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UMBRELLA EQUITIES: USE OF THE FEDERAL COMMON LAW OF NUISANCE TO CATCH THE FALL OF ACID RAIN

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Acid rain is emerging as one of the world's most serious environmental problems.¹ The result of a complex chemical interaction between sulfur and nitrogen oxides and atmospheric water vapor, acid rain² is precipitation of far above normal acidity.³ Prior to chemical transformation, the pollutants causing acid rain may travel hundreds or even thousands of miles from their emitting source.⁴ Interstate⁵ or


1. President's Message to the Congress on Environmental Priorities and Programs, 15 WEEKLY COMP. OF PRES. DOC. 1353, 1372 (Aug. 2, 1979).

2. Throughout the course of this Note, "acid rain" will serve as a generic term covering all forms of acid precipitation. The phenomenon occurs in snow, mist, and sleet as well as rain. Dumanoski, Acid Rain, SIERRA, May/June 1980, at 38. Use of the term acid rain merely reflects common usage; the importance of the phenomenon's other modes is not meant to be downplayed. It is equally troublesome in those regards. In fact, "acid stresses," accompanying large thaws of acid snow, provide a much greater threat of massive fish kills than does acid rain. Wetstone, Air Pollution Control Laws in North America and The Problem of Acid Rain and Snow, 10 ENV'TL L. REP. 50001, 50002 (1980) [hereinafter cited as Wetstone]. Discontinuous age structures of fish may result if the thawing occurs at spawning time. Id.

3. Dumanoski, supra note 2, at 38.

4. Graves, Rain of Troubles, SCIENCE 80, July/August 1980, at 75. See also ENVIRONMENTAL PROTECTION AGENCY, RESEARCH SUMMARY: ACID RAIN 3 (1979) [hereinafter cited as EPA SUMMARY] (various sulfuric compounds which may turn into sulfuric acid are known to travel as much as several hundred kilometers per day in the atmosphere); Robinson, Acid Rain—The Crossroads for Decision Making, 30 J. AIR POLL. CONT. A. 106, 106 (1980) (atmospheric studies show pollutants may travel thousands of miles).

5. Wetstone, supra note 2, at 50001. See notes 57-58 and accompanying text infra.
even international transportation is common.

Federal statutory pollution control in the United States inadequately controls interstate transport of acid rain pollutants. The Acid Precipitation Act of 1980 directly confronts the problem, but only with research appropriations and a policy of amelioration. In the Clean Air Act, Congress substantively addressed the problem of interstate air pollution. The Act's interstate provisions, however, are limited in scope. They are not broad enough to embrace acid rain.

Parties injured by acid rain originating in another state are not, however, without legal recourse. This Note will propose use of the

See also St. Louis Post-Dispatch, May 4, 1980, at 12A, col. 1 (EPA has tracked sulfur dioxide-bearing smoke clouds from St. Louis to Minnesota).

6. Graves, supra note 4, at 75. Acid rain first received documentation as an environmental problem because of its international effects. 8 COUNCIL ON ENVIRONMENTAL QUALITY ANN. REP. 195 (1977). A Swedish study in 1972 showed a marked increase in rainfall acidity in Sweden due in large part to pollutants transported there from other European countries. ROYAL MINISTRY OF FOREIGN AFFAIRS, ROYAL MINISTRY OF AGRICULTURE, Air Pollution Across National Boundaries: The Impact on the Environment of Sulfur in Air and Precipitation, SWEDEN'S CASE STUDY FOR THE UNITED STATES CONFERENCE ON THE HUMAN ENVIRONMENT (1972), cited in 8 COUNCIL ON ENVIRONMENTAL QUALITY ANN. REP. 195 (1977). It is estimated that 77% of the sulfur in the atmosphere over southern Sweden which is the result of human activity originates outside its borders. Likens, Wright, Galloway, and Butler, Acid Rain, SCIENTIFIC AMERICAN, October 1979, at 43, 47 [hereinafter cited as Likens]. One Swedish scientist has labelled the acid rain problem a "chemical war." TIME, March 17, 1980, at 48. Other Western European countries similarly have levied transfrontier pollution charges. Id.

In North America, the United States and Canada exchange over two million tons of acid rain causing pollutants each year. Dumanoski, supra note 2, at 41. Although Canada receives the greater percentage of the pollutants, id., the transboundary effects are felt on both sides of the border. See Minneapolis Tribune, Mar. 3, 1978, at 1, col. 1 (environmentalists fear acid rain damage to Boundary Waters Canoe Area of northern Minnesota from proposed coal-fired power plant at Atikokan, Ontario). The two countries have responded by agreeing to enter into a formal treaty to control the problem. [1980] 11 ENVIR. REP. (BNA) (11 Envir. Rep. Current Dev.) 549. The Canadian Parliament has also approved legislation giving the Canadian government power to abate transnational air pollution. [1981] 11 ENVIR. REP. (BNA) (11 Envir. Rep. Current Dev.) 1761.

8. See notes 69-85 and accompanying text infra.
11. See notes 108-12 & 130-41 and accompanying text infra.
12. Id.
federal common law of nuisance as an alternative non-statutory solution to the acid rain problem. Following examination of the scope of acid rain pollution and of the inadequacy of federal statutory solutions, this Note will discuss the prospect of a federal nuisance law remedy. It will examine a number of recurring federal nuisance law problems and conclude that this common law alternative provides the most effective remedy for acid rain pollution.

I. THE ENVIRONMENTAL PROBLEM: ACID RAIN

Natural precipitation is to a limited extent acidic. Its chemical composition varies depending upon the relative amounts of certain atmospheric substances it contains. It becomes increasingly acidic to the proportionate extent it combines with sulfur or nitrogen oxides or hydrogen sulfide. Highly acidic natural rainfall may result from the release of sulfur dioxide and hydrogen sulfide gases into the atmosphere from natural sources such as volcanoes. Most studies of precipitation which fell prior to the Industrial Revolution, however, indicate natural rainfall contains relatively low levels of acidity.

The increased atmospheric emissions of sulfur and nitrogen oxides attending the urbanization and industrialization of North America and Europe have significantly augmented precipitation acidity. Large-scale fossil fuel combustion from both stationary and mobile sources emits massive amounts of sulfur and nitrogen oxide emissions into the atmosphere each year in the United States alone. EPA SUMMARY, supra note 4, at 1.

13. Graves, supra note 4, at 76.
14. Likens, supra note 6, at 43.
15. Id.
16. Id.
17. Id. But see Wall Street Journal, Oct. 1, 1980, at 24, col. 1 (scientists find ice samples up to 350 years old containing high levels of acidity).
18. Likens, supra note 6, at 43.
19. The EPA estimates that approximately 50 million metric tons of sulfur and nitrogen oxides are discharged into the atmosphere each year in the United States alone. EPA SUMMARY, supra note 4, at 1.
20. Sulphur oxides (SO\textsubscript{x}) are principally discharged from stationary sources. Id. at 2. Coal-fired electric generating plants (especially those using high sulfur coal) and smelting operations are the primary sources of sulfur emissions. Babich, Davis, & Stotzky, Acid Precipitation: Causes and Consequences, ENVIRONMENT, May 1980, at 7 [hereinafter cited as Babich]. An estimated 70 percent of the SO\textsubscript{x} discharged in the United States is from electrical generation. Wetsone, supra note 2, at 50001 n.9.
21. All types of fossil fuel combustion produce nitrogen oxide (NO\textsubscript{x}). Babich, supra note 20, at 7. Thus, not only does coal and oil combustion by industrial and utility plants create nitrogen oxide, but gasoline combustion in motor vehicles con-
gases into the atmosphere. After drifting with the prevailing winds, these gases chemically transmute into particles or acids. Dry deposition occurs when the gases or particles return to earth prior to contact with moisture. Although the process is little understood, scientists believe these particles and gases acidify upon contact with water following deposition.

Wet deposition comprises the process commonly referred to as acid rain. Following emission into the atmosphere, the sulfuric and nitrogenous gases chemically combine with atmospheric moisture. Carried by the winds to atmospheric gathering points, the resultant sulfuric and nitric acids fall to earth in rain or snow.

The effects of acid rain vary with the receptive area. Since deposition may occur after hundreds of miles of transport, the receptive environment may differ greatly from that of the emitting source. Acid rain directly affects urban environments in a number of ways. It damages paint on buildings and automobiles, and deteriorates steel and works of art. Cement and marble structures, including statues and monuments, corrode more rapidly when subjected to acid rains. Moreover, the long-term leaching effects of acid rain may

tributes as well. Id. In fact, an estimated 40 percent of all NOx emissions in the United States in 1977 were from transportation-related sources. EPA SUMMARY, supra note 4, at 2.


23. Likens, supra note 6, at 48.
25. EPA SUMMARY, supra note 4, at 3. Dry deposition is believed to occur nearer the polluting source than wet deposition. Likens, supra note 6, at 48.
26. EPA SUMMARY, supra note 4, at 3.
27. Likens, supra note 6, at 43.
28. There are other acids that contribute to acid rain. For example, hydrochloric acid may result from coal-fired power plants. EPA SUMMARY, supra note 4, at 2. Sulfuric and nitric acids contribute, however, by far the largest proportion. Id.
29. 8 COUNCIL ON ENVIRONMENTAL QUALITY ANN. REP. 197 (1977); Glass, Glass, and Rennie, Effects of Acid Precipitation, 13 ENV'TL SCIENCE AND TECH. 1350, 1351 (1979) [hereinafter cited as Glass] (nature and properties of affected materials must be considered in determining potential impact of acid rain-causing emissions).
30. Wetstone, supra note 2, at 50002.
31. 10 COUNCIL ON ENVIRONMENTAL QUALITY ANN. REP. 71 (1979).
32. EPA SUMMARY, supra note 4, at 1; Gauri & Holdren, Pollutant Effects on Stone Monuments, 15 ENV'TL SCIENCE & TECH. 386, 386 (1981). Ancient classical
raise to harmful levels the amount of trace metals in drinking water supplies.\textsuperscript{33}

Acid rain’s deleterious effects upon the natural environment are even more pronounced. Often they are irreversible,\textsuperscript{34} threatening the ecological system which supports human life.\textsuperscript{35} Acid rain threatens destruction of sensitive virgin forests\textsuperscript{36} and corrodes the protective surface structures of plant leaves, making them susceptible to environmental and biotic stresses.\textsuperscript{37} It causes leaching of acid nutrients, resulting in decreased soil fertility and troublesome host-parasite associations.\textsuperscript{38} Agricultural productivity decreases in areas of heavy

buildings on the Acropolis, including the Parthenon, are deteriorating much more rapidly this century than heretofore as a result of high air pollution levels in Athens. EPA SUMMARY, supra note 4, at 1. Completion of an oil refinery in India is expected to similarly deface the Taj Mahal. Gauri & Holdren, supra, at 386. The EPA is currently studying the effects of acid rain on stone by observing the rates of decay of standard Veteran’s Administration headstones at a number of national cemeteries across the country. EPA SUMMARY, supra note 4, at 12.


35. St. Louis Post-Dispatch, May 4, 1980, at 12A, col. 1. Scientists disagree on whether acid rain poses a direct threat to human health. Compare Fuhs, \textit{A Contribution to the Assessment of Health Effects of Acid Precipitation}, in ACTION SEMINAR, supra note 22, at 113, 113 (acid rain is probably harmless as a direct threat to health) and McCarroll, \textit{Health Effects Associated with Increased Use of Coal}, 30 J. AIR POLL. CONT. A. 652, 654 (1980) (human ammonia production through respiratory tract secretions fully neutralizes all sulfuric acid inhaled before it reaches the lungs) with Hamilton, \textit{Health Effects of Acid Precipitation}, in ACTION SEMINAR, supra note 22, at 117, 126-27 (dry acid precipitation presently accounts for over two percent of the deaths annually in both the United States and Canada) and Rowe, \textit{Human Exposure to Sulfates from Coal-Fired Power Plants}, 30 J. AIR POLL. CONT. A. 682, 682 (1980) (health damage formerly attributed to sulfur dioxide is probably caused by acid particulate sulfates).

36. See EPA SUMMARY, supra note 4, at 9 (acid rain a threat to virgin white pine forests of northern Minnesota); Rennie, \textit{Dangers to Soils and Vegetation}, in ACTION SEMINAR, supra note 22, at 24, 26-27 (acid rain poses a long-term threat to Boreal forest ecosystem of eastern Canada). For a discussion of the overall effects of acid rain on forest ecosystems, see Varshney and Garg, \textit{Plant Responses to Sulfur Dioxide Pollution}, 9 CRITICAL REVIEWS IN ENVIRONMENTAL CONTROL 27, 38 (1979).


38. Id. at 44. See also 8 COUNCIL ON ENVIRONMENTAL QUALITY ANN. REP. 198
acidic deposition and chemically dormant metals in the environment mobilize into toxic states. Furthermore, it can make lakes with low buffering capacity so acidic that fish reproduction is impossible. Over time, this may result in a lake becoming totally incapable of supporting fish life, or even in the extinction of entire aquatic species.

Although global in outreach, acid rain is a regional environmental problem. Within the United States, studies evince rainfall of above normal acidity has fallen in the Northeast for at least twenty-five years. Although nationwide data on the chemistry of rainfall remains scarce, recent studies show an increase in precipitation acidity in most parts of the country. This increase is most pronounced in the rapidly industrializing Southeast, the major highly mobile

(1977) (acid rain affects important nitrogen-fixing bacteria which help replenish soil nitrogen essential to the growth of agricultural crops and trees).

39. EPA SUMMARY, supra note 4, at 10-12.

40. See Fuhs, A Contribution to the Assessment of Health Effects of Acid Precipitation, in ACTION SEMINAR, supra note 22, at 113, 115 (“actionable levels” of mercury found in fish from remote lakes in Adirondack Mountains of New York); Wetstone, supra note 2, at 50002 (plant and fish contamination by acid rain-mobilized metals poses a threat to health and the sport fishing industry).

41. A lake's buffering capacity is its ability to neutralize acids introduced into it. Waters low in acid-neutralizing minerals and consequently most susceptible to damage from acid rain tend to be high altitude and upstream lakes and streams. COUNCIL ON ENVIRONMENTAL QUALITY ANN. REP. 198 (1977).

42. Graves, supra note 4, at 76. See generally Hendrey, Acidification of Aquatic Ecosystems: Ecosystem Sensitivity and Biological Consequences, in ACTION SEMINAR, supra note 22, at 72, 72-79.

43. Babich, supra note 20, at 11-12. Roughly one hundred lakes in the Adirondacks can no longer support fish populations due to acid rain. Wetstone, supra note 2, at 50002. See also EPA SUMMARY, supra note 4, at 9 (lakes in Upper Michigan and northern Minnesota and Wisconsin may be as susceptible to acid rain as those in the Adirondacks).

44. Wetstone, supra note 2, at 50003. It is suspected that at least one fish species, the aurora trout, has become extinct due to acid rain. See ONTARIO MINISTRY OF THE ENVIRONMENT, NORTHEAST REGION, LIMNOLOGICAL OBSERVATION ON THE AURORA TROUT LAKES (1978), cited in Wetstone, supra note 2, at 50003.


46. Likens, supra note 6, at 48.

47. Id.


49. Likens, supra note 6, at 49.
Western cities, and the northern Great Lakes states.

Acid rain’s regional impact nonetheless remains greatest in the Northeast. High levels of sulfur dioxide in the atmosphere have caused extensive rain-induced environmental damage. The acidic rains have also forced curtailment of industrial development. Damage to the region’s economy is pervasive, in some sectors the loss may be total.

Studies indicate much of the Northeast’s acid rain problem originates outside its borders. Over one-third of the pollutants have been traced to the Midwest, principally Ohio. Midwestern states, motivated by economic factors, continue to encourage utility coal conversion and combustion of locally-mined high sulfur coal. This exacerbates the Northeast’s acid rain problem. To date, attempts by

50. Glass, supra note 29, at 1351. Studies have shown a marked increase, for example, in the acidity of rainfall in Pasadena, California since the 1960’s. Graves, supra note 4, at 77. Although most of this increase is thought to come from local sources, it is suspected part of it originates as far away as Japan or China. Id. See also Lewis & Grant, Acid Precipitation in the Western United States, SCIENCE, January 1980, at 176-77 (high acid content found in streams in Colorado Rockies).

51. EPA SUMMARY, supra note 4, at 8-9. Accord, Glass, supra note 29, at 1352 (lake acidification in the Boundary Waters Canoe Area-Voyagers National Park region of northern Minnesota has begun, with most sensitive lakes already affected); Minneapolis Tribune, Aug. 18, 1980, at 1A, col. 4 (acid rain problems detected at Isle Royale National Park in Upper Michigan).

52. Glass, supra note 29, at 1351.

53. Id.

54. [1980] 10 ENVIR. REP. (BNA) (10 Envir. Rep. Current Dev.) 1928 (environmental commissioners from six Northeastern states inform Environmental Protection Agency (EPA) Administrator that long-range pollutant transport from upwind states, principally Ohio, is forcing them to curb industrial development).

55. Former Secretary of State Muskie has warned the Northeastern states that coal conversion by other states will heighten the region’s acid rain problem to the point of inhibiting economic growth. Id. at 2327. See also [1980] 11 ENVIR. REP. (BNA) (11 Envir. Rep. Current Dev.) 732 (economist estimates annual national loss from acid rain at $5 billion); TIME, March 17, 1980, at 48 (structural damage alone may be as high as $2 billion).


58. Id. at 2148.

59. Id. at 1928. See generally Dumanoski, supra note 2, at 43-45.

Northeastern states to negotiate an "equitable" solution with the Midwest have failed. They may next seek judicial recourse. This Note now turns to the prospects for success of such action.

II. FEDERAL STATUTORY LAW

A. Acid Precipitation Act of 1980

Congress expressed recognition of the impending severity of acid rain pollution by passing the Acid Precipitation Act of 1980. Believing that once acid rain becomes fully understood Americans will willingly pay the price of abatement, and recognizing the close relationship between energy production and environmental degradation, Congress enacted the acid rain measure as Title VII of the Energy Security Act. Title I of the Energy Security Act creates a

61. See id. at 1928, 2239.


Controversy over air quality standards in Ohio nonetheless continues. The state consistently has resisted the Clean Air Act. See Dumanoski, supra note 2, at 43. It has the loosest emission limitations of any state, id. at 43-44, and has circumvented the Act through encouragement of tall stacks. Id. at 44. Cf. [1979] 10 ENVIR. REP. (BNA) (10 Envir. Rep. Current Dev.) 1544 (EPA allows Ohio power plants to burn coal with six percent sulfur content, while Pennsylvania plants are limited to two and one quarter percent). All EPA efforts to establish standards or designate areas of Ohio as nonattainment under the Clean Air Act have encountered stiff resistance. Private industry objections have created a protracted series of cases. See generally Cincinnati Gas & Élec. Co. v. Costle, 632 F.2d 14 (6th Cir. 1980); General Motors Corp. v. Costle, 631 F.2d 466 (6th Cir. 1980); PPG Indus., Inc. v. Costle, 630 F.2d 462 (6th Cir. 1980); Republic Steel Corp. v. Costle, 621 F.2d 797 (6th Cir. 1980); Cincinnati Gas & Élec. Co. v. EPA, 578 F.2d 660 (6th Cir. 1978), cert. denied, 439 U.S. 1114 (1979); Cleveland Elec. Illum. Co. v. EPA, 572 F.2d 1150 (6th Cir. 1978), cert. denied, sub nom. Timken Co. v. EPA, 439 U.S. 910 (1978).


64. 126 CONG. REC. 516198 (remarks of Sen. Schmitt).

65. Id. at 516197 (statement of Sen. Moynihan).

nationally program for synthetic fuel development. In enacting the acid rain provision, Congress evidenced concern that this synthetic fuel program together with coal conversion will intensify the acid rain problem.

The Acid Precipitation Act establishes a ten-year program to research the causes of acid rain and evaluate its social, economic, and environmental effects. The Act provides for creation of an Acid Precipitation Task Force to implement the ten-year program and prepare a comprehensive research plan. The comprehensive plan is to delineate a coordinated program identifying not only the causes and effects of acid rain, but measures for limiting or ameliorating its deleterious effects as well. Following a period for public review and comment, the Task Force is to submit the comprehensive plan to Congress and the President. The Act then directs the Task Force to implement the plan throughout the course of the ten-year program.

Although laudable, this statutory research program does nothing for those parties presently beleaguered by interstate transport of acid rain pollutants. It provides no substantive relief. Although the Task Force is to identify within the comprehensive plan measures to lessen or eliminate the harmful effects of acid rain, the statute provides

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72. Id. § 703(a), 42 U.S.C.A. § 8902(a) (Pamph. 1980).
73. Id. § 704(a), 42 U.S.C.A. § 8903(a) (Pamph. 1980).
77. Id. § 704(c)(1), (2), 42 U.S.C.A. § 8903(c)(1), (2) (Pamph. 1980).
78. Id. § 704(c)(3), 42 U.S.C.A. § 8903(c)(3) (Pamph. 1980).
79. Id. § 705(a), 42 U.S.C.A. § 8904(a) (Pamph. 1980).
nothing further. There is no authorization to implement or enforce any such measure.

In its statement of purpose, Congress declared that action deemed "necessary and practicable" based upon the findings of the research program shall be taken "to the extent consistent with existing law." In Section 705(b), however, Congress in effect reversed itself by prohibiting all regulatory activity under the Act, whether consistent with existing law or not. Section 705(b) provides: "Nothing in this subtitle shall be deemed to grant any new regulatory authority or to limit, expand, or otherwise modify any regulatory authority under existing law, or to establish new criteria, standards, or requirements for regulation under existing law."

This section eliminates the possibility of substantive action based upon the research program's findings. Not only does it prohibit exercise of new and modification of existing regulatory authority, it prohibits incorporation of new criteria or standards within the existing authority as well. Since the criteria and standards for regulatory control of acid rain are not contained within any existing authority, there is no available procedure for implementing the research program's findings. Before the Acid Precipitation Act can provide any substantive protection from acid rain, therefore, Congress must act further, either by amendment or enactment of appropriate enabling legislation.

B. Clean Air Act

1. Basic Regulatory Framework of the Clean Air Act

The Clean Air Act attempts to control and prevent air pollution by addressing the effects of direct pollutant discharges upon local en-

81. Id. § 702(b), 42 U.S.C.A. § 8901(b) (Pamph. 1980).
83. 42 U.S.C.A. § 8904(b) (Pamph. 1980).
84. Id.
85. See notes 113-43 and accompanying text infra.
86. Amendment could be either to the Acid Precipitation Act or the Clean Air Act. Amending the latter to embrace acid rain has been proposed. [1980] 11 Envir. Rep. (BNA) (11 Envir. Rep. Current Dev.) 732. Industry mobilization to weaken the Act during the 1982 legislative session will very possibly defeat any attempts to extend it to cover acid rain. Id. at 84.
environmental quality and human health and welfare. The Act's basic regulatory framework to achieve these goals gives the states primary control over meeting federally-established air quality standards.

The Act directs the Administrator of the Environmental Protection Agency (EPA) to establish national primary and secondary ambient air quality standards for each air pollutant he deems reasonably likely to endanger public health or welfare. Ambient standards presently exist for seven "criteria" pollutants.

The states are responsible for attaining ambient standards for existing stationary sources. Each state must develop a state implementation plan (SIP) for each criteria pollutant within nine months of its designation. The SIP provides for implementation, enforcement, and maintenance of both primary and secondary ambient standards within the state's air quality control regions. The SIP must conform with certain federal requirements in meeting the standards. States have discretion, however, in both strengthening the standards and distributing the burden of compliance.

New or modified stationary sources must meet stricter nationally uniform emission standards. These new source performance stan-

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93. The seven pollutants are: sulfur dioxide, nitrogen dioxide, total suspended particulates, hydrocarbons, ozone, carbon monoxide, and lead. For a discussion of the extent to which these standards have been met, see 9 COUNCIL ON ENVIRONMENTAL QUALITY ANN. REP. 40-33 (1978).
97. Id. § 110(a)(2), 42 U.S.C. § 7410(a)(2) (Supp. III 1979). Each new or revised SIP must be approved by the EPA. Id.
Standards (NSPS)\textsuperscript{99} require application of the "best demonstrated technological system of continuous emission reduction"\textsuperscript{100} to effect an overall percentage reduction in emissions.\textsuperscript{101} Nationally uniform standards also exist for hazardous air pollutants (NESHAPS)\textsuperscript{102} and new motor vehicles.\textsuperscript{103}

Areas with air quality better than ambient standards require receive special protection under the Act's Prevention of Significant Deterioration (PSD) program.\textsuperscript{104} This program requires that each SIP contain assurances that sulfur oxide and particulate concentrations will not exceed maximum allowable levels\textsuperscript{105} in the nation's clean air regions.\textsuperscript{106} An applicant for new construction of a major emitting source within a clean air region must demonstrate the proposed source will not cause cumulative emissions to exceed any of the Act's requirements.\textsuperscript{107}

The Act contains two separate but interrelated provisions for control of interstate air pollution. Section 110(a)(2)(E) requires that each SIP contain adequate assurances that in-state stationary sources do not prevent any other state's attainment of national ambient air quality standards or interfere with its plan for PSD program compli-


\textsuperscript{102} Id. § 112, 42 U.S.C. § 7412 (Supp. III 1979).

\textsuperscript{103} Id. § 202, 42 U.S.C. § 7521 (Supp. III 1979).

\textsuperscript{104} Id. §§ 160-169, 42 U.S.C. §§ 7470-7479 (Supp. III 1979).

\textsuperscript{105} The Act specifies that both maximum allowable concentrations and maximum allowable increases over baseline concentrations shall not be exceeded. 42 U.S.C. § 7473 (Supp. III 1979).

\textsuperscript{106} Clean Air Act, § 163, 42 U.S.C. § 7473 (Supp. III 1979). The Act divides clean air regions into three classes. Id. § 7472. Class I provides the most stringent standards and applies to national parks, memorial parks, wilderness areas, and international parks. Id. § 7472(a). All other clean air regions receive initial designation as Class II areas. Id. § 7472(b). States may redesignate certain areas to the most lenient standard, Class III, pursuant to established standards. Id. § 7474.

\textsuperscript{107} Id. § 165(a)(3), 42 U.S.C. § 7475(a)(3) (Suppl III 1979). Under the preconstruction review program, an applicant not only must show his facility will not cause a violation of PSD increment levels, but also that it will meet all other Clean Air Act requirements, including ambient standards. Id. Furthermore, the proposed source must adopt the best available control technology for each regulated pollutant it will discharge. Id. § 7475(a)(4).
The SIP must also ensure compliance with section 126. That section mandates that a state include in its SIP provision for written notice to all nearby states whose air quality may be affected by new or existing major sources within its jurisdiction. If, following petition for review, the EPA Administrator finds interstate transport will occur, he or she is to declare the polluter state's SIP in violation of the Act.

2. Prospects for Control of Acid Rain Under the Clean Air Act

States, environmentalists, and the EPA recently have reviewed the Clean Air Act's provisions in an attempt to devise a viable method of acid rain control. They have been unsuccessful. Although both sulfur and nitrogen oxides, the principle precursors to acid rain, are criteria pollutants for which ambient standards exist, the standards do little to eliminate the threat of acid rain. They are too lenient, allowing much higher emissions than achievable under available best technology systems. Moreover, they address ground level concentrations, not cumulative high altitude atmospheric loading. Acid rain, however, is a direct result of such long-term upper atmosphere accumulations.

109. Id.
111. Id. § 126(b), 42 U.S.C. § 7426(b) (Supp. III 1979).
112. Id. § 126(c), 42 U.S.C. § 7426(c) (Supp. III 1979).
116. Most air quality control regions can meet sulfur dioxide and nitrogen dioxide ambient standards while still allowing substantial discharges. In fact, many states have achieved nitrogen dioxide standards without establishing any existing stationary source regulations. Westone, supra note 2, at 50004. Compliance with federal motor vehicle emission controls alone suffices. Id.
117. See Costle, New Source Performance Standards for Coal-Fired Power Plants, 29 J. AIR. POLL. CONT. A. 690 (1979) (existing power plants average 83 pounds of sulfur dioxide discharged per ton of coal burned, while new facilities applying best available technology will average 12 pounds per ton).
118. Wetstone, supra note 2, at 50005.
State control over achievement of the ambient standards further exacerbates the problem. Each state’s primary objective in preparing its SIP is to meet ambient standards within its own air quality control regions. Since it has discretion in distributing the burden of compliance, it distributes it relative to the importance of the emitting source to its economy. The stringency of emission standards among the various classes of emitting sources, therefore, is not uniform from state to state.

State emphasis, moreover, concentrates upon minimizing local ground level pollution. Dispersion techniques, especially the use of tall stacks, are effective means of accomplishing this objective and achieving ambient standards without significantly reducing total emissions. Tall stacks disperse pollution upward and away from the emitting source, thereby contributing to both atmospheric loading and long-range interstate transport. The 1977 Clean Air Act Amendments limited employment of tall stacks, however, thus restricting their use for future dispersal purposes.

Both the new source performance standards and the PSD program prospectively could assist in acid rain abatement. At present, however, neither is of benefit. The NSPS requirement that a new or modified source use the best available technological system promises a long-term reduction in overall emissions. Since the average power plant in the United States has twenty years of useful life remaining, however, this policy will not produce significant reductions for some time.

The PSD program provides assurances against interstate deterioration of clean air regions. Furthermore, it seemingly covers damages inflicted by pollutants originating as air pollutants but which,
like acid rain, chemically transform into another medium prior to causing environmental damage. The program’s preconstruction review requirements do not apply, however, to major sources located in nonattainment areas polluting clean air regions of other states. Interstate acid rains denigrating clean air regions are thus beyond its prohibition.

The Act’s interstate provisions conceivably ought to provide effective relief from interstate transport of acid rain pollutants. They do not. Both sections 110(a)(2)(E) and 126 have severe substantive and procedural limitations. Neither can overcome the lack of uniformity in SIP’s regarding emission standards for different classes of sources. The sections apply only to interstate pollutants significantly contributing to violations of national ambient or PSD standards. Some states however, have adopted stricter standards for certain polluting sources. Under the interstate provisions, those states have no right to protect their standards against violations caused by interstate pollutant transport.

The limitations inherent in the interstate sections go beyond application to only the national standards. Section 110(a)(2)(E) covers only stationary sources. Interstate transport of motor vehicle pollution is beyond its purview. Moreover, the notice provisions of section 126 apply only to the even narrower class “any major


128. Section 160 provides:
The purposes of this part are as follows: (1) to protect public health and welfare from any actual or potential adverse effect which in the Administrator’s judgment may reasonably be anticipated to occur from air pollution (or from exposures to pollutants in other media, which pollutants originate as emissions to the ambient air), notwithstanding attainment and maintenance of all national ambient air quality standards; . . .


130. See notes 119-22 and accompanying text supra.


135. See Note, supra note 98, at 122.
source. Cumulative upper atmosphere loading by a consortium of smaller sources and major complying sources thus avoids the notice requirement.

Implementation of the interstate provisions also presents procedural difficulties. Tracing pollutants from a specific major source in one state to violation of a national standard in another may prove to be extremely difficult. Even after such a causal relationship is established, section 126 does not adequately delineate which state ought to bear the burden of control. It seemingly places the entire burden upon the polluting state. Since in-state sources are likely to be in part responsible for the receptor state's nonattainment, such an allocation is both disproportionately harsh and a disincentive to active EPA enforcement of the section.

Acid rain thus evades effective control under the Clean Air Act. In its present form the Act does not encourage efforts to contain interstate transport of air pollutants. Moreover, it limits EPA's enforcement alternatives. Nonetheless, the potential for control exists. By amendment the Act could encompass acid rain. It is doubtful such an amendment is forthcoming. Whether it is or not, parties presently suffering from the acid effects of rain need not wait; a federal common law remedy presently exists.

III. FEDERAL COMMON LAW OF NUISANCE

A. Development of the Doctrine

Since neither Congress nor the Constitution fully adopted English

143. See note 86 supra.
common law,144 United States common law derives from express judicial creation. Under the doctrine of Erie Railroad v. Tompkins,145 federal courts possess only limited lawmaking powers.146 Jurisdictional control over most traditional common law matters rests with the states.147 Federal courts, therefore, do not have general jurisprudence to fashion federal common law.148 As a result, "general" federal common law does not exist in the United States.149 "Specialized" federal common law, however, does.150 Although federal courts have exercised their lawmaking power rarely and in a restricted manner,151 they have fashioned federal common law

145. 304 U.S. 64 (1938).
149. Erie R.R. v. Tompkins, 304 U.S. at 78. Accord, Texas Indus., Inc. v. Radcliff Materials, Inc., ___ U.S. ___, ___ 101 S. Ct. 2061, 2067 (1981). In Erie, the Supreme Court overturned the century old decision of Swift v. Tyson, 41 U.S. (16 Pet.) 1 (1842), which held that federal courts exercising diversity jurisdiction are free to form an independent judgment concerning the state law they are applying. Id. at 19. The Court stated:

Except in matters governed by the Federal Constitution or by Acts of Congress, the law to be applied in any case is the law of the State. And whether the law of the State shall be declared by its Legislature in a statute or by its highest court in a decision is not a matter of federal concern. There is no federal general common law.

304 U.S. at 78.


remedies in a number of special situations. 152

Federal nuisance law is one such "special" field of common law. The origin of the federal common law of nuisance dates back to two early twentieth century Supreme Court decisions. 153 In Missouri v. Illinois, 154 the Court held that a state may claim relief under federal common law from a nuisance caused by another state endangering the health and comfort of its citizens. 155 Although it denied relief in this instance, 156 the Court stated that where injury is a real and immediate threat it would grant an injunction. 157

The Court did issue an injunction a year later in Georgia v. Tennessee Copper Co. 158 Georgia had filed suit alleging the copper company's sulfurous gas emissions were destroying crops, forests, and


154. 180 U.S. 208 (1901) (demurrer overruled); 200 U.S. 496 (1906) (decision on the merits).

155. 180 U.S. at 241. The alleged nuisance involved pollution of interstate waters. The Chicago Sanitary District, a corporation of the state of Illinois, constructed a canal connecting Lake Michigan with the Mississippi River 43 miles north of St. Louis. With the state's approval, the District began channeling raw sewage through the canal. Missouri contended this threatened the health of St. Louis residents and deprived the state of its right to use the river in its natural condition. Id. at 214-15. Furthermore, Missouri alleged an increase in typhoid fever in St. Louis was attributable to the canal operation. 200 U.S. at 522-23.

156. 200 U.S. at 526. Relief was denied because the Court felt Missouri fell short of proving the allegations of its complaint. Id. Moreover, Illinois introduced evidence showing that the Missouri River was more polluted as it emptied into the Mississippi than were the waters from the canal. Id. at 525. The Court found this evidence damaging both on the face of and in principle to Missouri's case. Id. at 526.

157. 180 U.S. at 248.

orchards within the state. Confronted with this situation bearing striking similarity to acid rain, the Court found a state has extreme rights in its capacity as a "quasi-sovereign" over the air and earth within its domain. These rights, the Court concluded, include the right to demand they not be denigrated by sources beyond the state's control. Holding Georgia had sufficiently met its burden of proof, the Court extended the rule of Missouri v. Illinois to include nuisances caused by private parties.

Apart from a few rare instances of Supreme Court invocation, the federal common law of nuisance lay dormant for over sixty years following Georgia v. Tennessee Copper Co. The Tenth Circuit revived it in 1971 in a controversy over interstate water pollution. In Texas v. Pankey, Texas sought an injunction to stop New Mexico ranchers from spraying a chlorinated camphene pesticide on their lands. The state alleged rainfall runoff would cause pollution of waters flowing into Texas. In reversing the district court's dismiss-

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159. Id. at 236.
160. In its "quasi-sovereign" capacity a state has an interest behind and independent of its citizens' private claims to land and air. Id. at 237. Justice Holmes did not explicate his reasons for adopting the term "quasi-sovereign." One writer has suggested he did so in order to emphasize that states do not possess all the powers of a sovereign. Comment, Federal Common Law: Judicially Established Effluent Standards as a Remedy in Federal Nuisance Actions, 7 B.C. ENVIR. AFFAIRS 293, 299-300 n.56 (1978).
161. 206 U.S. at 237.
162. Id. at 238. The Court stated:
   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.
   Id.
163. Id. at 238-39.
164. Id.
166. 441 F.2d 236 (10th Cir. 1971).
167. Id. at 237-38. The complaint alleged that use of the chemical pesticide Toxaphene by the defendants to eradicate range caterpillars would pollute the Canadian River, an interstate waterway flowing from New Mexico into Texas. Id. Texas ar-
sal for lack of jurisdiction, the court held a state has a common law right of protection against improper impairment of its waters from sources outside its province.\textsuperscript{168}

A year later the Supreme Court expressly approved the Tenth Circuit's reasoning in \textit{Illinois v. City of Milwaukee (Illinois I)}\textsuperscript{169}. Illinois sought invocation of the Court's original jurisdiction\textsuperscript{170} for abatement of interstate water pollution by several southern Wisconsin communities.\textsuperscript{171} Finding the case within the jurisdiction of the district courts,\textsuperscript{172} the Court elected not to exercise its original jurisdiction.\textsuperscript{173} Although the Court passed no judgment on the merits, Justice Douglas' opinion categorically explicated the framework within which federal common law arises.

\textit{Id.} at 238. Moreover, it contended that the municipal water supplies of eleven municipalities would become unusable. \textit{Id.}

\textsuperscript{168} \textit{Id.} at 240.

\textsuperscript{169} 406 U.S. 91 (1972).

\textsuperscript{170} Illinois' motion to invoke the Supreme Court's original jurisdiction was based upon art. II, § 2, cl. 2 of the Constitution. In part, that clause extends the Court's original jurisdiction "to Controversies between two or more States;—between a State and Citizens of another State..." U.S. CONST. art. III, § 2, cl. 2. Congress has delineated those instances in which the Court's original jurisdiction is and is not exclusive. 28 U.S.C. § 1251 (Supp. III 1979) reads in pertinent part:

(a) The Supreme Court shall have original and exclusive jurisdiction of all controversies between two or more states.

(b) The Supreme Court shall have original but not exclusive jurisdiction of:

\textsuperscript{171} A mirror image of the nuisance complained of in \textit{Missouri v. Illinois}, Chicago here was on the receiving rather than the discharging end of a raw sewage-in-interstate waters controversy. Illinois alleged that raw sewage and other waste materials were being discharged daily into Lake Michigan from four cities and two sewage districts in the Milwaukee area. The state contended this created a public nuisance in Illinois where such discharges were prohibited. 406 U.S. at 93.

\textsuperscript{172} 406 U.S. at 100. The Court determined the appropriate federal district court had jurisdiction over the controversy under 28 U.S.C. § 1331 (Supp. III 1979).

\textsuperscript{173} 406 U.S. at 108. In denying without prejudice Illinois' motion for leave to file, the Court stated that if Illinois wished to amend its pleadings to include the State of Wisconsin, the Court would entertain the suit. \textit{Id.} at 97. Exercise of its original jurisdiction would be mandatory under 18 U.S.C. § 1251(a)(1) (Supp. III 1979). As it stood, however, as a suit between a state and the political subdivisions of another, exercise of its original jurisdiction is left to the Court's discretion under § 1251(b)(3). See note 170 supra. Traditionally, the Court's policy has been to invoke its original jurisdiction sparingly. Utah v. United States, 394 U.S. 89, 95 (1969).
The facts endemic to the particular case determine whether application of federal common law is necessary.\textsuperscript{174} In some instances, the need to fill the interstices of congressional enactments in a certain field dictates its use.\textsuperscript{175} In such cases, state law may be relevant, but in the end federal law, in its common as well as statutory form, controls.\textsuperscript{176} In other instances, the presence of a federal question may mandate a common law rule of decision.\textsuperscript{177} Character of the parties, though perhaps essential, is not controlling;\textsuperscript{178} the controversy must either touch fundamental interests of federalism or invoke need for a uniform federal rule of law.\textsuperscript{179}

Within these bounds, the Court found an interstate common law already in existence.\textsuperscript{180} Boundary disputes often require a federal common law decision rule;\textsuperscript{181} so too, escheat of intangible personal property.\textsuperscript{182} Equitable apportionment of water in interstate streams

\begin{itemize}
\item \textsuperscript{174} 406 U.S. at 106. \textit{Accord}, Nebraska v. Wyoming, 325 U.S. 589, 618 (1945).
\item \textsuperscript{175} 406 U.S. at 103. \textit{Cf.} First Southern Fed. Sav. & Loan Ass'n v. First Southern Sav. & Loan Ass'n, 614 F.2d 71, 73-74 (5th Cir. 1980) (federal common law applies to fill the interstices of federal legislation when federal interest or policy so requires).
\item \textsuperscript{176} 406 U.S. at 102. \textit{Accord}, Textile Workers v. Lincoln Mills, 353 U.S. 448, 457 (1957) (although federal law must govern, compatible state law may be considered to effectuate the federal policy). D'Oench, Duhme & Co. v. Federal Deposit Ins. Corp., 315 U.S. 447, 471-72 (1942) (Jackson, J., concurring) (federal court sitting in non-diversity case may look to state law and give it persuasive or even controlling effect, but decision must rest upon federal law).
\item \textsuperscript{177} 406 U.S. at 105 n.6.
\item \textsuperscript{178} Id. at 105 n.6. \textit{See} Massachusetts v. Mellon, 262 U.S. 447, 480 (1923) (although a state may be a necessary party, its presence alone does not confer jurisdiction; controversy must be within the contemplation of the Constitution's jurisdictional grant).
\item \textsuperscript{179} 406 U.S. at 105 n.6. The Supreme Court has often referred to the need to establish a uniform rule for controversies involving basic federal interests. \textit{See, e.g.}, Banco Nacional de Cuba v. Sabbatino, 376 U.S. 398, 425 (1964) (federal interest in international relations mandates application of federal common law); Clearfield Trust Co. v. United States, 318 U.S. 363, 366 (1943) (federal government's interest in the commercial paper it prints is such as to establish federal common law); Hinderlider v. La Plata River & Cherry Creek Ditch Co., 304 U.S. 92, 110 (1939) (uniform federal law needed to protect federal interest in equitably apportioned interstate waters). \textit{See generally} P. BATOR, P. MISHKIN, D. SHAPIRO & H. WECHSLER, HART & WECHSLER'S THE FEDERAL COURTS AND THE FEDERAL SYSTEM 762-70 (2d ed. 1973).
\item \textsuperscript{180} 406 U.S. at 105.
\item \textsuperscript{181} \textit{See, e.g.,} Oregon \textit{ex rel.} State Land Bd. v. Corvallis Sand & Gravel Co., 429 U.S. 363, 375 (1977) (determination of state boundaries following change in stream bed made by federal common law).
\item \textsuperscript{182} \textit{See} Texas v. New Jersey, 379 U.S. 674, 682 (1965).
\end{itemize}
similarly raises a federal question. To this list the Court added interstate pollution, holding "[w]hen we deal with air and water in their ambient or interstate aspects, there is a federal common law." 

Continued applicability of this federal common law of interstate pollution toward any particular pollution problem is not, however, guaranteed. Federal common law submits to the paramount authority of Congress. The Supreme Court recognized in Illinois I that subsequent congressional enactments may preempt the doctrine's use in the field of water pollution. It will provide a remedy only so long as neither comprehensive legislation nor authorized administrative standards fill the field.

In its recent rehearing of the Illinois-Milwaukee controversy, the Court in City of Milwaukee v. Illinois (Illinois II) held that such preemption had in fact occurred in regard to effluent discharges in interstate waters. In an opinion by Justice Rehnquist, the Court found that the 1972 Amendments to the Federal Water Pollution Control Act (FWPCA) established an "all-encompassing pro-

183. See, e.g., Hinderlider v. La Plata River & Cherry Creek Ditch Co., 304 U.S. 92 (1939); Kansas v. Colorado, 206 U.S. 46 (1907).
184. 406 U.S. at 103.
186. 406 U.S. at 107.
gram” which fully occupies the field.\textsuperscript{191} Emphasizing the comprehensive nature of the congressional regulatory scheme,\textsuperscript{192} the Court ruled there is no interstice to be filled by federal common law.\textsuperscript{193}

\section*{B. Application of the Doctrine to Acid Rain}

The federal common law of nuisance flourished following \textit{Illinois I}. Numerous lower federal courts applied it in interstate water pollution controversies.\textsuperscript{194} Commentators billed it a “revolutionary” development in environmental law.\textsuperscript{195} No court invoked it, however, in litigation over air pollution. None considered its applicability to acid rain.

In \textit{Illinois II}, the Supreme Court effectively overruled the line of lower court decisions following \textit{Illinois I} which applied the federal common law of nuisance to remedy interstate water pollution controversies.\textsuperscript{196} The Court did not, however, undercut the doctrine’s basic structure. Nothing in the opinion is inconsistent with any of the aforementioned Supreme Court decisions which delineated the doctrine’s bounds.\textsuperscript{197} It remains, therefore, a potent remedy in environmental litigation. If its applicability to acid rain is adjudicated, courts will find it does provide an equitable remedy. This is apparent upon examination of a number of fundamental principles inherent within it.

\begin{itemize}
\item \textsuperscript{191} \textit{U.S. \ldots}, 101 S.Ct. 1784, 1792-93 (1981).
\item \textsuperscript{192} \textit{Id. at \ldots}, 101 S.Ct. at 1793.
\item \textsuperscript{193} \textit{Id. at \ldots}, 101 S.Ct. at 1795.
\item \textsuperscript{195} \textit{See Note, Federal Common Law of Nuisance Reaches New High Water Mark as Supreme Court Considers Illinois v. Milwaukee II, 10 ENV'TL L. REP. 10101, 10101 (1980).}
\item \textsuperscript{196} \textit{See cases cited in note 194 supra.}
\item \textsuperscript{197} \textit{See notes 153-187 and accompanying text supra. The Court rested its decision solely upon the statutory preemption language of \textit{Illinois I}. Although the Court emphasized the restrictive nature of the federal common law of nuisance to a greater extent in \textit{Illinois II} than it had in the earlier case, see \textit{U.S. at \ldots}, 101 S.Ct. at 1790-91 (federal common law is a “necessary expedient” resorted to only when resolution of a federal question not addressed by statute compels the Court to do so), the opinion contains no indication that the doctrine’s validity is dubious.}
\end{itemize}
1. Overriding Federal Interest

The Supreme Court in *Illinois I* emphasized that it will fashion federal common law when there is an overriding federal interest in doing so. This interest can arise either from need for a uniform rule of decision or to settle a dispute affecting basic interests of federalism. The Court determined that controversies over interstate and navigable waters raise such basic federalism interests. Subject to congressional preemption, therefore, creation of a public nuisance within those waters falls within the Court's interstate common law.

Interstate air pollution also falls within that common law. Transport of sulfuric and nitrogen oxides across state lines similarly touches basic interests of federalism. In *Illinois I*, the Court stated that federal common law encompasses air in its interstate or ambient facet as well as water. In fact, the Court treated as settled the question of whether air pollution is included within the federal common law of nuisance.

In reaching its holding, the Court relied heavily upon *Georgia v. Tennessee Copper Co.*, calling it "the leading air case" in federal common law of nuisance litigation. The Supreme Court in *Georgia v. Tennessee Copper Co.*, in granting Georgia's request for an injunction, recognized an overriding federal interest in abating interstate air pollution. The states released their right to forcible abatement of external nuisances upon establishing the federal union. Protection of the union dictates, however, that its member states not

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203. *Id.* at 103.

204. *Id.* at 104.

205. 206 U.S. at 237.
be greatly polluted by sources beyond their dominion. Although it had no right to abate the interstate nuisance under state law, as a quasi-sovereign member of the union, Georgia nonetheless could request relief under federal common law.

2. Statutory Preemption

Even though a particular interstate pollution problem may affect federal interests to the extent of necessitating invocation of the federal common law of nuisance, the doctrine's applicability remains subject to congressional supersession. In *Illinois I*, the Supreme Court acknowledged that federal laws and regulations may preempt use of the federal common law of nuisance. The Court found such had not occurred with water pollution. Although Congress had legislated extensively in regard to interstate and navigable waters, the Court held those statutory remedies were not necessarily exclusive. Where complementary, the federal common law of nuisance supplements them, providing additional federal remedies.

In the wake of *Illinois I*, numerous lower federal courts held that the Federal Water Pollution Control Act Amendments of 1972 and 1977 left federal nuisance law intact. *Illinois II* overruled those

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206. Id.
207. Id.
208. Id. at 238.
210. Id. at 103.
211. Id.
212. Id. The Court stated that the federal statutes, though not necessarily placing bounds on the federal common law, may provide guidance in establishing its decision rule. *Id.* at n.5. See also *Textile Workers v. Lincoln Mills*, 353 U.S. 448, 457 (1957) (statutes expressly create some substantive law; common law creates that necessary to resolve issues in the penumbra of the statutory mandates).

decisions. The Supreme Court held that the 1972 Amendments preempted the federal common law of nuisance.\footnote{United States v. Dixie Carriers, Inc., 462 F. Supp. 1126, 1130 (E.D. La. 1977) (federal common law nuisance remedy not available to preempt a remedy precisely and deliberately set by Congress in FWPCA).} The Court found that the amendments differed in magnitude from the legislative schemes it had before it to consider in \textit{Illinois I}.\footnote{\textit{Id.}. in Middlesex County Sewerage Auth. v. National Sea Clammers Ass’n, _ U.S. _, 101 S.Ct. 2615 (1981), the Court extended its holding in \textit{Illinois II} to cover effluent discharges into coastal waters. The Court expansively read \textit{Illinois II} as holding the FWPCA “entirely preempted” the federal common law of nuisance in the field of water pollution. \textit{Id.} at _, 101 S.Ct. at 2627. Such a broad reading of \textit{Illinois II} is inaccurate. Not only was the controversy in \textit{Illinois II} limited to sewage discharges, but the Court expressly restricted its holding to resolution of that issue. \textit{See} City of Milwaukee v. Illinois, _ U.S. _, 101 S.Ct. at 1792-94 (“at least so far as concerns the claims of respondents . . . the problem of effluent limitations has been thoroughly addressed through the administrative scheme established by Congress. . . . Federal courts lack authority to impose more stringent effluent limitations under federal common law than those imposed by the agency charged by Congress with administering this comprehensive scheme.”). (Emphasis added).} In enacting the amendments, Congress expressed an intent to create a comprehensive federal regulatory scheme.\footnote{Washington v. General Motors Corp., 406 U.S. 109, 114-15 (1972) (considering extent to which Clean Air Act preempts state control over air pollution).} Contrary to \textit{Illinois I}, therefore, the Court in \textit{Illinois II} found the field of federal control over effluent discharges in interstate waters completely occupied by an “all-encompassing” regulatory program.\footnote{Isbrandtsen Co. v. Johnson, 343 U.S. 779, 783 (1952).} This program, the Court concluded, totally supplanted application of the federal common law of nuisance.\footnote{\textit{Id.} at _, 101 S.Ct. at 1792-93.}

No case has determined to what extent the Clean Air Act preempts the federal common law of nuisance in regard to air pollution. Although it is likely much of the field is preempted,\footnote{\textit{Id.} at _, 101 S.Ct. at 1792.} several factors reduce the conclusion that all of it is not.

First, it is improper to presume that federal statutes and common law are mutually exclusive. The Supreme Court has long been committed to a presumption that statutes encroaching upon the common law retain familiar and long-established principles.\footnote{See United States v. Dixie Carriers, Inc., 462 F. Supp. 1126, 1130 (E.D. La. 1977) (federal common law nuisance remedy not available to preempt a remedy precisely and deliberately set by Congress in FWPCA).} Especially...
when a statute is of a remedial or amendatory nature, the Court hesitates to repeal by implication existant common law remedies. The Clean Air Act is a remedial, amendatory statute. The federal common law of nuisance is an existent remedy for interstate air pollution controversies. In considering the Act’s preemptive effect upon the common law, therefore, courts should refrain from over-reading its encroachment. Judicial construction should effectuate a statute’s purpose. Only when that purpose is expressly incongruous to the common law does a statute necessarily derogate it. Since the Clean Air Act’s remedial purpose is consistent with application of the federal common law of nuisance, courts should exercise restraint in finding its provisions preemption thereof.

Second, one of the essential functions of federal common law is filling in the penumbra of express statutory directives. Often a congressional enactment will establish a broad policy framework. Although our tripartite form of government entrusts the judiciary with only limited lawmaking power, the “specialized” common law that has developed since *Erie* gives federal courts interstitial decisionmaking power. Judicial inventiveness will be checked by the nature of the subject matter. The courts will look to the underlying statutory policies and principles, fashioning appropriate federal common law rules of decision.

223. *Id.*
231. See notes 150-52 and accompanying text *supra*.
234. See, e.g., *Illinois v. City of Milwaukee*, 406 U.S. 91, 103 n.5 (1972) (federal environmental protection statutes provide useful guidelines in establishing federal
In *Illinois II*, the Supreme Court held that the nature of the 1972 Amendments to the FWPCA regarding effluent discharges is so comprehensive that it excludes all interstitial decisionmaking by federal courts.\(^{235}\) Since the FWPCA and the Clean Air Act are complimentary statutes employing similar pollution control principles and techniques,\(^{236}\) it is surmisable that the reasoning of *Illinois II* could be extended to the Clean Air Act.\(^{237}\) Such an extension would have no bearing upon application of the federal common law of nuisance to combat acid rain.

*Illinois II* concerned sewage discharges into a navigable waterway.\(^{238}\) Such discharges were precisely one of the forms of water pollution Congress designed the FWPCA to control.\(^{239}\) The Act established an elaborate permitting program regulating effluent discharges.\(^{240}\) Congress considered this program an essential part of its comprehensive scheme to eliminate water pollution.\(^{241}\) Although nothing in the Act or its legislative history evidences an express congressional intent to abrogate the established federal common law of nuisance remedy, given the comprehensiveness of the statutory scheme, retention of the remedy would have been supervenous.

Acid rain presents an entirely different situation. Congress amended the Clean Air Act into its present form without giving acid rain adequate consideration. It couldn't; the magnitude of the envi-

\(^{235}\) U.S. at ___, 101 S.Ct. at 1794-95.

\(^{236}\) See, e.g., Ethyl Corp. v. EPA, 541 F.2d 1, 17 (D.C. Cir. 1976) (judicial interpretation of “endangering” under FWPCA deemed relevant to meaning of “endanger” under Clean Air Act); NRDC v. Train, 510 F.2d 692, 701-02 (D.C. Cir. 1975) (citizen suit provisions of the two Acts clearly parallel).

\(^{237}\) In one pre-*Illinois II* decision, the district court in New England Legal Foundation v. Costle, 475 F. Supp. 425 (D. Conn. 1979), implied that an argument developed by analogy from the FWPCA may form a valid basis for holding that the Clean Air Act has not preempted federal common law of nuisance remedies for air pollution. *Id.* at 441. It did not decide the question since the plaintiffs were precluded from receiving equitable relief on other grounds. *Id.*

\(^{238}\) U.S. at ___, 101 S.Ct. at 1788.

\(^{239}\) *Id.* at ___, 101 S.Ct. at 1794.

\(^{240}\) *Id.* at ___, 101 S.Ct. at 1789.

\(^{241}\) *Id.* at ___, 101 S.Ct. at 1793.
ronic threat of acidic precipitation was unknown.\textsuperscript{242} The Clean Air Act is designed to combat the air pollution problems prevailing at the time of its enactment.\textsuperscript{243} Although by administrative regulation it expressly addresses the pollutants most responsible for acid rain,\textsuperscript{244} it does so in a manner incongruous to eliminating the problem. The Act is localized. It divides the country into regions\textsuperscript{245} and classes\textsuperscript{246} and compels polluters within each area to assist in reducing\textsuperscript{247} or preventing an increase in\textsuperscript{248} pollutant levels. Only cursorily does it address pollutant transport across regional or class boundaries.\textsuperscript{249}

Interstate transport of acid rain circumvents this regulatory procedure. In fact, the Clean Air Act exacerbates the problem.\textsuperscript{250} Its emphasis upon local ground level pollution encourages pollutant dispersal outside the control area.\textsuperscript{251} This leads to upper atmosphere accumulation and, consequently, to acid rain.\textsuperscript{252}

Contrary to the situation present in \textit{Illinois II}, therefore, the Clean Air Act does not preempt the federal common law of nuisance as to acid rain. The Supreme Court in \textit{Illinois II} found Congress had expressly designed a comprehensive program to eliminate the precise form of water pollution at issue.\textsuperscript{253} Although the Clean Air Act is also a comprehensive statute, it is not comprehensive regarding acid rain. It is nugatory. It does not expressly address the problem, nor, given its localized regulatory format, can coverage be found by implication.


\textsuperscript{243} See notes 87-93 and accompanying text \textit{supra}.

\textsuperscript{244} See National Primary and Secondary Ambient Air Quality Standards, 40 C.F.R. §§ 50.2-.10 (1981).

\textsuperscript{245} See notes 94-98 and accompanying text \textit{supra}.

\textsuperscript{246} See notes 104-06 and accompanying text \textit{supra}.

\textsuperscript{247} See notes 99-101 and accompanying text \textit{supra}.

\textsuperscript{248} See notes 104-07 and accompanying text \textit{supra}.

\textsuperscript{249} See notes 108-12 and accompanying text \textit{supra}.


\textsuperscript{251} See notes 113-16 and accompanying text \textit{supra}.

\textsuperscript{252} See notes 116-18 and accompanying text \textit{supra}.

\textsuperscript{253} \textit{U.S. at } \textit{supra}, 101 S.Ct. at 1792-94.
3. Character of the Plaintiff

The Supreme Court in *Georgia v. Tennessee Copper Co.* restricted access to federal nuisance law to states. Most lower federal court decisions invoking the federal common law of nuisance have similarly adopted this limitation. Recent cases, however, presage its eradication.

The district court in *United States v. Ira S. Bushey & Sons, Inc.* was the first court to permit a party other than a state to institute a federal common law of nuisance claim. The Court granted the United States leave to seek redress under the common law for oil spills and seepage into interstate waters by a private party. Finding substantial evidence of an overriding federal interest in interstate waters, the court determined that denial of the common law remedy would be iniquitous.

Numerous courts since *Ira S. Bushey & Sons* have recognized the United States' right to initiate a federal common law of nuisance action. Courts have been hesitant, however, to extend the doctrine to non-sovereign plaintiffs. The first cases to break this barrier increased the doctrine's scope to subsume municipalities and state

254. 206 U.S. 230, 238 (1907).
256. *See cases discussed in notes 197-208 and accompanying text infra.*
258. *Id.* at 150.
259. *Id.*
260. *Id.* at 149-50. The court educed this finding from executive statements, legislative enactments, and administrative agency regulations as well as from judicial pronouncements. *Id.*
261. *Id.* at 150.
agencies. To date, only one court has permitted its invocation by a private party.

In *National Sea Clammers Association v. City of New York*, plaintiffs sought damages for economic injury resulting from the city's dumping of sewage sludge into the Atlantic Ocean. Relying upon traditional public nuisance law principles, the court determined that the plaintiffs had standing under the federal common law of nuisance since they had suffered injury distinct from that of the general public. In so holding, the court did not ignore the doctrine's requirement of an overriding federal interest. Turning to dictum in *Illinois I*, the court stated that need for uniformity in the doctrine's application mandated extending its scope to include private parties. In fact, the court concluded, to give the doctrine full effect private parties should be encouraged to use it.

Whether other federal courts will follow *National Sea Clammers* is debateable. If they do, the federal common law of nuisance will be available for use by any party, public or private, injured by interstate pollution. If not, private parties will have to rely upon their states for protection.

In its *parens patriae* capacity, a state may file suit to protect the general health, welfare, or property rights of its citizens. The Supreme Court has held this rule applicable to nuisance claims arising under federal common law. The amount of relief available in a *parens patriae* suit, however, is limited. A state is not a full sovereign. It is a "quasi-sovereign," acting as guardian or trustee for its citizens. Its interests, though lying behind those of its citizens,

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264. California Tahoe Regional Planning Agency v. Jennings, 594 F.2d 181 (9th Cir. 1979) (state agency together with state).
266. *Id.* at 1234-35.
267. *Id.* at 1233.
268. *Id.* at 1234.
270. *See e.g.*, North Dakota v. Minnesota, 263 U.S. at 375; Georgia v. Tennessee Copper Co., 206 U.S. 230 (1907).
do not include an interest in the individual claims of each citizen as against another state. For a state to sue another in its parens patriae capacity, its interests must not merely lie behind but be independent of those of its citizens. A state may not sue another, therefore, merely to redress private grievances of its citizens.

A suit for only economic damages such as those incurred by plaintiffs in National Sea Clammers is therefore beyond the scope of a parens patriae suit. If National Sea Clammers is not followed, private parties injured by acid rain will be confronted with this limitation. Acid rain's tendency to pervade state interest and arouse official concern suggests, however, this limitation is no real prohibition.

A plausible claim of interstate acid rain pollution will of necessity produce evidence of widespread damage. Although private landowners and entrepreneurs will sustain much of this damage, state lands or structures also are likely to be directly affected. To the extent they are, the state may sue in its proprietary capacity. Where not, its interest in protecting the health, welfare, and property of its citizens will rise above mere questions of individual private rights.

As the representatives of the collective, a state, moreover, has interests apart from those of particular individuals in maintaining a favorable economic position and preventing or eliminating impediments to its growth and development. These indissoluble links between the interests of a state and its citizens provide the necessary


276. New Hampshire v. Louisiana, 108 U.S. 76, 91 (1883). Such suits are prohibited by the Eleventh Amendment to the Constitution. That Amendment provides that the federal courts may not hear any case "commenced or prosecuted against one of the United States by Citizens of another State..." U.S. Const. amend. XI. Thus, a suit by a state under color of its quasi-sovereign interests but in essence designed to recover a specific claim of one or a group of its citizens is not justiciable. New Hampshire v. Louisiana, 108 U.S. at 91. Moreover, although a state may be able to enjoin another from causing a nuisance upon the private lands of its citizens, North Dakota v. Minnesota, 263 U.S. at 374, it may not seek monetary compensation for that damage already done. Id. at 376.


incentives and justifications for it to sue as *pars pro patria.*

4. The Availability of Injunctive Relief: Balancing the Equities

The federal common law of nuisance is a suit in equity. As such, traditional equity limitations apply. An injunction should issue only when the right to relief is evident, and the legal remedy inadequate. The danger must be real and immediate, the injury continuous or recurring. An injunction may not issue against a nuisance for which the plaintiff is in part responsible. The burden of proof is demanding, separating the noxious effects of multi-


286. *See, e.g.,* Missouri v. Illinois, 200 U.S. 496, 525-26 (1906) (injunction denied in part because plaintiff equally if not more guilty of creating the nuisance).

These equity limitations severely restrict access to the federal common law of nuisance. They place a heavy burden upon a party seeking its invocation. As regards acid rain, the burden, though arresting, is not prohibitive. Tracing clouds of sulfurous gases to their emitting sources may be arduous; it is not, however, impossible. Air monitoring technology permits scrutiny of pollutant discharges from individual stationary sources, their dispersal into the upper atmosphere, accumulation with other pollutants, and long distance transport. Thus, although delineating which pollutants within a cloud originated at which specific source within a large industrial area may prove to be difficult, tracing the cloud to a specific industrial area and hence to a minimal number of potential sources is not. A party impacted by interstate acid rains, therefore, could satisfy the injury burden of proof.

"Balancing the equities" presents the most inhibitive equity limitation upon use of the federal common law of nuisance to control acid rain. Once a court finds a polluter has created a nuisance, it must determine appropriate relief. Many courts have held an equitable balancing of each party's interests must precede consideration of injunctive relief. The court must consider the relative economic impact issuance or denial of an injunction will have on each party. It must also take into account evidence of intentional misconduct by either party, and consider the overall public interest.

Courts conflict on whether the federal common law of nuisance

288. No court applying the federal common law of nuisance has dealt directly with the issue of joint polluter liability. In Michie v. Great Lakes Steel Division, 495 F.2d 213, 216 (6th Cir. 1974), however, the Sixth Circuit held that under Michigan nuisance law three corporations could be jointly charged for air pollution. Thirty-seven Canadian plaintiffs had filed a diversity claim against the three corporations alleging a single indivisible injury. Id.


290. See notes 29-44 & 52-56 and accompanying texts supra.

291. See Harrison v. Indiana Auto Shredders Co., 528 F.2d 1107, 1122 (7th Cir. 1976).

292. See, e.g., Sussex Land & Live Stock Co. v. Midwest Ref. Co. 294 F. 597, 609 (8th Cir. 1923); Bliss v. Washoe Copper Co., 186 F. 789, 827 (9th Cir. 1911), cert. dismissed, 231 U.S. 764 (1913).

293. See PROSSER, supra note 281, at 603-04.

294. Id.
should embrace balancing. Some hold equity demands it.\textsuperscript{295} Others, recognizing equity to a polluter is given at the expense of the party suffering the effects of the pollution, hold equity is defeated by balancing.\textsuperscript{296} In either case, when the pollution is shown to endanger public health, courts find balancing improper.\textsuperscript{297}

Justice dictates that in applying the federal common law of nuisance to interstate acid rain, courts should seldom, if ever, balance the equities. Acid rain is not merely an environmental problem. It inhibits economic growth.\textsuperscript{298} It curtails industrial development,\textsuperscript{299} destroys certain ways of life.\textsuperscript{300} It is a threat to public health.\textsuperscript{301} As guardian of its citizens' health and welfare, a state is empowered to sue another state or parties therein to redress grievances in which it holds an interest. When it does, balancing is less important.\textsuperscript{302} A state has an interest in the purity of the air,\textsuperscript{303} land,\textsuperscript{304} and water\textsuperscript{305}

\textsuperscript{295}. See, e.g., United States v. Stoeco Homes, Inc., 498 F.2d 597, 611 (3d Cir. 1974) (dicta) (balancing necessary when applying federal common law of nuisance); Sussex Land & Live Stock Co. v. Midwest Ref. Co., 294 F. 597, 609 (8th Cir. 1923) (injunction denied since injury only partial and polluter using all available methods to halt oil loss); Bliss v. Washoe Copper Co., 186 F. 789, 827 (9th Cir. 1911), cert. dismissed, 231 U.S. 764 (1913) (injunction denied since loss to company would greatly exceed plaintiff's injury).

\textsuperscript{296}. See, e.g., American Smelting & Ref. Co. v. Godfrey, 158 F. 225, 230 (8th Cir. 1907), cert. denied, 207 U.S. 597 (1907) (fact that business is conducted in a reasonable and fair manner is irrelevant; injunction must issue to halt property damage and health threat from its operations); United States v. Luce, 141 F. 385, 416 (C.C.D. Del. 1905) (when right to relief is clear and injury sustained substantial, denial of an injunction by balancing defeats equity); McCleary v. Highland Boy Gold Min. Co., 140 F. 951, 952 (C.C.D. Utah 1904) (property of one of small means must not be forcibly taken by balancing equities against the wealthy).

\textsuperscript{297}. In granting relief for pollution of interstate waters as a federal common law nuisance, the Seventh Circuit in \textit{Illinois v. City of Milwaukee} stated, "if the pollution endangers the public health, injunctive relief is proper, without regard to any balancing." 599 F.2d at 166. \textit{Accord}, Harrison v. Indiana Auto Shredders Co., 528 F.2d 1107 (7th Cir. 1976) (state nuisance).

\textsuperscript{298}. See note 55 supra.

\textsuperscript{299}. See note 54 supra.

\textsuperscript{300}. See note 56 supra.

\textsuperscript{301}. See notes 33-44 supra.

\textsuperscript{302}. Georgia v. Tennessee Copper Co., 206 U.S. 230, 238 (1907); Illinois v. City of Milwaukee, 599 F.2d 151, 166 (7th Cir. 1979), \textit{vacated on other grounds}, \textit{---} U.S. \textit{---}, 101 S.Ct. 1784 (1981).

\textsuperscript{303}. Georgia v. Tennessee Copper Co., 206 U.S. 230, 237 (1907).

\textsuperscript{304}. \textit{Id.}

within its domain. Acid rain denigrates them all. To balance a polluting state's or private party's economic interests against the multiple interests of the receptor state is a judicial usurpation of a state's *parens patriae* interests.

**CONCLUSION**

Acid rain knows no jurisdictional bounds. Harmful to both urban and natural environments, acid rain threatens long-term devastation, much of which is irreversible. Current pollution control laws do not adequately address it. The Acid Precipitation Act of 1980 is a valuable research measure, but substantively devoid. The Clean Air Act, with its emphasis upon local ground level concentrations, not only does not address acid rain but increases the upper atmosphere pollutant loading which creates the interstate acid rain problem.

The federal common law of nuisance offers relief from the phenomenon. Though long quiescent, it has recently emerged as a viable form of pollution control. Federal courts have applied it in numerous water pollution controversies. Although the Supreme Court has determined that statutes preempt it as to certain forms of water pollution, the Court's reasoning is not applicable to acid rain. The Clean Air Act, therefore, is not preemptive. Whether suit be by state or private party, acid rain's harmful interstate effects create the requisite overriding federal interest. Protecting public health and welfare within the receptor state demands that equity not consider the polluter's economic interests. The federal common law of nuisance, in other words, encompasses acid rain. It is available for judicial cognizance.