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Environmental Law in the United States

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Environmental law in the United States

Environmental law in the United States comprises a complex patchwork of federal, state, and local statutes and regulations, along with the traditions of common law. Most statutory environmental programs emerged in the second half of the twentieth century. In the 1960s, writings such as Rachel Carson's Silent Spring (1962) fueled environmental awareness in the United States; the first Earth Day, celebrated on April 22, 1970, symbolized the birth of a national environmental consciousness. Federal environmental law entered a new era in 1970, when President Richard Nixon created the Environmental Protection Agency and the U.S. Congress passed the National Environmental Policy Act and the 1970 Clean Air Act Amendments. In the next decade, the Federal Water Pollution Control Act Amendments (1972), the Coastal Zone Management Act (1972), the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 1972), the Endangered Species Act (1973), the Toxic Substances Control Act (1976), the Resource Conservation and Recovery Act (1976), the Surface Mining Control and Reclamation Act (1977), and the Comprehensive Environmental Response, Compensation, and Liability Act, or "Superfund" law (1980), formed the body of modern environmental law.

Environmental regulation in the United States derives primarily from federal and state legislation and is normally implemented by administrative agencies. Environmental law protects human health and property and natural ecosystems from air and water pollution, toxic contamination and exposure, and other harms arising from myriad commercial, industrial, and governmental activities.

BACKGROUND

Environmental law in the United States comprises a complex patchwork of federal, state, and local statutes and regulations, along with the traditions of common law. Most statutory environmental programs emerged in the second half of the twentieth century. In the 1960s, writings such as Rachel Carson's

Silent Spring (1962) fueled environmental awareness in the United States; the first Earth Day, celebrated on April 22, 1970, symbolized the birth of a national environmental consciousness. Federal environmental law entered a new era in 1970, when President Richard Nixon created the Environmental Protection Agency and the U.S. Congress passed the National Environmental Policy Act and the 1970 Clean Air Act Amendments. In the next decade, the Federal Water Pollution Control Act Amendments (1972), the Coastal Zone Management Act (1972), the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA, 1972), the Endangered Species Act (1973), the Toxic Substances Control Act (1976), the Resource Conservation and Recovery Act (1976), the Surface Mining Control and Reclamation Act

(1977), and the Comprehensive Environmental Response, Compensation, and Liability Act, or "Superfund" law (1980), formed the body of modern environmental law.

Federal environmental law brings into focus the constitutional and historical relationship between the states and the federal government. Protection of the health and welfare of citizens is generally the province of the states under their police powers. However, because air and water pollution cannot be contained within state borders and because even seemingly local activity such as mining can have interstate effects, Congress deemed it appropriate to impose environmental regulation pursuant to its powers under the "commerce clause" of the U.S. Constitution. Congress also recognized that the establishment of national standards could reduce the potential for a "race of laxity" in which states compete for economic development by offering the most lenient regulatory climate. To preserve the balance of state and federal power where nonfederal lands or activities are involved, federal environmental programs embraced the model of "cooperative federalism" whereby Congress and the relevant federal agencies establish national standards but allow each state to regulate within its borders through a federally approved plan that implements—at a minimum—the federal requirements. State governments may impose additional requirements and enact environmental laws consistent with federal statutory or constitutional provisions; many have done so in programs relating to solid waste control and disposal, groundwater, land use, zoning, and other activities of local concern.

Implementation and enforcement typically occur at the agency level. Administrative agencies promulgate regulations to interpret the law and to handle such matters as permit issuance, inspections, and enforcement. Such agencies are usually empowered to issue cease-and-desist orders, civil penalties, and various remedial requirements. Criminal penalties for known violations of environmental laws are imposed by state and federal courts.

COMMON LAW

Long before the enactment of modern environmental programs, courts were empowered to protect the rights of landowners and the general public in cases brought under the common law of nuisance and related doctrines. Although the laws of individual states vary, courts generally define a "private nuisance" as the intentional and unreasonable interference with the use and enjoyment of private property. A public nuisance is the intentional and unreasonable interference with rights shared by the public.

Nuisance law has not been entirely supplanted by modern environmental statutory programs. Activity that is unregulated or in compliance with existing statutes or regulations may nevertheless be considered harmful and unreasonable in a particular locale and may therefore constitute an actionable nuisance. A wide variety of conditions—air and water pollution, land contamination, and even noise and odors—can be redressed in a lawsuit brought against common-law nuisance. Courts can award money damages to compensate for the devaluation or loss of use and enjoyment of property and for personal injuries, and they can issue injunctive relief to prevent or abate a nuisance. Nuisance law is a mainstay of modern "toxic tort" litigation because it enables courts to grant not only these traditional forms of relief but also innovative remedies such as requiring medical surveillance of persons exposed to toxic chemicals. Other common-law doctrines—including the law of trespass, negligence, strict liability for ultrahazardous activity, and riparian rights—are also used to protect health and property from environmental harm on a case-specific basis.

FEDERAL PROGRAMS: AIR POLLUTION

The Federal Air Pollution Control Act, or Clean Air Act (CAA), comprises a complex group of interlocking programs designed to address the nationwide problem of air pollution. The basic structure of the CAA emerged in the 1970 amendments to the Air Quality Act of 1967, and the program was substantially revised through amendments enacted in 1977 and 1990.

The CAA charged the Environmental Protection Agency (EPA) with the task of dividing the country into Air Quality Control Regions, establishing air quality criteria based on health and environmental studies, and publishing National Ambient Air Quality Standards (NAAQS) for certain "criteria pollutants" so that safe levels for such pollutants could be set and maintained. The EPA is required to establish criteria if emissions of a pollutant "will cause or contribute to air pollution which may reasonably be anticipated to

endanger public welfare" and come from "numerous and diverse mobile or stationary sources." Six pollutants have been included in this category: sulfur dioxide, particulates, carbon monoxide, ozone, nitrogen oxides, and lead. NAAQS for these criteria pollutants include primary standards, set at a level to protect public health with a margin of safety for those who suffer from respiratory ailments, and secondary standards to protect the public welfare in regard to more generalized environmental well-being.

The CAA requires the states to assure compliance with the NAAQS by formulating EPA-approved State Implementation Plans (SIPs). Each state determines whether the air quality in its Air Quality Control Regions meets the NAAQS, designating them "attainment" or "nonattainment" areas for each criteria pollutant. After conducting an inventory of all existing sources, states establish emission limitations for each such source or category of sources to achieve the NAAQS before the relevant statutory deadline. These limitations are included in various permits for new, modified, or existing sources, which provide for various pollution controls in conformity with applicable regulations.

Beginning in 1970, the Clean Air Act was amended periodically to address the problem of nonattainment. In 1977, Congress added strict permitting requirements as well as deadlines for nonattainment areas to ensure that reasonable progress was made toward compliance and required new and modified major sources to offset existing pollutants and to achieve "lowest achievable emission rates." Amendments in 1990 further tightened the permit requirements for nonattainment areas, requiring retrofitting of existing sources in some instances. SIPs must also include a program for prevention of significant deterioration to assure that areas that have better air quality than required for attainment are not allowed to become appreciably worse.

Although the NAAQS are the heart of the Clean Air Act, other programs coexist with and supplement these requirements. Source Performance Standards require all major emitting facilities to employ the "best available control technology." Hazardous air pollutants are governed by National Emissions Standards for Hazardous Air Pollutants (NESHAPs), requiring major sources of listed hazardous pollutants to meet "maximum achievable control technology" standards.

In 1990, Congress responded to the problem of "acid rain" by creating an emissions trading program for sulfur dioxide under which coal-burning power plants accumulate, buy, and sell emissions allowances; thus polluters who can most economically reduce emissions may sell unused allowances to those who need them, while the overall number of annual allowances is steadily reduced by 9 million metric tons from 1980 levels.

There is also a program to protect visibility in national parklands. In 2003, the George W. Bush administration backed the Clean Skies Act, an amendment to the Clean Air Act that proposed to reduce sulfur dioxide, mercury, and nitrogen oxide emissions. The bill stalled in the Senate. In 2009, the Environmental Protection Agency was given the mandate of setting mercury emission standards for oil- and coal-fired power plants by 2011. The EPA issued the Mercury and Air Toxics Standards (MATS) rule in 2012, mandating reductions of industrial mercury emissions and other hazardous air pollutants. In December 2018, the Trump Administration, citing the billions of dollars cost to the economy of such regulations, announced it would reconsider the reasoning behind mercury pollution standards for power plants.

Finally, mobile sources such as automobiles and other vehicles are covered by strict provisions in Title II of the Clean Air Act, which requires manufacturers to reduce emission rates drastically in their new models within specified time frames. California, afflicted with the worst automobile pollution in the United States, has stricter requirements for automobile emission reduction and is an exception to the national standards imposed in those provisions. In 2002, the California Air Resources Board instituted stricter emission standards for cars and trucks to encourage the use of and continued development of low-emission vehicles.

Water Pollution

The Clean Water Act (CWA) took shape in the Federal Water Pollution Control Act Amendments of 1972, and it was revised and strengthened in the 1977, 1982, and 1987 amendments to the CWA. Several proposed amendments have sought to define specifics of the CWA more clearly. These include the Clean Water Protection Act (a House of Representatives bill introduced in 2009), which concerns

mountaintop removal mining and the discharge pollutants the procedure produces, and the Clean Water Restoration Act (a Senate bill introduced in 2009), which focuses on the protection of rivers and wetlands. The focal point of the CWA is the National Pollutant Discharge Elimination System (NPDES). An NPDES permit is required for discharges into any "navigable water" from a "point source," defined as "any discernable, confined, and discrete conveyance . . . from which pollutants are or may be discharged." Non-point sources such as agricultural or silvicultural runoff or area pollution do not require NPDES permits and are for the most part unregulated under the program. Stormwater and publicly owned treatment works are subject to special provisions under the Clean Water Act; public water supply systems are regulated separately under the Safe Drinking Water Act (1974) and by some state groundwater statutes.

The NPDES permit system imposes technology-based effluent limitations on dischargers. Effluent levels for toxic and "nonconventional" pollutants are based on "best available technology economically achievable," while conventional nontoxic pollutants must meet "best conventional pollution control technology" standards. To implement these requirements, the EPA promulgates mandatory effluent "guidelines" for each industry, setting forth the pollution reduction required. These, in turn, are incorporated into permit conditions by the permitting authority—usually a state agency—specifying the permissible discharge for each source. Additional New Source Performance Standards may also be required in the permit.

In addition to technology-based effluent limitations, the Clean Water Act provides for water quality standards, which focus on the designated use and quality of the receiving water. State water quality standards existed before the NPDES permit system, but they were ineffective and took a secondary role after the implementation of technology-based emission limitations in the 1972 program. In 1987, the provisions of the Clean Water Act relating to toxic pollutants were substantially strengthened, requiring the EPA and the states to establish and implement strict water quality criteria for listed toxics. Thus permits may include both technology-based and specific water-quality-based effluent limitations depending on the pollutant and the use and quality of the water into which it is discharged.

The Clean Water Act also contains provisions relating to wetlands such as swamps, marshes, bogs, and similar areas. Although the U.S. Army Corps of Engineers has long regulated dredge and fill activities in navigable waters under the Rivers and Harbors Act of 1899, the Clean Water Act expands this by regulating point source discharges of dredge and fill materials into wetlands. Land developers who use fill material to create viable construction sites on swampy soils and others who deposit excavated material into wetlands must obtain permits from the Army Corps of Engineers for such activity, and they may be required to demonstrate the absence of available nonwetland sites or practicable alternatives that would have less adverse impact on aquatic ecosystems. The Great Lakes Critical Programs Act of 1990, signed by the United States and Canada, requires the EPA to mandate water quality standards for the Great Lakes and reduce toxic pollutants that threaten human, wildlife, and aquatic life.

HAZARDOUS AND TOXIC POLLUTANTS

A major component of environmental regulation responds to the health hazards associated with toxic and hazardous substances in the environment. Emissions or discharges of such substances are limited in the Clean Water Act and the Clean Air Act. Some toxic substances have been removed from commerce under the Toxic Substances Control Act (TSCA) of 1976, and pesticides must be registered and controlled under the Federal Environmental Pesticide Control Act (FEPCA). Beyond these regulations, however, an increasing awareness of the quantity of hazardous material produced by U.S. industry, combined with the public outcry accompanying the discovery of toxic dumps near residential neighborhoods, caused Congress to create specific programs intended to control hazardous waste disposal and to remove and remediate contaminated areas.

The first of these programs, created in 1976 and substantially amended in 1984 and 1986, was the Resource Conservation and Recovery Act (RCRA). Although RCRA relates to solid waste generally, its key regulatory provisions are found in Subtitle C, which imposes "cradle to grave" controls on hazardous waste. Strict regulatory controls apply when material falls within the definition of "hazardous waste." Some wastes are specifically listed as hazardous, while others may be determined to be so based on the

presence of a hazardous characteristic such as toxicity, reactivity, corrosivity, and ignitability. In general, household waste is excluded from the program. There are also separate provisions regulating underground storage tanks such as those used for gasoline and other hazardous liquids.

Under Subtitle C, generators of hazardous wastes are subjected to strict recordkeeping and reporting as well as to specifications for containment and labeling. Transporters are required to comply with a manifest system which identifies the waste and assures that it is taken to a permitted facility for treatment, storage, or disposal (TSD). TSD facilities must comply with elaborate permitting requirements, usually issued and enforced by a state agency, including not only technical standards but also financial responsibility and background review. Under the 1984 amendments, land disposal is regarded as the "least favored method for managing hazardous wastes" and is severely restricted. Landfills may be permitted, provided they meet strict technical requirements such as double plastic liners and leachate collection systems. Treatment systems are preferred; they must meet "best demonstrated available technology" standards.

The RCRA regulates hazardous wastes prospectively. Although RCRA provides for injunctive relief to eliminate "imminent and substantial endangerment to the health or environment," Congress addressed in another program, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), the need for cleaning up areas which are already contaminated. Sometimes referred to as "Superfund" because of the trust fund created by the act to fund cleanups, CERCLA is a comprehensive approach to hazardous chemical dump and spill sites. It authorizes the president of the United States, through the EPA, to clean up facilities at which hazardous substances have been released. Hazardous substances subject to the act are identified predominantly by cross-reference to lists established under the Resource Conservation and Recovery Act, Clean Water Act, and Clean Air Act. petroleum substances not otherwise contaminated or listed as hazardous are exempted from the purview of the act. CERCLA requires persons in charge of certain facilities to report releases of hazardous substances, subject to strict penalties for failure to do so. It also created a system of listing hazardous sites, a National Contingency Plan (NCP), setting forth the protocols and standards of remedial investigation, feasibility study, removal and long-term remediation, and a National Priorities List listing the cleanup sites in order of priority.

Under CERCLA, hazardous substance removal and site remediation is accomplished in two ways: first, the EPA can issue an order requiring potentially responsible parties (PRPs) to clean up a site; alternatively, the EPA can clean up the site itself and bring a cost recovery action against the PRPs for response costs and natural resource damages. Private parties who have incurred response costs may also seek reimbursement. CERCLA's cost recovery provisions impose "strict liability"—without any required showing of fault—upon present and past owners and operators of facilities from which there has been a release or threatened release of hazardous substances, upon those who "arranged for disposal," and upon transporters who took part in site selection. Although cost recovery must be consistent with the National Contingency Plan, there are only a few very limited defenses to liability, and the act's provisions tend to encourage voluntary settlements and cleanups. Nevertheless, litigation often occurs among PRPs who are jointly and severally liable for the full amount but may apportion their liability in actions for contribution. In 2002, the Small Business Liability Relief and Brownfields Revitalization Act amended CERCLA. Brownfields are derelict commercial or industrial complexes that can be revitalized for new uses. The amendment provides funds for the cleanup of these areas.

ENDANGERED SPECIES

The Endangered Species Act (1973) was elevated to national debate by a small fish, the snail darter, the threatened demise of which caused the U.S. Supreme Court to cease construction of the Tellico Dam on the Little Tennessee River. In *Tennessee Valley Authority v. Hill* (1978) the Court held that there are no exceptions to the Endangered Species Act command that all federal agencies ensure that actions authorized, funded, or carried out by them do not jeopardize the continued existence of an endangered or threatened species or result in the destruction or modification of habitat of such species. Congress amended the statute in 1978 to provide some flexibility, but the prohibitions of the Endangered Species Act remain

strong. The act prohibits the importation, exportation, and "taking" of endangered species; the Department of the Interior, which administers the Endangered Species Act, has defined "taking" not only to prohibit such predatory activities as hunting, pursuing, shooting, wounding, killing, trapping, or capturing endangered species but also to outlaw harming such species by "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering." A narrow exception is made for "incidental taking" of species in pursuit of otherwise lawful activity. Since its enactment, the Endangered Species Act has remained a contentious political issue; presidential administrations have often differed substantially on their stances on this issue. The administration of President Ronald Reagan attempted to limit protective status for certain species, a policy that hampered the enforcement of the act and caused more than a decade of legal battles that resulted in the expansion of the designation of critical habitat. The administration of President Bill Clinton enacted the Safe Harbor agreement that encouraged landowners to make their territories friendlier to endangered species. As of 2013, fifty-six species previously considered endangered have been removed from the protection of the Endangered Species Act. Of these, twenty-eight species had recovered, while ten species were struck from the list because they became extinct, and eighteen species were delisted for other reasons, including original listing errors. By November 2016, the US Fish and Wildlife Service had listed 1,228 endangered species and 375 threatened species. In July, 2018, the administration of President Donald Trump proposed sweeping changes to the Endangered Species Act, which would require government agencies, in deciding which species to list, to take into account the economic costs of such protections to industry and commerce.

NATIONAL ENVIRONMENTAL POLICY ACT

The National Environmental Policy Act (NEPA), enacted in 1970, was designed to force federal decision makers to take a "hard look" at the environmental consequences of their actions. NEPA provides that "all federal agencies shall include in any recommendation or report on any proposal for legislation or other major federal action significantly affecting the quality of the human environment a detailed statement . . . on environmental impact . . . any adverse effects which cannot be avoided . . . alternatives to the proposed action," and other considerations. Environmental impact statements (EISs), conforming to regulations promulgated by the Counsel on Environmental Quality, may be required for a variety of governmental activities—including the construction of airports, dams, and highways; the issuance of federal licenses or permits; and decisions regarding the management and use of federal lands and resources. NEPA is regarded as a procedural statute because it imposes no substantive requirements. On August 15, 2017, the Donald Trump issued an Executive Order designed to accelerate procedures for approval of infrastructure projects, claiming that NEPA entangles federal construction projects in red tape and waste billions of dollars on unnecessary "impact statements." Despite much debate over its effectiveness as a tool to protect the environment, it has been emulated by some state environmental policy acts and in international law as well.

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