the United States yet, there is considerable interest in these tools. With challenge regulation, the government establishes a clear environmental performance target, while the regulated community designs and implements a program for
achieving it. Unlike purely voluntary programs, such as EPA’s 33/50 program, specific regulatory responses take effect if the target is not met. Environmental contracting, used in EPA’s Project XL, involves an agreement between a government agency and a source to waive certain regulatory requirements in return for an enforceable commitment to achieve superior performance.

Pollution Taxes or Emissions Charges. Economists also have supported pollution taxes or emissions charges to internalize the social costs of activities damaging public health or the environment. One early example was the Esch-Hughes Act of 1912, which imposed a tax on white phosphorus to induce manufacturers of matches to use a safer, but more expensive, substitute. Congress in 1989 imposed an escalating tax on CFC production to accelerate both the phaseout of these chemicals and the development of substitutes. Emissions charges are based on the polluter-pays principle, to provide added incentive for emissions reductions. For example, the 1990 Clean Air Act Amendments finance a new national permit program by imposing an emissions charge of at least $25 per ton on sources needing permits.

Subsidies. Subsidies are the converse of taxes. Corporate investments beneficial to the environment can be encouraged by providing companies with public funds, tax breaks, or other benefits to subsidize such activity. In the past, subsidies frequently promoted environmentally destructive activities, such as the development of wetlands or logging on public lands. Elimination of such subsidies can be a means to promote environmental protection.

Deposit-Refund Schemes. Combining elements of both taxes and subsidies, deposit-refund schemes impose a fee that later can be refunded when a product is returned for recycling or disposal in an environmentally responsible manner. Several states have enacted “bottle bills” that impose a refundable deposit on beverage containers. Deposit-refund schemes help reduce litter and can serve as a disincentive for “midnight dumping,” which taxes on waste disposal otherwise might encourage.

Liability Rules and Insurance Requirements. Some statutes strengthen common law rules imposing liability for environmental damage. CERCLA imposes strict, joint, and several liability for environmental cleanup costs and natural resource damages. Regulations issued under other statutes seek to increase the effectiveness of liability rules by requiring that facilities seeking permits to handle hazardous materials have sufficient insurance or other resources to pay for potential damage caused by their activities. In return for limiting liability for nuclear accidents, the Price Anderson Act requires utilities to purchase $150 million of private insurance per reactor and to contribute to a second-tier federal compensation fund totaling $7 billion.

Planning or Analysis Requirements. Beginning with NEPA’s directive that federal agencies prepare environmental impact statements, environmental regulation occasionally requires that certain information be gathered and analyzed or that certain plans be prepared prior to undertaking environmentally significant decisions. Efforts to encourage states to control nonpoint source pollution and to improve the management of nonhazardous solid waste have relied largely on requirements for more comprehensive planning.
Information Disclosure (Labeling) Requirements. These require the regulatory target to disseminate information. Their usual objective has been to inform persons of hazards they can avoid through proper conduct, such as wearing ear protection in noisy areas or avoiding foods containing sodium when on a low-sodium diet. Disclosure requirements may be subdivided into design and performance categories. Congress has specified the precise wording of cigarette warning labels (a design standard). California’s Proposition 65 requires businesses employing toxic chemicals to give “clear and reasonable warning” to exposed individuals (a performance standard). Informational regulation also is being used to generate public pressure for emissions reductions, as illustrated by the EPCRA’s requirement that facilities report annual releases of toxic substances.

The choice of what mix of controls to employ is likely to be influenced by the nature of the regulatory targets and the chosen basis for control. Some types of controls are better suited for certain regulatory targets and bases for control than are others. For example, information disclosure and labeling requirements are more likely to be effective when the regulatory target is a product that informed consumers can decline to purchase than when it is widely dispersed sources of air pollution. Statutes that require that controls be based on the capabilities of a certain level of technology leave little room for choice concerning the type of control to employ. While regulators can set performance standards that reflect the capabilities of a given level of technology, regulatory targets may play it safe by simply installing the particular technology used to derive the standard. Unless regulators are extraordinarily prescient in determining appropriate levels of emissions charges or environmental taxes, they cannot ensure that pollution will be limited to any specific level, such as that required by health-based standards.

Like the choice of regulatory targets, the choice of which type of control to impose will create winners and losers because it will not affect every member of the regulated community in the same way. By requiring companies to pay for emissions they previously could discharge for free, emissions charges may transfer wealth from polluters to regulators. Yet these same polluters may be winners under a marketable permit scheme because the scheme would allow them to sell rights to pollute that previously were not transferable. Advocates of marketable permits claim this is a virtue because it creates an incentive for emission reductions beyond what otherwise would be required by regulation. Opponents note that because the source of this incentive is the ability to transfer rights to pollute, aggregate levels of pollution will not be any lower and pollution actually may increase around facilities purchasing pollution rights.

3. Comparing Regulatory Strategies

The choice of which regulatory strategy to employ usually is a matter for Congress. The environmental statutes generally identify regulatory targets by defining the jurisdictional reach of the authorities they delegate to agencies. Congress also usually specifies the bases for control and types of regulation agencies may employ to implement the environmental laws. For example, when air pollution became politically salient, Congress chose to regulate by establishing health-based performance standards, the national, uniform ambient air standards (see sections 108 and 109 of the Clean Air Act), through an instruction targeted at the states instructing each state to develop a plan outlining how it would achieve those standards. When it enacted the Clean Water Act, Congress
required EPA to impose technology-based effluent standards targeted directly at the industrial facilities that discharge pollutants into surface waters.

Dissatisfaction with the performance of executive agencies in implementing the environmental laws has encouraged Congress to write regulatory legislation with increasing specificity. Congress now often specifies deadlines for implementing action by agencies, and occasionally it spells out precise regulatory consequences should an agency fail to meet a deadline. For example, the 1984 amendments to the Resource Conservation and Recovery Act (RCRA) provided that the land disposal of broad classes of hazardous wastes would be banned automatically after certain deadlines unless EPA specified levels of treatment that would render such disposal safe.

Despite the increasing specificity with which Congress writes the environmental statutes, executive agencies inevitably have considerable discretion in defining the precise contours of the regulatory strategy used to implement statutory commands. Thus, both legislators and executive officials face important choices in choosing among the available regulatory options. Given the high stakes of these choices (for both the regulated community and the environment) and the rich mix of available options, it is not surprising that assessments of regulatory alternatives can be highly controversial. Indeed, dissatisfaction with existing regulatory strategies has ignited a lively debate between proponents of approaches that rely on economic incentives and defenders of the traditional command-and-control approach. Before exploring this debate, it is important to identify the various criteria available for assessing regulatory options.

Many criteria can be used to evaluate alternative regulatory strategies. Professor Thomas McGarity suggests six such criteria: (1) administrative feasibility, (2) survivability (under existing conditions of judicial and political review), (3) enforceability, (4) efficiency, (5) fairness and equity, and (6) ability to encourage technological advance. McGarity, Media-Quality, Technology, and Cost-Benefit Balancing Strategies for Health and Environmental Regulation, 46 Law & Contemp. Probs. 159 (Summer 1983). McGarity concludes that each regulatory strategy scores high under some of these six criteria but not under others. Similar conclusions were reached in an OTA report, Environmental Policy Tools: A User’s Guide 23 (1995). OTA found that the best mix of regulatory tools depends on the relative importance of each criterion. For example, because efficiency is enormously important to most economists, they are harshly critical of command-and-control regulations that generally do not vary regulatory standards to take into account differences in compliance costs. Proponents of command-and-control regulation may recognize its inefficiency, but believe that it scores high on administrative simplicity, enforceability, and equity, which they may view as more important values than efficiency.

Given the pervasive uncertainty that surrounds environmental problems and the enormous diversity of regulatory targets encompassed by the environmental laws, the task confronting regulators is indeed a difficult one. The legal system seeks to formulate general rules to be applied to certain classes of activities and enterprises. Yet the diversity of regulatory targets implies that it will be virtually impossible to design regulations that take into account relevant differences between individual targets.

There are several strategies available for adjusting regulations to account for the diversity of regulated entities. Consider the following possibilities. Uniform regulations can be issued with a procedure for granting variances. Regulations can be designed to apply to a smaller class of activities or entities that have
similar characteristics or regulations can rely on case-by-case decision making to permit consideration of individual circumstances. While case-by-case review can be valuable if the number of regulatory targets is small, it is likely to prove extremely cumbersome if there are large numbers of regulated firms. Another possibility is enforced self-regulation, which directs individual firms to draft their own rules, subject to some form of certification. See I. Ayres and J. Braithwaite, Responsive Regulation: Transcending the Deregulation Debate (1992). These privately written rules can then be publicly enforced, e.g., under the Clean Water Act EPA can penalize firms for violating their privately drafted oil spill prevention rules. In an effort to increase regulatory flexibility, EPA has begun experimenting with environmental contracting through its Project XL. The project gives selected companies more flexibility to meet environmental standards if they enter into contracts with EPA that promise greater reductions in pollutant discharges than would be achieved through existing standards.

The tension between flexibility and complexity and its implications for enforcement of environmental regulations is explored in the following case study.

A Case Study: Oil Spill Liability and Section 311 of the Clean Water Act

The tradeoff between regulatory flexibility and complexity is well illustrated by the history of federal regulation of discharges of oil spills and hazardous substances under section 311 of the Clean Water Act. This experience, on which the strict liability provisions of the Superfund legislation (CERCLA) are modeled, began in 1970 with the precursor of today’s Clean Water Act. In 1970 Congress established a national policy that “there should be no discharges of oil or hazardous substances into or upon the navigable waters of the United States.” As originally written, section 311 of this Act prohibited and required the reporting of all discharges of “harmful quantities” of oil. While this sounds like a relatively straightforward prohibition, it required the Secretary of the Interior, who at the time administered the statute, to determine what constituted “harmful quantities” of oil. Given the enormous uncertainties that surround assessments of the impact of pollutants on aquatic life, any regulation that required actual proof of harm would be extremely difficult to enforce. For small discharges of oil or hazardous substances, the costs of demonstrating harm surely would exceed any likely recovery. As a result, the Secretary of the Interior opted for a simpler, but less flexible, interpretation of section 311. He promulgated what came to be known as the “sheen test” for oil discharges. Under that test, any oil spill that caused “a film or sheen upon or discoloration of the surface of the water or adjoining shorelines” was deemed a harmful quantity prohibited by the statute.

The sheen test was challenged by dischargers, who argued that section 311 required evidence that small spills actually had caused harm. In United States v. Boyd, 491 F.2d 1163 (9th Cir. 1973), the Ninth Circuit held that the “harmful quantities” language in the statute meant that de minimis discharges were not illegal if they were not actually harmful. As a result, defendants charged with spilling oil could contest whether the discharges actually had caused harm. In a subsequent case, United States v. Chevron Oil Co., 583 F.2d 1357 (5th Cir. 1978), the Fifth Circuit held that the sheen test was only a rebuttable presumption of harm to the environment. The court emphasized that Congress had not...
chosen to prohibit all discharges of oil, but rather only discharges in “harmful quantities.” Under the Fifth Circuit’s approach, defendants were free to contest whether their discharges had caused harm, but they bore the burden of showing that the discharge had not actually been harmful.

In 1978, Congress amended section 311 to provide that environmental officials could prohibit any discharge of oil or hazardous substances that they found “may be harmful to the public health or welfare of the United States.” After extensively considering alternative approaches for determining what discharges may be harmful, EPA in 1987 again promulgated the sheen test. The sheen test again came under judicial scrutiny when challenged by defendants charged with releasing oil. After the Coast Guard assessed civil penalties ranging from $250 to $1,000 against Chevron for 12 discharges of oil that created oil sheens, the company successfully argued in court that the discharges were not illegal under section 311 because any impact of the spills on the ecosystem was de minimis. On appeal, the Fifth Circuit reversed. The court held that the 1978 amendments had authorized EPA to prohibit spills that “may be harmful” regardless of whether or not they caused actual harm. In holding that spills that violated the sheen test violated the statute regardless of whether or not they caused harm, the court explained that EPA could adopt a less flexible approach to regulation in order to avoid the administrative expense of a more complicated inquiry: “In sum, the agency may both proscribe incipient injury and measure its presence by a test that avoids elaborated inquiry. While it is apparent that such an approach sometimes overregulates, it is equally apparent that this imprecision is a trade-off for the administrative burden of case-by-case proceedings.” Chevron U.S.A., Inc. v. Yost, 919 F.2d 27 (5th Cir. 1990).

NOTES AND QUESTIONS

1. Why do you suppose that Congress did not simply prohibit all discharges of oil in section 311? What was to be gained by prohibiting only discharges in harmful quantities? Does the use of the sheen test effectively sacrifice these ends by prohibiting even discharges that may not be harmful?

2. If you determined that only discharges of oil or hazardous substances that are harmful should be prohibited, who should bear the burden of proof concerning the impact of the discharge: the discharger or enforcement officials? What effect is the allocation of the burden of proof likely to have on the enforceability of the prohibition?

3. Should it matter whether the discharger believed that the discharge would be harmful? Criminal prohibitions generally require some element of intentional conduct, though it need not necessarily be an intent to cause harm to the environment. By contrast, strict liability provisions impose liability without regard to fault. What impact would an intent requirement have on incentives to prevent discharges? What impact would a strict liability standard have on such incentives?

4. In April 1994, the Coast Guard announced a pilot program to issue “tickets” to dischargers who spill less than 100 gallons of oil. The tickets can be served on violators immediately by Coast Guard officials. The alleged violators then have the option of paying the fine within 30 days or seeking an administrative hearing to contest the charges. 59 Fed. Reg. 16,558 (1994).
Assessing Regulatory Strategies and Their Effect on Technological Innovation

Each regulatory strategy places its own informational demands on regulators and each has its own practical and political consequences. Uniform, technology-based controls initially were thought to be easier to develop and monitor. Thus, it is not surprising that some form of nationally uniform, technology-based controls are an essential feature of the regulatory approach employed in the Clean Air Act, the Clean Water Act, and RCRA. Risk-balancing and health-based standards were thought to be more difficult to implement and administer because they require considerable information about health effects and economic impacts that are difficult to assess with precision.

Critics of technology-based approaches have emphasized their inefficiencies. See, e.g., Ackerman & Stewart, Reforming Environmental Law: The Democratic Case for Market Incentives, 13 Colum. J. Envtl. L. 171, 173-175 (1988). Others disagree. Howard Latin argues that proposals for more flexible regulatory approaches are based on “an excessive preoccupation with theoretical efficiency” that ignores “actual decisionmaking costs and implementation constraints.” Latin, Ideal Versus Real Regulatory Efficiency: Implementation of Uniform Standards and “Fine-Tuning” Regulatory Reforms, 37 Stan. L. Rev. 1267, 1270 (1985). He maintains that because “[a]ny system for environmental regulation must function despite the presence of pervasive uncertainty, high decision-making costs, and manipulative strategic behavior resulting from conflicting private and public interests,” the “indisputable fact that uniform standards are inefficient does not prove that any other approach would necessarily perform better.”

Professor Carol Rose has proposed a hierarchy of efficient management strategies for common resources. She argues that the strategy with the least net costs depends upon the level of pressure on the resources. Rose, Rethinking Environmental Controls: Management Strategies for Common Resources, 1991 Duke L.J. 1. When there is little pressure on congestible resources, no regulation is needed (what she calls a DO NOTHING strategy, as illustrated in Figure 2.8).

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**FIGURE 2.8**
Strategy Comparison

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<tr>
<th>Pressure on Resource</th>
<th>Total Management Costs</th>
<th>DO-NOTHING</th>
<th>KEEPOUT</th>
<th>RIGHTWAY</th>
<th>PROP</th>
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**Source:** 1991 Duke L.J. 1, 24.
As resource use increases, a zoning approach that excludes certain uses from certain areas (KEEPOUT) has the least net costs. At still greater levels of pressure on common resources, regulations that prescribe the ways in which the resources can be used (RIGHTWAY) have the lowest management costs. Finally, at very high levels of pressure on congestible resources, a strategy that creates transferable property rights (PROP) that will promote their efficient use has the least net costs.

Professor Rose argues that environmental policy is currently making a partial transition from RIGHTWAY to PROP in the air pollution area. Implicit in her model is the notion that the outcome of the debate over the future of regulatory policy should turn on how far to the right we are along the horizontal axis of pressure on resources in her model. If her hypothesis about the relative shape of the cost curves is accurate, then critics of technology-based regulation have the better of the argument if resource pressures have grown beyond the point where RIGHTWAY has greater costs than PROP, while its defenders are right if we are to the left of this point, where RIGHTWAY has lower costs than PROP. Professor Rose also notes that much of the criticism of PROP is based on concern for its distributional impact and fears that it may sacrifice some of the moral force of RIGHTWAY by promoting the notion of “rights to pollute.” While she suggests some approaches for addressing these problems, Professor Rose emphasizes that more attention must be paid to the norm-formation impact of environmental management strategies.

Our discussion so far has assumed that the balance of costs and benefits represents an inflexible tradeoff: Greater environmental protection can only be achieved at the expense of greater costs. However, costs are not in fact fixed but reflect the technology available for pollution control. Improving technology can increase the level of reductions achievable and lower costs. Technological innovation that expands the menu, increases the capability, or reduces the cost of available pollution control technology is commonly viewed as a desirable goal. The impact of regulation on technological innovation and the potential for regulation to stimulate such innovation are crucial issues that must be considered in designing any regulatory scheme.

Regulations that establish performance standards without specifying the technology to be used to meet them preserve incentives for the development of improved pollution control technology. They do not, however, avoid the problem of strategic behavior by the regulated community during the time performance standards are under consideration. Regulatory targets have an incentive to exaggerate the costs of complying with proposed performance standards in an effort to convince regulators not to adopt them. As a result it is difficult to get accurate estimates from industry of prospective compliance costs. Once performance standards are adopted, the regulated community has an incentive to develop more efficient technology for achieving them, absent a belief that regulators can be convinced to relax the standards.

Experience with environmental regulation has demonstrated that industry estimates of prospective compliance costs often prove to be far too pessimistic. EPA Assistant Administrator William G. Rosenberg notes: “Historically, actual costs are generally much lower than projections because of improved technology. For example, in 1971 the oil industry estimated that lead phase-out would cost 7 cents a gallon, or $7 billion a year. In 1990, with 99 percent of lead phase-out accomplished, actual costs are only $150 million to $500 million a year, 95 percent less than earlier estimates.” Rosenberg, Clean Air Amendments, 251 Science 1546, 1547 (1991).
Industry estimates of the costs of complying with the acid rain control program in the 1990 Clean Air Act Amendments quickly proved to be substantially overstated. By 1992, EPA had reduced its cost estimate of the acid rain control program to $3 billion per year from the $4 to $5 billion it employed when the legislation was adopted. EPA then estimated that emissions allowances would trade for only $275 per ton instead of its previous estimates of $500 to $750 per ton and industry estimates of as much as $1,500 per ton. EPA Issues Final Rules for Utilities on Acid Rain, Wall St. J., Oct. 27, 1992, at A18. In fact, allowances have sold for far less, at prices ranging from $75 to $225 per ton between 1997 and 1999.

Several studies have confirmed that pollution control regulations tend to be substantially less costly than expected before regulations are adopted. One reason for this phenomenon is that new technologies that lower control costs are developed in response to regulation. Goodstein & Hodges, Polluted Data, 35 The American Prospect 64 (1997). Another factor may be that regulations do not achieve as much pollution control as expected. See Harrington, Morgenstern & Nelson, Predicting the Costs of Environmental Regulations, 41 Environment 10 (Sept. 1999).

The question of how regulatory policy best can incorporate incentives for technological innovation is becoming an increasingly important issue. See Miller, Environmental Regulation, Technological Innovation, and Technology-Forcing, 10 Nat. Res. & Env. 64 (Fall 1995). The Clinton administration actively promoted the development of environmental technologies. EPA’s Golden Carrot program, funded by a consortium of electric utilities, offered $30 million to the appliance manufacturer who won a contest to develop a refrigerator 50 percent more efficient than 1990 models. The program was funded by contributions from electric utilities based upon calculations of the financial savings they would enjoy by avoiding costly investments in new power plants due to the efficiency gains the refrigerator would provide. In June 1992, the Whirlpool Corporation won the competition, which generated 14 competing proposals. The product Whirlpool began marketing in 1994 is the most energy-efficient refrigerator in the world. C. Moore & A. Miller, Green Gold 207-208 (1994).

Based on analysis of the development of technology to control sulfur dioxide pollution, Margaret R. Taylor, Edward L. Rubin, and David A. Hounshell argue that regulation and the anticipation of regulation played a particularly important role in stimulating technological innovation. Regulation as the Mother of Innovation: The Case of SO₂ Control, 27 Law & Policy 348 (2005). They demonstrate that there was a huge surge in patent applications for new pollution control technology at the time of enactment of the Clean Air Act in 1970 and whenever other measures to strengthen regulation were imminent.

NOTES AND QUESTIONS

1. Technology has proved to be remarkably adaptable once regulation has created the proper incentives. The chemical industry publicly denied the availability of reasonable substitutes for chlorofluorocarbons (CFCs), chemicals that damage the ozone layer, until regulation became imminent after the discovery of the Antarctic ozone hole and the development of an international consensus that CFCs should be phased out. Since regulations were announced, substitutes

2. The economic and political risks are such that Congress has only rarely chosen to threaten the shutdown of an entire industry should emissions standards prove unachievable. The issue is more often what form of regulation is most conducive to innovation. In particular, fixed emissions standards based on current assessments of technology are widely faulted for the absence of incentives for further innovation. An industry regulated by a "best available technology" standard may rightly question the benefits of research on new pollution control methods knowing that the costs could increase. Moreover, once the required level of emissions reduction has been achieved, there is no remaining incentive for efforts to go still further. See Dudek & Palmisano, Emissions Trading: Why Is This Thoroughbred Hobbled?, 13 Colum. J. Envtl. L. 217, 234-236 (1988).

3. Is there any way to judge the innovation potential in particular industries in advance of technology-forcing requirements? Some technologies appear to be mature, in the sense that they have been in use for decades and improvements over time might readily be expected to approach theoretical limits. Consider, for example, the relative potential for improving computers and the gasoline combustion engine. On the other hand, technology forcing may lead to a necessary examination of alternative fuels that offer significant opportunities for improvement. See, e.g., The Greening of Detroit, Business Week, April 8, 1991, at 54-60. Another example is steelmaking, an industry that goes back more than 200 years. Dramatic reductions have been achieved in the energy requirements and emissions associated with conventional steelmaking. Nevertheless, much more advanced methods of steelmaking are now being developed that would produce better-quality steel using lower-quality (and less expensive) coal, while also reducing energy needs and emissions. J. Goldemberg, Energy for a Sustainable World 67-69 (1987).

4. Advocates of increased reliance on economic incentive approaches to regulation argue that they are better suited for stimulating technological innovation than the "game of chicken" approach Congress employed in dealing with the auto industry in the early 1970s. Pollution taxes and emissions trading schemes create a continuous incentive for innovations that reduce emissions while giving companies flexibility to meet emissions limits however they can, including process changes and other alternatives to conventional end-of-pipe technology. Others are more skeptical of the impact of economic incentive approaches on technological innovation. They argue that such approaches are best suited for stimulating cost savings rather than improvements in pollution control. Should this matter? A study of emissions trading under the Clean Air Act suggests that flexibility has led to innovation in the form of cost-saving modifications as opposed to new hardware or exotic technologies. Dudek & Palmisano, supra at 235-236.

5. While renewed interest in economic incentive approaches to environmental regulation makes them appear to be a recent invention, they actually have been the subject of high-level debate from the start of the federalization of environmental law. In 1965 the Economic Pollution Panel of the President's Science Advisory Committee discussed pollution taxes in their report Restoring the Quality of the Environment. In 1966, the President's Council of Economic Advisers (CEA) proposed the use of effluent charges to create incentives for dischargers to reduce pollution, with the revenue raised to be used to pay for municipal treatment plants. CEA, Economic Report of the President, 1966, at
FIGURE 2.9
Comparison of Uniform, National Regulatory Approaches with Incentive-based Approaches to Regulation

<table>
<thead>
<tr>
<th>Pros</th>
<th>Cons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Uniform, National Regulation</strong></td>
<td>Arguably easier to establish</td>
</tr>
<tr>
<td></td>
<td>Assures protection of health</td>
</tr>
<tr>
<td></td>
<td>Precludes relocation to avoid controls</td>
</tr>
</tbody>
</table>

| 2. **Effluent Charges** | Creates incentives for dischargers to reduce emissions in the most cost-effective manner | No guarantee sufficiently protective levels of control will be achieved |
|      | Provides funds to cover social costs of pollution | Difficult to determine socially efficient level of such charges |
|      |                      | Increases cost of production |
|      |                      | Creates incentive for midnight dumping |

| 3. **Marketable Permits** | Creates incentives for dischargers to reduce emissions in the most cost-effective manner | Can result in less equitable distributions of pollutants |
|      | Overall allowable level of pollution can be determined in advance by allocation of permit rights | Some believe it is unfair to permit polluters to profit from sale of rights to pollute |

| 4. **Deposit-Refund Schemes** | Reduces incentive for midnight dumping | Administrative costs of collecting and refunding deposits reduce attractiveness |

| 5. **Provision of Subsidies for Investments in Pollution Controls** | Assists small and less profitable firms in bearing costs of compliance | Penalizes firms that already have invested in compliance technology |
|      |                      | Redistributions income from taxpayers to polluting activities |

*Source: Adapted from Congressional Research Service, Pollution Taxes, Effluent Charges and Other Alternatives for Pollution Control 2:8 (May 1977).*
124 (1966). In his Environmental Message of 1971, President Nixon proposed that Congress impose a charge on sulfur dioxide emissions, and he pushed for a stiff tax on gasoline lead additives to encourage their rapid phaseout. These proposals were not given serious consideration by Congress.

6. One of the most important reasons why Congress did not quickly embrace incentive-based approaches to regulation was its awareness that a shift to such policies would create losers as well as winners. As Figure 2.9 indicates, each of the principal incentive-based approaches has advantages and drawbacks that reflect, at least in part, how they alter the distribution of the costs and benefits of regulation. In addition, a study of congressional staff discovered that neither proponents nor opponents of effluent charges really understood the theory behind them. S. Kelman, What Price Incentives? Economists and the Environment 100-101 (1981).

7. A report issued by the World Resources Institute (WRI) estimates that a strategy of shifting the revenue burden of taxation from economic “goods” to environmental “bads” could raise between $100 to $180 billion per year. “Congestion tolls on urban highways could generate $40 to $100 billion, carbon taxes would yield $30 to $50 billion, and solid-waste charges could raise another $5 to $10 billion.” R. Repetto, R. Dower, R. Jenkins & J. Geoghegan, Green Fees: How a Tax Shift Can Work for the Environment and the Economy 11 (1992). These additional revenues could permit the government to reduce marginal tax rates on economically productive activities like labor, producing $45 to $80 billion in net economic benefits annually. Id. The WRI estimated that effluent charges, charges on environmentally damaging activities or products, and the reduction of tax benefits and subsidies for resource exploitation could generate nearly $40 billion in extra revenue each year. Id. at 83.

C. THE REGULATORY PROCESS

The regulatory process is the arena in which law is translated into policy. This occurs in large part through the actions of administrative agencies operating under the watchful eye of the judiciary. By increasing the authority of administrative agencies, regulatory legislation has helped transform “the system of shared powers created by the constitution” into “a system of shared influence over bureaucratic decision-making.” Strauss, Legislative Theory and the Rule of Law, 89 Colum. L. Rev. 427, 428 (1989), quoting M. McCubbins & T. Sullivan eds., Congress: Structure and Policy 405 (1987). A wide range of interests seek to influence how agencies implement the environmental statutes, including environmental groups, regulated industries, powerful congressional committees, and the Executive Office of the President. The umpire lurking in the background is the judiciary, whose intervention routinely is sought by parties disappointed by agency decisions.

1. Law, Policy, and Agency Decision Making

Whenever Congress decides to confront an environmental issue, its options can be visualized as a “policy space,” in the parlance of our policy sciences.
colleagues. Each point within that space represents a discrete, defined program for action, including the action of doing nothing. The statutes Congress enacts seldom point to a single unique location within the policy space, however. Instead, Congress identifies a target area, a subset of all the available options, and instructs an administrative agency to implement the statute by resolving all the remaining issues necessary to produce a definitive governmental decision.

To translate the environmental laws into regulations, administrative agencies must choose a regulatory alternative within the policy space established by law and develop, propose, and promulgate regulations. The Administrative Procedure Act and the environmental laws under whose authority the agency acts outline the ground rules for agency action, but agencies generally have considerable discretion over both the substance of regulatory policy and the procedures used to formulate it. How agency discretion is exercised within the policy space identified by the environmental statutes determines the precise contours of environmental policy and, presumably, the level of environmental protection the laws actually provide. Thus, study of the rulemaking process and agency decision making is critical to understanding environmental policy.

Dissatisfied with administrative implementation of the environmental laws, Congress has incorporated increasingly detailed regulatory directives into the environmental laws, coupled with provisions designed to force agencies to act. The classic agency-forcing device is a provision that authorizes a citizen suit against agency officials who fail to take certain action.

Virtually all of the major federal environmental statutes authorize citizens to bring action-forcing litigation against EPA when the EPA administrator has failed to perform a nondiscretionary duty. Most citizen suit provisions are patterned on section 304(a)(2) of the Clean Air Act, which authorizes “any person” to sue the administrator of EPA “where there is alleged a failure of the Administrator to perform any act or duty under this chapter which is not discretionary with the Administrator.” 42 U.S.C. §7604(a)(2). Virtually identical provisions are contained in the Clean Water Act (§504(a)(2)), 33 U.S.C. §1365, the Resource Conservation and Recovery Act (§7002(a)(2)), 42 U.S.C. §6972(a)(2), the Safe Drinking Water Act (§1449), 42 U.S.C. §300j-8, the Toxic Substances Control Act (§20(a)(2)), 15 U.S.C. §2619, the Comprehensive Environmental Response, Compensation, and Liability Act (§310), 42 U.S.C. §9654, and other statutes. Because these statutes also authorize court awards of attorneys' fees to prevailing parties, plaintiffs can recover their legal costs when they successfully sue officials who fail to act.

During the 1980s Congress often amended the environmental statutes to require agencies to issue regulations by certain deadlines. Agencies who missed these deadlines usually became the targets of citizen suits, called “deadline litigation,” alleging that the agency had failed to perform a nondiscretionary duty. While such lawsuits are not the only avenue for persuading agencies to initiate regulatory proceedings, they have been one of the most effective ones. The Administrative Procedure Act and most federal environmental laws require agencies to give citizens the right to petition for the initiation of rulemaking proceedings. See 5 U.S.C. §553(e). A study performed for the Administrative Conference of the United States found that citizen petitions were used relatively infrequently. Most administrative practitioners indicated that there “were more effective ways to influence agency action, such as informal contacts or litigation, and that they would be loath to file a petition for rulemaking because of the delay they expect in the final disposition of their requests.” Luneberg.

Although agencies generally are not required to respond to citizen petitions by a certain date, one unusual exception to this rule is provided by section 21 of the Toxic Substances Control Act, 15 U.S.C. §2620. Section 21 of TSCA requires EPA within 90 days to grant or deny citizen petitions to initiate rulemaking actions under TSCA to control chemicals that may present “unreasonable risks” to public health or the environment. If EPA fails to act on such a petition within 90 days, or denies the petition, the petitioners may file suit in federal district court seeking de novo review of such failure or denial. If a court determines that the action sought by the petition meets the requisite statutory standard, “the court shall order the [EPA] Administrator to initiate the action requested by the petitioner.” 15 U.S.C. §2620(b)(4)(B). The combination of a tight deadline for EPA to respond to petitions and a cause of action to challenge petition denials in court provides petitioners with a potentially significant tool to stimulate agency action.

2. Rulemaking Procedures

In the late 1960s, when the fledgling environmental movement launched an assault on the use of DDT, a formal adjudicatory hearing was held to consider cancelling the registration of DDT. The hearing took more than 7 months and produced more than 9,000 pages of testimony from 125 expert witnesses. After environmental concerns stimulated an avalanche of federal environmental legislation in the early 1970s, agencies relied increasingly on informal rulemaking proceedings to make regulatory decisions. Today most environmental regulations are promulgated through informal rulemaking, although pesticide cancellation proceedings under FIFRA still involve formal adjudicatory hearings.

The procedural requirements for informal rulemaking are relatively straightforward. Informal rulemaking proceedings are governed by section 4 of the Administrative Procedure Act (APA), 5 U.S.C. §553, which requires that agencies provide (1) public notice in the Federal Register of proposed rulemaking actions, (2) an opportunity for the public to submit written comments, and (3) publication of final rules in the Federal Register accompanied by a concise statement of their basis and purpose. Agencies are permitted to formulate rules through informal rulemaking unless an enabling statute requires that hearings be conducted on the record.

Agencies undertake to develop rulemaking proposals prior to issuing a notice of proposed rulemaking. In some cases agencies may publish an advance notice of proposed rulemaking (ANPR) to solicit input from the public when the agency need not act quickly or to defuse pressure for faster action by indicating that the agency is considering the issue.

For EPA rulemaking proceedings, draft rulemaking documents usually are prepared by a work group of EPA staff who represent offices likely to be affected by the initiative. Draft notices of proposed rulemaking and supporting documents, which may be prepared with the help of outside consulting firms in more complex rulemakings, generally are reviewed by a steering committee composed of representatives from the major EPA offices. The final step in EPA’s internal review procedures is “red border” review by top-level management and the EPA administrator.
Some of the federal environmental laws specify additional rulemaking procedures, but these procedures generally are consistent with those of the informal rulemaking model. For example, section 307(d) of the Clean Air Act, 42 U.S.C. §7607(d), provides extensive requirements for maintenance of a rulemaking docket by EPA for rulemakings under the Clean Air Act. It also specifies a standard for judicial review of agency action, which generally tracks the judicial review provisions of APA section 706 (although it provides that courts may invalidate rules for procedural errors only if the errors were so serious that “there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made”).

Other environmental statutes require that public hearings be held before certain major regulatory decisions are made (see, e.g., §§3001(a) and 3004(a) of RCRA, 42 U.S.C. §§6921(a) and §6924(a), which also require “consultation with appropriate Federal and State agencies”). Section 6(c) of the Toxic Substances Control Act, 15 U.S.C. §2605(c), specifies detailed procedures for informal rule making under section 6(a) of TSCA. It requires that EPA provide an opportunity for oral testimony and authorizes the submission of rebuttal testimony and cross-examination if the EPA administrator determines that it is necessary to resolve disputed issues of material fact. The Occupational Safety and Health Act also requires OSHA to hold a public hearing if written objections are filed to a proposed rule by any interested parties, and it gives such parties the right to conduct cross-examination when it conducts hearings on proposed rules.

**THE REGULATORY PROCESS: A PATHFINDER**

The Administrative Procedure Act (APA), 5 U.S.C. §§551 et seq., establishes the basic procedural requirements agencies must follow in conducting informal rulemaking. Its basic requirements—that agencies provide public notice and an opportunity to comment prior to promulgating regulations—are implemented through notices published daily in the Federal Register describing agency actions and how to comment on them. The Federal Register can be accessed online at: [www.archives.gov/federal_register/](http://www.archives.gov/federal_register/). Public comments and background documentation for agency actions are usually kept in rulemaking dockets referenced in the Federal Register notices. Information concerning EPA’s rule-making dockets is available online at [www.epa.gov/epahome/dockets.htm](http://www.epa.gov/epahome/dockets.htm) and comments on rules proposed by any federal agency may be submitted electronically at [www.regulations.gov](http://www.regulations.gov).

Some environmental statutes supplement the APA by specifying additional procedures agencies must follow before taking certain actions. See, e.g., §6(c) of TSCA or §307(d) of the Clean Air Act. The Negotiated Rulemaking Act of 1990 generally codifies agency practices for conducting negotiated rulemaking. The Freedom of Information Act, 5 U.S.C. §552, provides an important tool for obtaining information from agencies that may assist citizens in participating in rulemaking proceedings.

Other statutes require agencies to consider certain factors when undertaking rulemaking. The Regulatory Flexibility Act (RFA) 5 U.S.C. §601, requires agencies to consider the impact of regulations on small
businesses, and the Small Business Regulatory Enforcement Fairness Act (SBREFA) authorizes judicial review of an agency’s compliance with the RFA.

Executive Order 12,866 requires federal agencies to submit significant rulemaking actions to OMB’s Office of Information and Regulatory Affairs (OIRA) for review prior to publication in the Federal Register. Each agency publishes a summary of its rulemaking plans and a description of the status of existing rulemakings in an Agenda of Regulatory and Deregulatory Actions that appears in the Federal Register at the end of April and October. See, e.g., 67 Fed. Reg. 33,724 (2002).

A useful introduction to the regulatory process that highlights important legal and procedural issues is Jeffrey S. Lubbers, A Guide to Federal Agency Rulemaking (3d ed. 1998). The Administrative Law Review, published by the ABA’s Section of Administrative Law and Regulatory Practice, features articles on the regulatory process and an annual review of administrative law cases.

Despite the relatively minimal procedural requirements imposed by the APA, it has become enormously difficult for regulatory agencies to issue regulations through informal rulemaking. Agencies face several constraints on their ability to complete complex rulemakings efficiently and expeditiously. These include budgets that rarely provide sufficient resources to conduct more than a handful of major rulemakings in any given year, frequent turnover of technical staff, and the difficulty of obtaining critical information that typically is more readily available to the regulated community than to the regulators. As a result of these and other constraints, “[n]o health and safety agency has been able to promulgate regulations for more than three controversial chemicals in any given year.” Shapiro & McGarity, Reorienting OSHA: Regulatory Alternatives and Legislative Reform, 6 Yale J. on Reg. 1, 6-7 (1989).

Although the procedural requirements for informal rulemaking remain remarkably simple, fear of judicial reversal has caused agencies to bend over backwards to supply detailed justifications for their actions. For example, Thomas McGarity notes that when EPA issued the initial national ambient air quality standards in 1971, the APA-required “concise general statement of basis and purpose” for the rules occupied a single page in the Federal Register. By 1987, “revision of a single primary standard consumed 36 pages in the Federal Register and was supported by a 100-plus-page staff paper, a lengthy Regulatory Impact Analysis that cost the agency millions of dollars, and a multi-volume criteria document.” Id. at 1387. T. McGarity, Some Thoughts on “Deossifying” the Rulemaking Process, 1992 Duke L.J. 1385, 1386.

The seemingly innocuous requirement of a concise statement of basis and purpose “has blossomed into a requirement that agencies provide a ‘reasoned explanation’ for rules and that they rationally respond to outside comments passing a ‘threshold requirement of materiality.’” Id. at 1400. As McGarity notes, while these additional analytic requirements are “not especially burdensome in theory,” in practice they “invite abuse by regulatees who hire consultants and lawyers to pick apart the agencies’ preambles and background documents and launch blunderbuss attacks on every detail of the legal and technical bases for the agencies’ rules.” Id. As a result, agencies seeking to
avoid judicial reversals must go to great lengths to provide exceedingly thorough responses to comments.

Agencies also must comply with requirements for presidential and congressional review of rulemaking actions, as discussed below. These include the provisions of Executive Order 12,866, which specifies that significant regulatory actions must be reviewed by the Office of Management and Budget before they can be published in the Federal Register, and the Small Business Regulatory Enforcement Fairness Act (SBREFA), Pub. L. 104-121. SBREFA requires EPA and OSHA to give representatives of small businesses an opportunity to review and comment on certain rules that may affect them before the rules are even proposed publicly. SBREFA also authorizes judicial review of agency compliance with the Regulatory Flexibility Act (RFA), 5 U.S.C. §§601 et seq. The RFA requires agencies to prepare “regulatory flexibility analyses” when proposed or final rules are issued that “have a significant economic impact on a substantial number of small entities.” Modeled on NEPA’s environmental impact statement requirement, regulatory flexibility analyses require EPA to analyze alternatives to any regulatory action likely to have a substantial effect on small entities. SBREFA also requires that all rules issued by federal agencies be sent first to Congress for review before taking effect. The legislation creates special fast-track procedures for Congress to enact a resolution disapproving the rules. This provision, known as the Congressional Review Act, 5 U.S.C. §§801 to 808, provides that if Congress enacts a joint resolution disapproving a regulation, the regulation shall not take effect or continue in effect. If a regulation is disapproved by Congress, the Act prohibits the agency that issued it from issuing any new rule that is “substantially the same as” the disapproved rule unless specifically authorized by subsequent legislation. 5 U.S.C. §801(b)(2).

In Immigration and Naturalization Service v. Chadha, 462 U.S. 919 (1983), the Supreme Court held that a legislative veto of regulations is unconstitutional because it bypassed the President’s role in approving or disapproving legislation. The Congressional Review Act avoids this constitutional problem by providing that joint resolutions of disapproval must be signed by the President or enacted over his veto. In March 2001 Congress used the Congressional Review Act for the first time to repeal a regulation. The regulation repealed by Congress was the Occupational Health and Safety Administration’s ergonomics standard to protect workers from repetitive stress injuries. The regulation, which had been under development by OSHA for a decade, finally had been issued in the closing days of the Clinton administration. OSHA expected that the rule would prevent 500,000 worker injuries per year from carpal tunnel syndrome, back strains, and other ailments. OSHA acknowledged that the rule would be expensive for businesses, estimating that it ultimately could cost $4.5 billion to implement, but it projected that it would save $9 billion per year by reducing worker injuries. On March 1, Congressional Republicans introduced a resolution of disapproval, which was approved by the Senate on March 6, 2001, by a vote of 56-44. On March 7, the House of Representatives adopted the joint resolution by a vote of 223-206. Using the fast-track procedures of the Congressional Review Act, the joint resolution was adopted without any hearings or committee action, with no opportunities for amendments, and with floor debate limited to ten hours. President Bush endorsed the disapproval effort and signed the joint resolution repealing the rule.

In December 2000, Congress enacted the Information Quality Act (IQA), §515 of Title V of Pub. L. 106-554, also sometimes called the Data Quality Act,
as part of the FY 2001 Treasury and General Government Appropriations Act. The IQA requires the Office of Management and Budget (OMB) to issue “guidelines ensuring and maximizing the quality, objectivity, utility, and integrity of information (including statistical information) disseminated by Federal agencies.” The OMB published government-wide guidelines for complying with the IQA in February 2002—67 FR 8452. These and other requirements piled by the executive branch on top of the APA’s seemingly simple statutory provisions have contributed to ossification of the regulatory process and the ability of regulated industries to successfully forestall the adoption of new regulatory standards. See McGarity, Shapiro & Bollick, Sophisticated Sabotage (2004) for a description of how regulatory targets are able to use procedural gambits to sabotage the adoption of regulations.

3. Reforming Rulemaking

Using advances in electronic communication, EPA and other regulatory agencies are attempting to make it easier for the public to participate in rulemaking proceedings and to retrieve information from the agencies. EPA’s World Wide Web site (http://www.epa.gov) provides detailed information on the agency’s activities and access to agency reports and databases. EPA and other agencies are now allowing comments on proposed rules to be submitted electronically. In 2003 the federal government launched a website (www.regulations.gov) that permits the public to submit comments online on any rule proposed by a federal agency.

While improvements in technology may make it easier to communicate with government agencies, they are unlikely to serve as a vaccine for regulatory ossification. Indeed, if easier access is not accompanied by fundamental reforms in the process, the slow pace and contentious nature of rulemaking may be exacerbated. Efforts to improve the rulemaking process have spawned a variety of initiatives. These include regulatory negotiation, generic rulemaking, and the latest efforts to “reinvent regulation.”

A. Negotiated Rulemaking


In a negotiated rulemaking, the major groups interested in a prospective rulemaking action attempt to resolve their differences through negotiations prior to issuance of a proposed rule. Pursuant to the Federal Advisory Committee Act, the participants in a negotiated rulemaking are appointed to a negotiating committee by the agency responsible for the rule. Negotiations among the interest groups then take place with the assistance of an agency-appointed mediator. Agency staff responsible for developing the proposed rule also may participate. If the negotiations are successful, the parties agree on the substance of a
proposed rule, which is then issued by the agency for public comment. The agency then follows the standard notice-and-comment procedures of informal rulemaking and the parties to the negotiation participate in the rulemaking.

If successful, negotiated rulemaking should reduce the chances that conflicts among interest groups will result in legal challenges to the regulation ultimately adopted. Once a consensus rule has been proposed, the rulemaking should be able to proceed relatively quickly because contentious issues presumably will have been resolved during the pre-proposal negotiations.

Not all rules are good candidates for negotiated rulemaking. Indeed, the procedure probably works well only in certain narrowly defined circumstances. Philip Harter has identified certain criteria for a successful regulatory negotiation. These include the following:

(1) The parties should have power to affect the decision and an incentive to bargain.
(2) The number of parties should be small enough to permit bargaining.
(3) The issue must be ready for decision and a firm deadline for decision should be set.
(4) Negotiation must have the potential to benefit all parties.
(5) The issue should not center on a fundamental value conflict between parties.
(6) More than one issue should be involved to allow tradeoffs across issues.
(7) The agency should commit to propose the product of the negotiations.


The Negotiated Rulemaking Act of 1990 endorses some of these criteria, as reflected in the factors that it requires agencies to consider before embarking on a negotiated rulemaking. The Act specifies that agencies should consider whether there are a limited number of significantly affected interests that can be adequately represented in a negotiation and whether there is a reasonable likelihood of reaching consensus within a fixed period of time. The Act essentially codifies what had been existing agency procedures for conducting negotiated rulemakings.

Regulatory negotiation is becoming an accepted alternative for developing proposed rules, although it is doubtful that it can be used successfully in the most controversial rulemakings, which rarely will meet the criteria outlined above. Only regulations that involve a small number of issues, that affect a limited number of interests, and that have firm deadlines requiring that some action be taken are likely to be successful candidates for regulatory negotiation.

**B. GENERIC APPROACHES TO RULEMAKING**

Agencies have tried several alternative approaches for speeding up the glacial progress of standard-setting. One approach has been to permit agencies to adopt interim standards based on substantially reduced information thresholds while the agency gathers the necessary data to determine at what levels final standards should be set. When OSHA was created, Congress realized that the Agency faced a mammoth task in promulgating regulations to protect workers
from exposure to a plethora of workplace hazards. To ensure that workers were rapidly provided with at least a modicum of protection, Congress directed OSHA to adopt as interim standards, without conducting rulemaking under the Administrative Procedure Act, national consensus standards already established by a national standard-setting organization or any health or safety standards already adopted by other federal agencies. 5 U.S.C. §655(a). In 1971 OSHA adopted exposure limits for approximately 400 chemicals based largely on the Threshold Limit Values (TLVs) adopted by the American Conference of Governmental Industrial Hygienists (ACGIH) in 1968.

While this approach allowed OSHA to promulgate relatively comprehensive regulations rapidly, it did not address the problem the Agency would face in enforcing such standards. Moreover, “interim” standards have a way of acquiring a life of their own. Although Congress contemplated that OSHA would revise the interim standards to provide more protection to workers through normal rulemaking proceedings, OSHA did not attempt to revise the standards to keep them up to date with changes in the ACGIH TLVs until 1989, long after the TLVs had been lowered for hundreds of the chemicals. When it finally got around to updating the standards, OSHA employed a generic rulemaking approach that considered health, risk, and feasibility evidence for 428 substances in one massive rulemaking. On June 7, 1988, OSHA proposed to amend the permissible exposure limits (PELs) covering air contaminants and to add new PELs to address substances not previously regulated. OSHA adopted a final regulation in January 1989. The 650-page final rule occupied an entire volume of the Federal Register. It strengthened 212 permissible exposure limits while setting new PELs for 164 substances that had not been regulated by OSHA. 54 Fed. Reg. 2332 (1989). However, OSHA’s rule ultimately was struck down by the Eleventh Circuit in the Air Contaminants decision, AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir. 1992). The court held that OSHA needed to make more individualized findings concerning the risks of the chemicals regulated and the feasibility of controls on various industries in order to justify such a rule. As a result of the court’s decision, the problems OSHA faces in just updating old standards will be compounded dramatically. Indeed it was not until February 2006 that OSHA issued its first significant occupational exposure standard during the more than 5 years that President Bush had then been in office. 71 FR 10349 (Feb. 28, 2006) (PEL to control occupational exposure to hexavalent chromium).

C. REINVENTING REGULATION

Faced with legislative proposals to drastically alter the regulatory process, President Clinton announced his own regulatory reform program in March 1995. The President directed agencies to intensify their efforts to identify and eliminate unnecessary regulations. As part of this “reinventing regulation” initiative, the Clinton administration launched Project XL. The project, whose acronym stands for Excellence and Leadership, is designed to give greater flexibility to businesses and state and local governments in deciding how to meet environmental standards. Participants in Project XL enter into comprehensive contracts with EPA that promise greater, multi-faceted reductions in pollutant discharges than would be achieved through existing standards in return for waiving application of some of those standards. While this effort to “reinvent regulation” has been widely endorsed by projects examining ways to improve future environmental
C. The Regulatory Process

policy, see, e.g., NAPA, Resolving the Paradox of Environmental Protection: An Agenda for Congress, EPA & the States 75 (1997), it is not without its critics. See Rena Steinzor, Reinventing Environmental Regulation: The Dangerous Journey from Command to Self-Control, 22 Harv. Envtl. L. Rev. 103 (1998). One concern is the difficulty of defining and measuring what constitutes improved environmental performance. EPA’s legal authority to waive existing standards also has been questioned. EPA staff reportedly have developed the motto, “If it isn’t illegal, it isn’t XL.” What’s Up With Project XL—Week of 3/11/96, Project XL Update. For a discussion of the prospects for greater use of collaborative process for developing regulations, see Jody Freeman, Collaborative Governance in the Administrative State, 45 U.C.L.A. L. Rev. 1 (1997). Freeman notes that the limited resources of public interest and community groups restrict their ability to participate in the collaborative development of regulations.

EPA’s reinvention efforts have sought to promote five principles: (1) offering regulatory flexibility in return for better results; (2) building stronger partnerships with state and local governments, tribes, community leaders, businesses, and private citizens; (3) facilitating compliance by making regulatory information easier to obtain and to understand; (4) cutting red tape associated with environmental regulations; and (5) making it easier to report, obtain, and understand information about the environment. EPA is seeking to measure its progress through a strategic planning process with objective goals, as required by the Government Performance and Results Act.

4. Presidential Oversight of Rulemaking

When decisions are being made about environmental regulations that affect important constituencies, few government officials are purely disinterested observers of the rulemaking process. No official has more clout with executive agencies than the president, who appoints agency officials who serve at the president’s pleasure. In the exercise of this “clout” over executive agencies, the president is supposed to be guided by a constitutional duty to “take Care that the Laws be faithfully executed.” U.S. Const., art. II, §3.

Every president since Richard Nixon has established some sort of regulatory review program. The programs operated during the Reagan and Bush administrations were the targets of harsh criticism by environmentalists who argued that they were used to block implementation of the laws. President Clinton’s regulatory review program was established by Executive Order 12,866, which provides that only significant regulatory actions are subject to OMB review. Executive Order 12,866 also establishes time limits on OMB review and it provides for public disclosure of information concerning the review process.

The Clinton administration also sought to use its executive oversight authority to require agencies to incorporate environmental justice concerns in their actions. In 1994, President Clinton issued Executive Order 12,898, 59 Fed. Reg. 7,629 (1994). The executive order directs each federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations.” The executive order directs agencies to consider the impact of environmental and human health risks on minority and poor communities. Each agency is required to develop an environmental justice strategy and to
revise agency rules or policies to promote environmental justice. Other executive orders require agencies to consult and coordinate with Indian Tribal Governments (E.O. 13,084) and to respect principles of federalism (E.O. 13,132).

The president is not the only source of pressure exerted on agencies. Its lawmaking and appropriations powers give Congress formidable tools for influencing agency decision making. Although the Supreme Court’s decision in INS v. Chadha, 462 U.S. 919 (1983), removed the “legislative veto” from Congress’s arsenal, Congress has not hesitated to exercise other oversight authority to influence agency action and to contest presidential efforts to exert greater control over regulatory decisions. As noted above, congressional dissatisfaction with EPA’s performance has resulted in the enactment of increasingly specific statutory directives designed to serve as agency-forcing mechanisms. These provisions effectively dictate what agency priorities should be and establish timetables for agency action enforceable in court.

Congress has been far more than a disinterested observer of the regulatory process. Members of Congress often seek to influence agency decisions, and congressional pressure can have a significant impact on agency decision making.

The legal bounds on executive and congressional oversight of the rule-making process were addressed in the case that follows. The D.C. Circuit was faced with a challenge to EPA’s promulgation of new source performance standards for coal-fired power plants. The court rejected a variety of challenges to the regulation from utilities and environmental groups. An important procedural question in the case centered around the environmentalists’ claim that the standards had been weakened significantly at the eleventh hour due to the personal intervention of President Carter, a key member of Congress, and the White House staff.

**Sierra Club v. Costle**

657 F.2d 298 (D.C. Cir. 1981)

Wald, Circuit Judge:

We have already held that a blanket prohibition against meetings during the post-comment period with individuals outside EPA is unwarranted, and this perforce applies to meetings with White House officials. We have not yet addressed, however, the issue whether such oral communications with White House staff, or the President himself, must be docketed on the rulemaking record, and we now turn to that issue. The facts, as noted earlier, present us with a single undocketed meeting held on April 30, 1979, at 10:00 A.M., attended by the President, White House staff, other high ranking members of the Executive Branch, as well as EPA officials, and which concerned the issues and options presented by the rulemaking.

We note initially that section 307 makes specific provision for including in the rulemaking docket “written comments” of other executive agencies along with accompanying documents on any proposed draft rules circulated in advance of the rulemaking proceeding. Drafts of the final rule submitted to an executive review process prior to promulgation, as well as all “written comments,” “documents,” and “written responses” resulting from such interagency review process, are also to be put in the docket prior to promulgation. This specific requirement does not mention informal meetings or conversations concerning the rule which are not part of the initial or final review processes, nor
does it refer to oral comments of any sort. Yet it is hard to believe Congress was unaware that intra-executive meetings and oral comments would occur throughout the rulemaking process. We assume, therefore, that unless expressly forbidden by Congress, such intra-executive contacts may take place, both during and after the public comment period; the only real issue is whether they must be noted and summarized in the docket.

The court recognizes the basic need of the President and his White House staff to monitor the consistency of executive agency regulations with Administration policy. He and his White House advisers surely must be briefed fully and frequently about rules in the making, and their contributions to policymaking considered. The executive power under our Constitution, after all, is not shared—it rests exclusively with the President. The idea of a "plural executive," or a President with a council of state, was considered and rejected by the Constitutional Convention. Instead the Founders chose to risk the potential for tyranny inherent in placing power in one person, in order to gain the advantages of accountability fixed on a single source. To ensure the President’s control and supervision over the Executive Branch, the Constitution—and its judicial gloss—vests him with the powers of appointment and removal, the power to demand written opinions from executive officers, and the right to invoke executive privilege to protect consultative privacy. In the particular case of EPA, Presidential authority is clear since it has never been considered an “independent agency” but always part of the Executive Branch.

The authority of the President to control and supervise executive policymaking is derived from the Constitution; the desirability of such control is demonstrable from the practical realities of administrative rulemaking. Regulations such as those involved here demand a careful weighing of cost, environmental, and energy considerations. They also have broad implications for national economic policy. Our form of government simply could not function effectively or rationally if key executive policymakers were isolated from each other and from the Chief Executive. Single mission agencies do not always have the answers to complex regulatory problems. An overworked administrator exposed on a 24-hour basis to a dedicated but zealous staff needs to know the arguments and ideas of policymakers in other agencies as well as in the White House.

We recognize, however, that there may be instances where the docketing of conversations between the President or his staff and other Executive Branch officers or rulemakers may be necessary to ensure due process. This may be true, for example, where such conversations directly concern the outcome of adjudications or quasi-adjudicatory proceedings; there is no inherent executive power to control the rights of individuals in such settings. Docketing may also be necessary in some circumstances where a statute like this one specifically requires that essential “information or data” upon which a rule is based be docketed. But in the absence of any further Congressional requirements, we hold that it was not unlawful in this case for EPA not to docket a face-to-face policy session involving the President and EPA officials during the post-comment period, since EPA makes no effort to base the rule on any “information or data” arising from that meeting. Where the President himself is directly involved in oral communications with Executive Branch officials, Article II considerations—combined with the strictures of Vermont Yankee [where the Supreme Court held that courts may not require agencies to employ additional rule-making procedures not required by Congress]—require that courts tread with extraordinary caution in mandating disclosure beyond that already required by statute.
The purposes of full-record review which underlie the need for disclosing ex parte conversations in some settings do not require that courts know the details of every White House contact, including a Presidential one, in this informal rulemaking setting. After all, any rule issued here with or without White House assistance must have the requisite factual support in the rulemaking record, and under this particular statute the Administrator may not base the rule in whole or in part on any "information or data" which is not in the record, no matter what the source. The courts will monitor all this, but they need not be omniscient to perform their role effectively. Of course, it is always possible that undisclosed Presidential prodding may direct an outcome that is factually based on the record, but different from the outcome that it would have obtained in the absence of Presidential involvement. In such a case, it would be true that the political process did affect the outcome in a way the courts could not police. But we do not believe that Congress intended that the courts convert informal rulemaking into a rarified technocratic process, unaffected by political considerations or the presence of Presidential power. In sum, we find that the existence of intra-Executive Branch meetings during the post-comment period, and the failure to docket one such meeting involving the President, violated neither the procedures mandated by the Clean Air Act nor due process.

NOTES AND QUESTIONS

1. Does Sierra Club v. Costle lay to rest any questions concerning the legality of regulatory review? Does it suggest that the president can lawfully dictate to an agency head the substance of a regulatory decision Congress has directed the agency to make?

2. In subsequent litigation, plaintiffs argued that President Reagan’s regulatory review program had allowed OMB unlawfully to usurp decision-making authority delegated by Congress to executive agencies. In Public Citizen Health Research Group v. Tyson, 796 F.2d 1479 (D.C. Cir. 1986), Public Citizen charged that OMB had illegally forced OSHA to delete a short-term exposure limit (STEL) from regulations controlling occupational exposures to ethylene oxide (EtO). Faced with vigorous OMB opposition to a STEL and a court-ordered deadline for promulgating the EtO standard, OSHA had simply crossed out all reference to the STEL in the final regulation that was sent to the Federal Register for publication. The regulations were then published without any explanation of why the STEL had been deleted. The D.C. Circuit struck down the decision to delete the STEL as unsupported by the administrative record. The court noted that “OMB’s participation in the EtO rulemaking presents difficult constitutional questions concerning the executive’s proper role in administrative proceedings and the appropriate scope of delegated power from Congress to certain executive agencies.” However, the court found it unnecessary to reach this issue in light of its decision that deletion of the STEL was unsupported by the record.

3. The result in Public Citizen Health Research Group v. Tyson confirms that, regardless of who ultimately is responsible for an administrative decision, that decision must conform to applicable requirements of the underlying regulatory statute and the Administrative Procedure Act in order to withstand judicial review. If OMB directs agencies to make decisions arbitrarily or capriciously or to base them on factors inconsistent with the requirements of the underlying
regulatory statute, such decisions are likely to be reversed. Suppose, however, that the administrative record and the appropriate statutory criteria would support either a decision favored by the agency or a different decision favored by OMB. Does Sierra Club v. Costle suggest that a decision directed by the president might be upheld in these circumstances even if it differs from that which the agency would have reached independent of presidential input? Would this present the “difficult constitutional questions” to which the Public Citizen court referred?

4. Some statutory limits on executive oversight may be inferred from the environmental statutes themselves. In Environmental Defense Fund v. Thomas, 627 F. Supp. 566 (D.D.C. 1986), OMB blocked EPA from issuing regulations governing the storage of hazardous waste in underground tanks, even though the statutory deadline for issuing such regulations had passed. EDF filed a deadline suit against EPA, but it took the unusual step of also joining OMB as a defendant. The court held that OMB had no authority to block EPA from promulgating regulations beyond the date of a statutory deadline. While noting that “[a] certain degree of deference must be given to the authority of the President to control and supervise executive policymaking,” the court declared that efforts by OMB to block regulations after deadlines have expired are “incompatible with the will of Congress and cannot be sustained as a valid exercise of the President’s Article II powers.” 627 F. Supp. at 570. “Thus, if a deadline already has expired, OMB has no authority to delay regulations subject to the deadline in order to review them under the executive order.” Id. at 571. Does this decision mean that EPA effectively could avoid OMB’s regulatory review simply by waiting until after a statutory deadline had expired before issuing proposed regulations?

5. Elena Kagan notes that President Clinton assumed directive authority over agency heads by issuing an unprecedented 107 presidential directives to them. She argues that the president should be viewed as having the authority to direct decision making by agency heads, not as a result of a constitutional imperative, but rather as an appropriate rule of interpretation in circumstances where Congress has not expressly indicated to the contrary. Elena Kagan, Presidential Administration, 114 Harv. L. Rev. 2245 (2001). Robert Percival notes that this interpretive rule would be contrary to the understanding of Congress at the time it adopted the regulatory statutes, an understanding reinforced by the pre-Clinton regulatory review programs that expressly disavowed such directive authority. Percival, Presidential Management of the Administrative State: The Not-So-Unitary Executive, 51 Duke L.J. 963 (2001). Percival argues that such authority cannot be derived from the president’s appointment and removal powers, even though as a practical matter they give him considerable ability to influence decisions by executive officers. He argues that the constitutionally required confirmation process envisions that agency heads will have some degree of independence from the president and that the political cost of the president firing an agency head serves as an important check on abuses of presidential power.

5. Judicial Review and the Regulatory Process

The major federal environmental statutes specifically authorize judicial review of agency action taken pursuant to them, and they also specify the
procedures for obtaining judicial review. See, e.g., RCRA §7006(a), 42 U.S.C. §6976; TSCA §19, 15 U.S.C. §2618; CWA §509(b), 33 U.S.C. §1369(b); CAA §307(b), 42 U.S.C. §7607(b). These statutes, coupled with the judicial review provisions of the APA, 5 U.S.C. §§701-706, lay out the ground rules for challenging agency decisions in the federal courts. They generally permit suits challenging final agency action (as distinguished from “preliminary, procedural, or intermediate agency action,” which may be reviewed only when the final action is taken, APA §704) as long as it is not “committed to agency discretion by law” (such as a decision whether or not to initiate enforcement action, Heckler v. Chancy, 470 U.S. 821 (1985)), §701(a)(2). Plaintiffs seeking judicial review also must have exhausted administrative remedies by raising objections in the rulemaking proceeding before the agency. The agency’s action also must be deemed sufficiently “ripe for review” by courts, who seek to avoid premature adjudication of issues that have not crystallized to the point at which they are having more than a hypothetical impact on prospective litigants.

Virtually all of the federal environmental statutes also authorize *citizen suits* (FIFRA is the principal exception) against governmental agencies who fail to perform their statutory duties and against those who violate the statutes. It is important not to confuse the citizen suit provisions of the environmental statutes with the statutes’ judicial review provisions. The citizen suit provisions generally authorize two types of lawsuits: action-forcing lawsuits against the agency for failure to perform a nondiscretionary duty and citizen suits against anyone who violates the environmental laws. The judicial review provisions of the environmental statutes authorize courts to review agency actions, such as the issuance or repeal of environmental regulations. We now turn to a brief history of judicial review and its impact on the regulatory process.

When the Supreme Court in Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402 (1971), reversed a decision to authorize the expenditure of federal funds to build an interstate highway through a park, the decision was a surprise for two reasons: it indicated that courts were willing to review a wider range of agency actions and to scrutinize more carefully the rationale behind agency decisions. The plaintiffs in *Overton Park* alleged that the Secretary of Transportation had violated a provision of the Department of Transportation Act of 1966 that prohibited him from approving any project that required public parkland unless he determined that no feasible and prudent alternative to the use of the land existed and that all possible planning had been done to minimize harm to the park from such use. Relying on the judicial review provisions of section 706 of the APA, the plaintiffs argued that the Secretary’s decision was an abuse of discretion and contrary to law.

In response to the lawsuit, the government argued that the Secretary’s decision was not reviewable by a court because it was “committed to agency discretion by law” and thus exempt from review pursuant to the judicial review provisions of the APA, 5 U.S.C. §701(a). Because the Secretary had not made any specific findings at the time he made the decision, the Agency submitted affidavits to the court to support the Secretary’s claim that he had indeed balanced the cost of other routes and safety considerations against the environmental impacts of the project. Although the court held that the Secretary did not need to make formal findings, it remanded the case to the district court for review based on reconstruction of the record actually before the Secretary at the time the decision was made. The court indicated that the Secretary had an obligation under the statute to do more than simply articulate a universally applicable rationale
(i.e., that considerations of costs, the directness of the route, and community disruption favor use of the parkland) and that courts had an obligation to ensure that agency officials exercise their discretion properly.

With the enactment of the National Environmental Policy Act, which declared the importance of environmental values in national policy and required agencies to prepare environmental impact statements, environmentalists gained a powerful tool for challenging agency decisions. Courts began a period of greater scrutiny of agency actions characterized as the “hard look” doctrine, as Judge Leventhal referred to it in Greater Boston Television Corp. v. FCC, 444 F.2d 841, 851 (D.C. Cir. 1970), cert. denied, 403 U.S. 923 (1971).

This burst of judicial activism featured greater scrutiny of agency actions not only at the behest of environmentalists, but also in response to challenges by regulated industries. The courts struck down several EPA regulations in response to lawsuits by affected industries, even after the Agency began to develop detailed administrative records to support its rules. See, e.g., Kennecott Copper Corp. v. EPA, 462 F.2d 846 (D.C. Cir. 1972) (national secondary air quality standard for sulfur dioxide struck down as inadequately justified by agency); International Harvester Co. v. Ruckelshaus, 478 F.2d 615 (D.C. Cir. 1973) (denial of waiver for new motor vehicle emissions reduction standards invalidated); Portland Cement Association v. Ruckelshaus, 486 F.2d 375 (D.C. Cir. 1973) (new source performance standard for Portland cement plants struck down).

The movement by reviewing courts to require agencies to go beyond the minimum procedures required by the APA was brought to an abrupt halt by the Supreme Court in Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, 435 U.S. 519 (1978).

Vermont Yankee involved a challenge to a decision by the Atomic Energy Commission to grant a license to a nuclear power plant. Although the license had been granted only after extensive licensing hearings, the hearings did not consider the environmental effects of the uranium fuel cycle, deferring that issue for a subsequent informal rulemaking proceeding. NRDC argued that NEPA required the AEC to employ additional factfinding procedures when considering the environmental impact of nuclear waste disposal, beyond those explicitly required by the APA. The D.C. Circuit agreed and held that such issues must be considered in individual licensing proceedings employing more formalized factfinding procedures. Natural Resources Defense Council v. Nuclear Regulatory Commission, 547 F.2d 633, 653 (D.C. Cir. 1976). The Supreme Court then reversed.

In an opinion by Justice Rehnquist, the Court held that the APA “established the maximum procedural requirements which Congress was willing to have the courts impose upon agencies in conducting rulemaking procedures.” While noting that “[a]gencies are free to grant additional procedural rights in the exercise of their discretion,” the Court held that “reviewing courts are generally not free to impose them if the agencies have not chosen to grant them.” Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, 435 U.S. 519 (1978). Sternly admonishing the lower courts that “our cases could hardly be more explicit in this regard,” Justice Rehnquist warned:

[1] If courts continually review agency proceedings to determine whether the agency employed procedures which were, in the court’s opinion, perfectly tailored to reach what the court perceives to be the “best” or “correct” result, judicial review would be totally unpredictable. And the agencies, operating under this vague injunction to employ the “best” procedures and facing the threat of reversal if they did not, would undoubtedly adopt full adjudicatory
procedures in every instance. Not only would this totally disrupt the statutory scheme, through which Congress enacted “a formula upon which opposing social and political forces have come to rest,” Wong Yang Sung v. McGrath, 339 U.S., at 40, but all the inherent advantages of informal rulemaking would be totally lost. [435 U.S. at 546-547.]

_Vermont Yankee_ repudiated attempts by reviewing courts to require agencies to provide more complete rulemaking records encompassing a wider range of issues that might be deemed relevant on judicial review. The decision had important implications for judicial review of agency compliance with the procedural obligations established by the National Environmental Policy Act (NEPA), an issue we will examine when we study NEPA in Chapter 8. But it had even broader implications, sending the lower courts a message that they should be more deferential to agency rulemaking procedures.

While _Vermont Yankee_ mandated greater judicial deference to agency procedural decisions, the Court did not abandon judicial review as a check on the substance of agency decisions. Even though the APA specifies a relatively deferential standard of review (section 706 provides that courts are to overturn agency action only if it is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law”), the Court has not made the standard a toothless one. In Motor Vehicle Manufacturers Association v. State Farm Mutual Auto Insurance Co., 463 U.S. 29 (1983), the Supreme Court affirmed a D.C. Circuit decision striking down the Reagan administration’s rescission of a regulation requiring automobile manufacturers to install passive restraint systems in cars. The Court held that the agency had failed to offer an adequate explanation of its decision in light of the extensive evidence in the record that passive restraint systems could prevent substantial numbers of deaths in automobile accidents.

Shortly after the _State Farm_ decision, the Supreme Court substantially expanded judicial deference to agency decisions in the case that follows. The case involved a challenge to another agency effort to change policy abruptly.


_JUSTICE STEVENS_ delivered the opinion of the Court.

In the Clean Air Act Amendments of 1977, Pub. L. 95-95, 91 Stat. 685, Congress enacted certain requirements applicable to States that had not achieved the national air quality standards established by the Environmental Protection Agency (EPA) pursuant to earlier legislation. The amended Clean Air Act required these “nonattainment” States to establish a permit program regulating “new or modified major stationary sources” of air pollution. Generally, a permit may not be issued for a new or modified major stationary source unless several stringent conditions are met. The EPA regulation promulgated to implement this permit requirement allows a State to adopt a plantwide definition of the term “stationary source.” Under this definition, an existing plant that contains several pollution-emitting devices may install or modify one piece of equipment without meeting the permit conditions if the alternative will not increase the total emissions from the plant. The question presented by these cases is whether EPA’s decision to allow States to treat all of the pollution-emitting devices within the same industrial grouping as though they were
encased within a single “bubble” is based on a reasonable construction of the statutory term “stationary source.”


The court observed that the relevant part of the amended Clean Air Act “does not explicitly define what Congress envisioned as a ‘stationary source,’ to which the permit program . . . should apply,” and further stated that the precise issue was not “squarely addressed in the legislative history.” Id., at 273, 685 F.2d, at 723. In light of its conclusion that the legislative history bearing on the question was “at best contradictory,” it reasoned that “the purposes of the nonattainment program should guide our decision here.” Id., at 276, n.39, 685 F.2d, at 726, n.39. Based on two of its precedents concerning the applicability of the bubble concept to certain Clean Air Act programs, the court stated that the bubble concept was “mandatory” in programs designed merely to maintain existing air quality, but held that it was “inappropriate” in programs enacted to improve air quality. Id., at 276, 685 F.2d, at 726. Since the purpose of the permit program—its “raison d’être,” in the court’s view—was to improve air quality, the court held that the bubble concept was inapplicable in these cases under its prior precedents. Ibid. It therefore set aside the regulations embodying the bubble concept as contrary to law. We granted certiorari to review that judgment, 461 U.S. 956 (1983), and we now reverse.

The basic legal error of the Court of Appeals was to adopt a static judicial definition of the term “stationary source” when it had decided that Congress itself had not commanded that definition. Respondents do not defend the legal reasoning of the Court of Appeals. Nevertheless, since this Court reviews judgments, not opinions, we must determine whether the Court of Appeals’ legal error resulted in an erroneous judgment on the validity of the regulations.

When a court reviews an agency’s construction of the statute which it administers, it is confronted with two questions. First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court as well as the agency must give effect to the unambiguously expressed intent of Congress. If, however, the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute.

“The power of an administrative agency to administer a congressionally created . . . program necessarily requires the formulation of policy and the making of rules to fill any gap left, implicitly or explicitly, by Congress.” Morton v. Ruiz, 415 U.S. 199 (1974). If Congress has explicitly left a gap for the agency to fill, there is an express delegation of authority to the agency to elucidate a specific provision of the statute by regulation. Such legislative regulations are given controlling weight unless they are arbitrary, capricious, or manifestly contrary to the statute. Sometimes the legislative delegation to an agency on a particular question is implicit rather than explicit. In such a case, a court may
not substitute its own construction of a statutory provision for a reasonable interpretation made by the administrator of an agency . . . .

In light of these well-settled principles it is clear that the Court of Appeals misconceived the nature of its role in reviewing the regulations at issue. Once it determined, after its own examination of the legislation, that Congress did not actually have an intent regarding the applicability of the bubble concept to the permit program, the question before it was not whether in its view the concept is “inappropriate” in the general context of a program designed to improve air quality, but whether the Administrator’s view that it is appropriate in the context of this particular program is a reasonable one. Based on the examination of the legislation and its history, which follows, we agree with the Court of Appeals that Congress did not have a specific intention on the applicability of the bubble concept in these cases, and conclude that the EPA’s use of that concept here is a reasonable policy choice for the agency to make . . . .

In these cases, the Administrator’s interpretation represents a reasonable accommodation of manifestly competing interests and is entitled to deference: the regulatory scheme is technical and complex, the agency considered the matter in a detailed and reasoned fashion, and the decision involves reconciling conflicting policies. Congress intended to accommodate both interests, but did not do so itself on the level of specificity presented by these cases. Perhaps that body consciously desired the Administrator to strike the balance at this level, thinking that those with great expertise and charged with responsibility for administering the provision would be in a better position to do so; perhaps it simply did not consider the question at this level; and perhaps Congress was unable to forge a coalition on either side of the question, and those on each side decided to take their chances with the scheme devised by the agency. For judicial purposes, it matters not which of these things occurred.

Judges are not experts in the field, and are not part of either political branch of the Government. Courts must, in some cases, reconcile competing political interests, but not on the basis of the judges’ personal policy preferences. In contrast, an agency to which Congress has delegated policymaking responsibilities may, within the limits of that delegation, properly rely upon the incumbent administration’s views of wise policy to inform its judgments. While agencies are not directly accountable to the people, the Chief Executive is, and it is entirely appropriate for this political branch of the Government to make such policy choices—resolving the competing interests which Congress itself either inadvertently did not resolve, or intentionally left to be resolved by the agency charged with the administration of the statute in light of everyday realities . . . .

We hold that the EPA’s definition of the term “source” is a permissible construction of the statute which seeks to accommodate progress in reducing air pollution with economic growth. “The Regulations which the Administrator has adopted provide what the agency could allowably view as . . . [an] effective reconciliation of these twofold ends. . . .” United States v. Shinier, 367 U.S., at 383.

The judgment of the Court of Appeals is reversed.

NOTES AND QUESTIONS

1. The judicial review provisions of the Administrative Procedure Act provide that reviewing courts are to “decide all relevant questions of law, interpret constitutional and statutory provisions, and determine the meaning or
applicability of the terms of an agency action.” 5 U.S.C. §706. Is this consistent with the notion that courts should defer to agency interpretations of statutes?

2. Judicial deference to the decisions of administrative agencies stems in part from notions of agency expertise. To what extent are such notions relevant when the agency is not making complicated technical or scientific judgments, but rather is engaging in statutory interpretation? Who should be more “expert” at divining the intent of Congress—courts or agencies?

3. *Chevron* was decided by a unanimous Supreme Court, though only six justices participated in the decision. The papers of the late Justice Thurgood Marshall provided no evidence that the six justices appreciated that *Chevron* would work any significant change in administrative law. Within a week of its initial circulation, Justice Stevens’s first draft opinion was joined by the other five justices without any substantive comment or suggested changes. Percival, Environmental Law in the Supreme Court: Highlights from the Marshall Papers, 23 Envtl. L. Rep. 10606, 10613 (1993). Release of the papers of the late Justice Harry A. Blackmun shed further light on this mystery because they contained notes taken by Justice Blackmun during conference. These notes indicate that the Justices initially were badly split when they voted in conference. Justice Stevens, who ultimately authored the unanimous opinion for the six Justices who participated in the final vote is recorded as stating, “When I am so confused, I go with the Agency.” His statement appeared to reflect frustration expressed by several Justices at the difficulty of understanding the workings of complex, new regulatory programs like the Clean Air Act, which may have influenced their ultimate directive to afford agencies greater deference. See Robert V. Percival, Environmental Law in the Supreme Court: Highlights from the Blackmun Papers, 35 ELR 10637, 10644 (2005). Further background information on the *Chevron* litigation is provided in Jody Freeman, The Story of *Chevron*: Environmental Law and Administrative Discretion, in Environmental Law Stories 171 (Lazarus & Houck, eds. 2005).

4. *Chevron*’s two-step framework leaves reviewing courts considerable wiggle room because they still must determine whether a statute is ambiguous (Step 1)—and statutory ambiguity often is in the eye of the beholder, as decisions subsequent to *Chevron* quickly made clear. In Chemical Manufacturers Association v. Natural Resources Defense Council, 470 U.S. 116 (1985), the Supreme Court split 5-4 on the question whether or not the word “modified” in the Clean Water Act was ambiguous. In Board of Governors v. Dimension Financial Corp., 474 U.S. 361 (1986), the Supreme Court unanimously rejected the Federal Reserve Board’s interpretation of the term “bank” by concluding that the term was clear and unambiguous.

5. How, if at all, do you think *Chevron* has affected judicial review of decisions by administrative agencies? *Chevron* must be the most frequently cited decision in administrative law cases. Shortly after its sixth birthday *Chevron* had been cited more than 1,000 times, with the number of citations to it continuing to increase rapidly. Sunstein, Law and Administration After *Chevron*, 90 Colum. L. Rev. 2071, 2074-2075 (1990). Yet *Chevron* does not seem to have insulated agency interpretations of statutes from effective judicial review. In the first four years after *Chevron* was decided, the Supreme Court rejected an administrative agency’s interpretation of a statutory provision in six cases. See, e.g., Immigration and Naturalization Service v. Cardoza-Fonseca, 408 U.S. 421 (1988) (rejecting INS’s interpretation of the term “well founded fear” of persecution for purposes of determining when asylum may be granted to refugees).
6. In a study of the Supreme Court’s use of *Chevron*, Thomas Merrill finds it “clear that *Chevron* is often ignored by the Supreme Court.” Merrill, Judicial Deference to Executive Precedent, 101 Yale L.J. 969, 970 (1992). Statistics compiled by Professor Merrill indicate that *Chevron*’s two-step framework has been used in only about half of the cases in which the Court has recognized that a question of deference to an agency interpretation is presented. In contrast to the Supreme Court itself, the Courts of Appeals have treated *Chevron*’s two-step approach as controlling whenever the agency is entitled to heightened deference, as in cases of agency rulemaking. In a study of all the courts of appeals decisions in the 1990s involving EPA rulemaking, Schroeder and Glicksman found *Chevron* to be universally applied. The agency prevailed in 75% of those challenges. Interestingly, when the court concluded that the Congress had clearly spoken (*Chevron* Step One), the agency success rate was much lower: 41%. When the agency was able to get past Step One to Step Two, where the question is whether the agency’s construction of the statute was reasonable, it prevailed in 93% of the case. Schroeder and Glicksman, *Chevron*, *State Farm* and the EPA in the Courts of Appeals During the 1990s. 31 Environmental Law Reporter 10371 (2001).

7. *Chevron*’s scope has been further diminished by the Supreme Court’s decision in *United States v. Mead Corp.*, 533 U.S. 218 (2001). In *Mead*, the Court held, over a lone, but vigorous dissent by Justice Scalia, that “administrative implementation of a particular statutory provision qualifies for *Chevron* deference when it appears that Congress delegated authority to the agency generally to make rules carrying the force of law, and that the agency interpretation claiming deference was promulgated in the exercise of that authority.” 533 U.S. at 226-227. *Mead* moves judicial review of agency interpretations in the direction of *Skidmore v. Swift & Co.*, 323 U.S. 134 (1944), which stated that the degree of deference owed an agency interpretation of a statute should depend on several factors, including the thoroughness of the agency’s deliberations and the persuasiveness of its reasoning. *Mead* has clarified that the *Chevron* doctrine is grounded in congressional intent, rather than notions of separation of powers. To determine when *Chevron* deference is due, *Mead* makes the threshold questions whether Congress intended to give the agency authority to make rules with the force of law and whether the agency interpretation in question was issued in the exercise of such authority. As Professor Thomas Merrill observes, the post-*Mead* landscape of judicial review now encompasses three different degrees of deference to agency interpretations:

\[\textit{Chevron},—a\text{ rule-like\ doctrine\ that\ requires\ courts\ to\ accept\ reasonable\ agency\ interpretations\ of\ ambiguous\ statutes;\ }\textit{Skidmore}—a\text{ standard\ that\ requires\ courts\ to\ consider\ agency\ interpretations\ under\ multiple\ factors\ and\ defer\ to\ the\ interpretation\ if\ it\ is\ persuasive;\ and\ no\ deference}—a\text{ rule\ that\ applies\ when\ independent\ judicial\ review\ is\ required,\ for\ example,\ where\ the\ agency\ action\ is\ alleged\ to\ violate\ the\ Constitution,\ or\ where\ statutes\ designed\ to\ constrain\ agency\ discretion\ like\ the\ Administrative\ Procedure\ Act\ (APA)\ are\ at\ issue.}\]

Thomas W. Merrill, The *Mead* Doctrine: Rules and Standards, Meta-Rules and Meta-Standards, 54 Admin. L. Rev. 807, 812-813 (2002). Although Professor Merrill criticizes the Court for leaving unclear how to determine when Congress has given an agency the power to act with force of law, he concludes that *Mead* actually will strengthen *Chevron*, by diminishing the need to water it down in cases that fall within its now-narrower scope.