Perspective on 40 Years of Environmental Law

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Perspectives on 40 Years of Environmental Law (C)

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I. Introduction

A. Prologue

Environmental Law is 40 years old. The field has expanded exponentially in this short time period. Many of the underlying principles of environmental law that we take for granted today were developed in the 1970’s. We need to look back at its roots to see how we arrived where we are today, but also to recognize many of these problems still exist. Victories in Environmental Law are not always permanent.

This article is not intended as an exhaustive analysis of Environmental Law. It is based on the author’s memories of 40 years in the Environmental Law classroom, starting with the major issues of 4 decades ago. While not inclusive, emphasis is based on major issues of 4 decades ago that remain perplexing problems today, such as risk. Other once significant issues seem to have become environmental footnotes.

Four environmental events coalesced to usher in the Environmental Decade of the 1970’s and the Age of the Environment. First was the decades’ rise of smog, especially in Southern California. The second was the publication of Rachel Carson’s epochal book, Silent Spring. Third was the January 28, 1969 Santa Barbara Oil Blowout on Platform A. Finally, the Cuyahoga River, as it flows through Cleveland, caught on fire through spontaneous combustion on June 22, 1969.

The result was the inaugural Earth Day on April 22, 1970 at the University of Wisconsin. The EPA opened its doors on December 2, 1970. The AALS Section on Environmental Law began in 1973. Popular songs and movies followed.

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2 Some of the stories rely upon the author’s recollections, and cannot necessarily be cited in a traditional method. For a history of Environmental Law, see Richard J. Lazarus, The Making of Environmental Law (2004). This article is not intended to be an outline on Environmental Law, but a recollection of the tides and currents in Environmental Law over the past 4 decades.

3 See notes 1, infra and accompanying text. Wetlands and takings remain a major issue today, but their analysis exceeds the scope of this paper. See Denis Binder, It’s Still Wetlands and Takings After 40 Years, SSRN abstract No.

4 Senator Gary Hart of Colorado once said his constituents “were tired of seeing the air they breathe.”


6 The Santa Barbara Oil Blowout was preceded in March 1967 by the grounding of the tanker Torrey Canyon off England on March 18, 1967. See Robert Eaton, Black Tide (1972) and Dye, Blowout at Platform A (1971). The anti-oil development group GOO, Get Oil Out, was formed in Santa Barbara as a reaction to the ecological tragedy.

7 Cf. Randy Newman, Burn On Big River, Burn On: “Now the Lord can make you tumble, And the Lord can make you turn, And the Lord can make you overflow, But the Lord can’t make you burn ... Burn on, big river, burn on.”

8 See especially, Joni Mitchell, Big Yellow Taxi, “They tore up paradise and put in a parking lot.”

9 For example, Star Trek IV: The Voyage Home (1986), also nicknamed “Save the Whales,” featured robotic George and Grace humpback whales. Other environmental movies are The China Syndrome, Silkwood, and Free Willy. More recently are the classic “Toxic Torts” Movies, A Civil Action and Erin Brockovich.
The onset of the Environmental Age was the recognition that the quality of life was at least as critical as the quantity of life.

B. The Intellectual Underpinnings

The intellectual underpinnings harken back to Thoreau\(^{10}\) and Aldo Leopold.\(^{11}\) President Theodore Roosevelt expressed the sentiments of a century ago: “We should save the marvelous resources of this land because we aren’t building our country for a day, but for the ages....”

The great writer Bernard DeVoto once wrote a letter to the editor of the Denver Post: “You are certainly right when you say ‘us natives’ can do what you like with your scenery. But the National Parks and Monuments happen not to be your scenery. They are our scenery. They do not belong to Colorado or the West, they belong to the people of the United States, including the miserable unfortunates who have to live east of the Allegheny hillocks.”

The great naturalist, Bob Marshall, once wrote “There is just one hope of repulsing the tyrannical ambition of civilization to conquer every niche on the whole earth. That is the organization of spirited people who will fight for the freedom of the wilderness.”\(^{12}\)

A few jurists a century ago also understood the values in preserving our natural resources. The Supreme Court of Maine in 1908\(^{13}\) upheld a statute controlling timber harvesting:

There are two reasons of great weight for applying this strict construction of the constitutional provision to property in land: (1) such property is not the result of productive labor, but is derived solely from the state itself, the original owner; (2) the amount of being incapable of increase, if the owner of large tracts can waste them at will without state restriction, the state and its people may be helplessly impoverished and one great purpose of government defeated.\(^{14}\)

The Washington Supreme Court 4 decades later wrote:

Edmund Burke once said that a great unwritten compact exists between the dead, the living, and the unborn. We leave to the unborn a colossal financial debt, perhaps inescapable, but incurred, none the less, in our time and for our immediate benefit. Such as unwritten compact requires that we leave to the unborn something more than debts and depleted natural resources. Surely, where natural resources can be utilized and at the same time perpetuated for future generations, what has been called “constitutional morality” requires that we do so.\(^{15}\)

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\(^{10}\) Thoreau, Walden (1854).


\(^{13}\) In Re Opinion of the Justices, 69 A. 627 (Me. 1908). Contra see, Pennsylvania Coal Co. v. Sanderson, 6 A. 453 (Pa. 1886) where the Pennsylvania Supreme Court held that the water pollution of plaintiff’s land by defendant’s anthracite coal mining was not a nuisance because the coal mining was an ordinary and natural use of defendant’s land.

\(^{14}\) Id. at 629.

\(^{15}\) State v. Dexter, 202 P.2d 906, 908 (Wash. 1949).
C.  Rumblings

To be sure some omens foreshadowed the coming environmental battles. The legal stage was set with the late 1960's Scenic Hudson litigation over a proposed pump storage facility at Storm King Mountain on the Hudson River 50 miles north of New York City.\textsuperscript{16} The Second Circuit Court of Appeals reversed the approval of the facility for failure to consider alternatives, interconnects, gas turbines, nuclear power, and undergrounding of the transmission lines. It rebuked the FPC for acting as an "umpire blandly calling balls and stripes" rather than affirmatively protecting the public interest.\textsuperscript{17}

The existing ethos of the 1960's on energy development was expressed on remand by the FPC's opinion:

Just as the mountain has swallowed the rear of the highway, and tolerates both the barges and scows which pass by it and the thoughtless humans who visit it without seeing it, so it will swallow the structures which will serve the needs of people for electric power.\textsuperscript{18}

Chairman Nassiskas of the FPC subsequently stated "I'm a conservationist too," but the Agency's first mission is to encourage "An abundant supply of electrical energy throughout the United States."\textsuperscript{19}

The second was the nascent battle against highway locations.\textsuperscript{20} Third was the legislation which created in 1966 the San Francisco Bay Conservation and Development Commission,\textsuperscript{21} an early precursor to ecosystem management.

\textsuperscript{16} Scenic Hudson Preservation Conference v. Federal Power Commission, 354 F.2d 608 (2\textsuperscript{nd} Cir. 1965). One of the lessons from the November 9, 1965 blackout of the East Coast was that power must be immediately restored to avoid a cascading power failure. A pumped storage facility, which could go online almost immediately, was believed to be a solution. Water would be stored higher up a mountain, and then released to satisfy peak demands or in an emergency. These peak storage facilities can be viewed as a giant battery. Northeast Utilities built a pump storage facility at Northfield Mountain, Massachusetts. Consolidated Edison (Con Ed) of New York thought it had found a similar site at Storm King Mountain. The intake and outflow site was in the prime spawning habitat of the Atlantic striped bass.

\textsuperscript{17} Scenic Hudson Preservation Conf. v. FPC, 354 F.2d 608, 620 (2\textsuperscript{nd} Cir. 1965). The Supreme Court in a separate opinion, Udall v. FPC, 387 U.S. 428 (1967) construed the provision that the project "be best adopted to a comprehensive plan for improving or developing a waterway... including recreational purposes" to extend protection to anadromous fish.

\textsuperscript{18} Re Consolidated Edison Co., 85 P.U.R. 3d 129 (1970), aff'd 2:1, Scenic Hudson Preservation Conf. v. FPC, 453 F.2d 463 (2\textsuperscript{nd} Cir. 1971). I always thought Simon & Garfunkel's The Sound of Silence They listen but did not hear" characterized the FPC decision.


\textsuperscript{20} The "Freeway Battle" began in San Francisco, when highway designers proposed building a highway through the beloved Golden Gate Park to connect with the Peninsula and the Golden Gate Bridge to Marin County. The public was already irate at the 1 ½ miles of the Embarcadero Freeway which cut the City off from the Bay. The Board of Supervisors found they only had one legal weapon available at the time; they refused to close a city street which was essential to the proposed freeway. The freeway was never built, and the Embarcadero never completed. It was demolished after the Loma Prieta earthquake of October 17, 1989.
The Santa Barbara Oil Blowout gave rise to two quotations that captured the spirit of the times. Fred Hartley, the President of Union Oil, said at a news conference: “I don’t like to call it a disaster, because there has been no loss of life. I am amazed at the publicity for the loss of a few birds.” The statement though came across in the media as callous in the tone of “What’s the big deal with the loss of a few dead birds.”

The reaction was the same as a year ago to Tony Hayward, CEO of BP Oil, to the Gulf Blowout. He was videoed saying: “I’m sorry. We’re sorry for the massive disruption it’s caused their lives. There’s no one who wants this over more than I do. I’d like my life back.” The “I’d like my life back” line damned him in the public eye.

The response of Gulf Oil’s exploration manager to the Union Oil Blowout was illustrative of the attitude of many at the time. He blamed much of the oil company’s domestic production decline on environmentalists halting Santa Barbara operations “just because we dribbled some oil on the waters.”

The public response to the Santa Barbara oil spill was fear of the offshore production and transportation of oil. One of the proposals for the Alaskan oil was a transshipment port in Puget Sound. The powerful Senator from Washington, Warren Magnuson, threatened to block any facility in the Sound. He said, in words that could be the mantra of the NIMBY movement: “Why should Puget Sound become a dumping point for someone else’s oil?”

Justice Holmes was widely quoted for his 1931 statement “A river is more than an amenity, it is a treasure,” but these were the legal realities in 1970:

1) The exploitation of natural resources was legally encouraged and favored by the law;

A later conflict occurred over the proposed Westway Highway Project in Manhattan. It was a 4.2 mile interstate link (I-478) in Manhattan. It was estimated to cost $1.8 billion, making it by far the most expensive freeway request. Over $50 million was spent on preliminary engineering, right-of-way, and partial demolition of the existing road. Westway was intended to replace a section of the old Westside Highway, which had to be abandoned when it started caving it.

One of the longest running freeway battles refuses to die. The plan for decades was to complete the 710 from the ports of Long Beach and Los Angeles to the 210 in Pasadena. It ends in South Pasadena on city streets a few miles from Pasadena, and the dreams of completing it continue.

For a history of the federal highway system, see Earl Swift, Big Roads: The Untold Story of the Engineers, Visionaries, and Trailblazers Who Created the American Superhighways (2011).


Union Oil claims his actual statement was “I am always tremendously impressed at the publicity that the death of birds receives versus the loss of people in our country in this day and age. There’s no use crying over spilled milk. Let’s don’t get excited over this little thing.” Jeff Share, The Benefit of the Doubt, August 10, 2010, Vol. 237, No. 8, http://pipelincandgasjournal.com/benefit-doubt (visited on August 22, 2011).


Bill Prochnac, Magnuson Says No, Seattle Post-Intelligencer, Sept. 3, 1977 at XXX.

2) Land use planning was reserved to state and local governments;\footnote{26}
3) Energy development in the form of coal, gas, hydro, nuclear, and oil was the past, present and the future;
4) Citizens had little legal power to challenge or change governmental actions, approvals or denials, permits or variances;
5) International environmental issues were essentially unrecognized, even though pollution is no respecter of artificial political boundaries;\footnote{27}
6) Native American rights were not considered.\footnote{28}

D. The Paradigms

The basic conflict by Earth Day was resource exploitation versus resource preservation, consumption versus conservation. The Environmental Movement built on the historic conservation movement,\footnote{29} such as the Cities Beautiful Movement a century earlier.\footnote{30} The 1960’s witnessed an extension of traditional conservation values with enactment of the Wilderness Act in 1964\footnote{31} and the Wild and Scenic Rivers Act in 1968.\footnote{32} These statutes reflected the traditional conservational ethos – to preserve that which is there.

The purpose of the environmental movement was not just to preserve and conserve, but to prevent and restore. No longer was the conservation of resources the ethos, but the protection of the broader environment, the allocation of resources, and the reallocation of resources from exploitation to recreation. The Clean Air Act and the Clean water Act were enacted not to preserve the status quo of

\footnote{26} Senator Ted Kennedy proposed a federal land use planning act in the early 1970’s, but it went nowhere in Congress. The federal government is now indirectly implementing local land use planning to a limited extent through the Endangered Species Act and wetlands preservation.

\footnote{27} The major exception was enforcement of the Migratory Bird Treaty, 16 U.S.C. §703 et seq. See United States v. Green, 571 F.2d 1 (6th Cir. 1977), United States v. Delahoussaye, 573 F.2d 910 (5th Cir. 1978).

\footnote{28} The classic example is the original allocation of Colorado River waters, which did not allocate Native American water rights. The initial 1922 Colorado River Compact allocation of the river’s waters was 7.5 million acre feet each to the Upper Basin (Colorado, New Mexico, Utah and Wyoming) and Lower Basin states (Arizona, California and Nevada), with 1.5 million acre feet flowing into Mexico. Arizona v. Colorado, 283 U.S. 423 (1931). The Native American rights were finally validated in 1983, Arizona v. Colorado, 460 U.S. 605 (1983). The average mean flow of the Colorado is substantially less than 15 million acre feet.

\footnote{29} The term conservation was changed to ecology, and then quickly to environment.

\footnote{30} The Chicago World’s Fair of 1893 stimulated urban planning, as evidenced by the Chicago shoreline. Much of its legacy is the creation of urban parks, for which Frederick Law Olmstead is famous. He designed many of the green spaces we take for granted in urban America, including Central Park and Prospect Park in New York, Belle Isle in Detroit, the Biltmore Estate in Asheville, North Carolina, Presque Isle in Michigan, Forest Park in Springfield, Massachusetts, Chicago’s Riverside Park, the Niagara Reservation, park systems in Buffalo and Milwaukee, and the campuses of the universities of Chicago, California Berkeley, Cornell, and Stanford. See Witold Rybczynski, A Clearance in the Distance: Frederick Law Olmstead and America in the 19th Century (1999). A more modern version of the City Beautiful Movement was Ian L. McHarg, Design With Nature (1969).

\footnote{31} 16 U.S.C. §§1131-1136.

\footnote{32} 16 U.S.C. §§1271-1287.
pollution, but to restore air and water quality. Resource allocations of 5 decades ago could be reversed to protect the environment.  

Our resources, air, water, land, minerals, are finite, but the demands may be infinite. How society allocates the resources today is environmental law.

The conflict over resources has been most apparent in the American West, the vast, wide open West. The American West was developed for resource exploitation, starting with the 49ers and the California Gold Rush. Minerals development, timber, farming and ranching, water, and fishing were the natural resources of the West.

Several great Western cities, especially Denver, Portland, San Francisco, and Seattle grew out of the exploitation of natural resources, such as fisheries, timber, and mineral extraction. As their populations grew, their economies diversified, and urbanization ensued; the urban residents turned from exploiting nature’s bounty to enjoying it, especially for recreational activities, such as backpacking, biking, camping, canoeing, hiking, jogging, river rafting, skiing, and nature watching. Their values changed from resource exploitation to resource preservation and recreation for a wider population.

II. The Legal Landscape

The judicial underpinnings of modern environmental law were established early. Environmental Law was essentially a tabula rasa. It was fledging. No recognized corpus existed. Statutes were few, relatively

34 For example, the Colorado River is one of the major rivers of the West. Consumptive uses of the Colorado and its tributaries can include domestic use, irrigation, stock watering, hydro, and pollution disposal. Non-consumptive uses which affect the natural flow of the river include the generation of hydroelectricity and flood control. Recreational uses include white water canoeing and rafting (often white water), boating, water skiing, parasailing, swimming and bathing, fishing, and viewing. The Colorado lacks sufficient water to supply all these demands.
35 Arizona, Colorado, the Dakotas, Idaho, Montana, New Mexico, Utah, and Wyoming witnessed mineral booms. One reason for Custer’s Last Stand is that the Black Hills had been reserved to the Native Americans, but then gold was discovered in the Hills. The Sioux were to be removed. See Nathaniel Philbrick, The Last Stand 4 (2010).
36 The Organic Act of 1897 guided the Forest Service for 6 decades. It viewed its primary role as harvesting timber for revenue. Environmentalists distrusted the Forest Service because it is part of the Department of Agriculture, whose mission is to promote agriculture, whereas the Park Service is in the Department of the Interior. Presidents and Congress continue to add to the national parks, forests, wildlife sanctuaries, monuments, scenic areas, and marine sanctuaries and seashores.
37 The use of our national forest lands was governed by the Multiple Use and Sustained Yield Act of 1964. 16 U.S.C. §§528-531. The five designated uses are outdoor recreation, range, timber, watershed, and fish and wildlife. The statute provides equal preference for each of the five in such combination that would best serve the needs of the American people. Preference was in fact accorded timbering, hydro, and skiing before the Environmental Age.
38 California’s Central Valley is the largest agricultural producer in the United States, as measured by the value of the output.
39 The classic study on the water issues of the West isMarc Reiser’s Cadillac Desert: The American West and its Disappearing Water (1986).
40 Skiing and ski-boarding do require some change in the resource. See e.g. Sierra Club v. Morton, 405 U.S. 727 (1972).
weak, or so new as to not be fully understood. Lawyers could be creative. Judges were not limited by precedence or statutes. Professors could theorize. Common law theories, such as nuisance and the Public Trust Doctrine, were dusted off and revived.

Judge Bazelon in the famous case of **Environmental Defense Fund v. Ruckelshaus** laid out the markers:

We stand on the threshold of a new era in the history of the long and fruitful collaboration of administrative agencies and reviewing courts. For many years, courts have treated administrative policy decisions with great deference, confining judicial attention primarily to matters of procedure. On matters of substance, the Courts regularly upheld agency action with a nod in the direction of the “substantial evidence” test, and a bow to the mysteries of administrative expertise. Court occasionally asserted, but less often exercised, the power to set aside agency action on the ground that an impermissible factor had entered into the decision, or a crucial factor had not been considered. Gradually, however, that power has come into more frequent use, and with it, the requirement that administrators articulate the factors on which they base their decisions.

Strict adherence to that requirement is especially important now that the character of administrative litigation is changing. As a result of expanding doctrines of standing and reviewability, and new statutory causes of action, courts are increasingly asked to review administrative action that touches on fundamental personal interests in life, health and liberty. These interests have always had a special claim to judicial protection, in comparison with the economic interests at stake in a ratemaking or licensing proceeding.

**A. Germinal Cases**

Three federal district court opinions had a major impact in changing the law. The first, **Sierra Club v. Ruckelshaus**, rebuked EPA’s position that it lacked authority to include a non-degradation clause (PSD) in state implementation plans. The result was that PSD clauses became a critical protective measure of air quality.

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40 For example, the Clean Air Act and the Clean water Act and their predecessors have been amended several times, strengthening them each time.
41 See the discussions on the National Environmental Protection Act (NEPA) and the Endangered Species Act, infra note XXX, and accompany text.
44 See notes infra and accompanying text.
45 See pages infra and accompanying text.
46 439 F.2d 584 (D.D.C. 1971).
47 Id. at 597-98. See also, **Environmental Defense Fund v. Hardin**, 428 F.2d 1093 (D.C. Cir. 1970).
48 344 F. Supp. 253 (D.D.C. 1972), *aff’d. per curium* 4 E.R.C. 1815 (1973); *aff’d. per curium* 4:4, **Fry v. Sierra Club**, 5 E.R.C.XXX.
The second, West Virginia Division of Izaak Walton League of America, Inc. v. Butz,\(^{49}\) struck down clearcutting on federal forest lands by holding the Organic Act of 1897 required the individual markings of trees to be cut.

The third, United States v. Chem-Dyne Corp.,\(^{50}\) the federal district court interpreted the vague wording of CERCLA to impose in most instances retroactive, joint and several strict liability for cleaning up toxic contamination.

B. Germinal Issues

The basic issues at the onset of the Environmental Age were:

1) The respective roles of the states and the federal government;
2) The rights of the citizens to challenge government actions;
3) Do trees have standing?
4) Should a hard look or soft look apply to environmental decisions?
5) How clean is clean;
6) How safe is safe?
7) How do we handle risk?
8) Who can be held responsible?

C. The Administrative Threshold

The bulk of official government decisions in this country have been made by administrative agencies since the days of the New Deal. The agencies, such as the Environmental Protection Agency, are charged with protecting the public interest.

The explosion in environmental legislation and litigation, set in the background of the 1960’s, led to the revolution in Administrative Law.\(^{51}\) The challenge was to determine the procedures and remedies available when the agency is not fulfilling its statutory charge.

The rights of the citizens in a democracy to legally challenge government should be apparent, but the assumption was that administrative agencies represented the public and the public interest; the agencies possessed the expertise to resolve these issues. They were delegated discretion in exercising their duties to protect the public. Therefore, private citizens should not be allowed to legally challenge their decisions. Nor should their final decisions be subject to judicial second-guessing.

\(^{50}\) 572 F. Supp. 862 (D.C. Ohio 1983).
Citizens were thereby met with the unholy trinity of standing, ripeness, and deference. The Children of the '60's were enchanched with government. The veterans of the Civil Rights Movement demanded more from the government than the arbitrary and capricious standard of review.

The early 1970's were a period of exhilaration as court after court, especially the Supreme Court and the Court of Appeals for the District of Columbia, as well as a few opinions from the California and Wisconsin Supreme Courts, opened the doors to environmental litigation. Three early cases redefined the rights of the public: *Sierra Club v. Morton*, 405 U.S. 727 (1972); *Citizens to Preserve Overton Park v. Volpe*, 435 U.S. 519 (1978); and *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 5 U.S.C. §702.

1. **Do Trees have Standing?**

A threshold of federal jurisdiction is that the plaintiff must have an injury, a sufficient stake in a justiciable controversy; in essence, to have suffered an injury recognized by federal law. Section 10 of the Administrative Procedure Act provides: "A person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof." 5 U.S.C. §702.


The Supreme Court in *Sierra Club v. Morton* opened up the doors to standing. The Sierra Club opposed development of a ski resort in Mineral King National Forest. It claimed standing in a representative capacity "in the conservation and the sound maintenance of the national parks, game refuges and forests of the country ... One of the principal purposes of the Sierra Club is to protect and conserve the national resources of the Sierra Nevada Mountains."

Three critical holdings emerged from *Sierra Club v. Morton*. First, the Court extended standing to aesthetic and environmental well-being. Second, standing can be extended to organizations in a representational capacity as long as an individual member satisfies the standing requirements. Third,
once standing is obtained, the claimant can assert the broader public interest. The successful claimant thereby assumes the role of a private attorney general. The case helped fuel the growth of environmental public interest organizations on both sides.

The answer to Professor Stone’s question is that trees can be named plaintiffs, so long as a named individual plaintiff satisfies the standards for standing.

President Carter signed on November 10, 1978 the Omnibus Parks Bill, also known as the “Park- Barrel” Bill. Congressman Phil Burton of San Francisco played off the traditional pork-barrel legislation by inviting members of Congress to propose additions to the national parks, forests, marine sanctuaries, refuges, monuments, and seashores in their districts, making it unassailable in Congress. Mineral King was added to the Sequoia National Park with the proviso that banned any downhill skiing in the area.

The Court took standing to seemingly infinite limits in United States v. Students Challenging Regulatory Agency Procedures (SCRAP). Significantly, SCRAP was an early decision involving governmental disincentives to recycling. Law students in a seminar opposed a proposed 2.5% surcharge on freight rates. The students claimed the rate structure discouraged the use of recyclable materials while promoting the use of raw materials. “The students were allegedly impaired because of unnecessary destruction of timber and extraction of otherwise recyclable solid and liquid waste materials.”

Specifically, SCRAP alleged that each of its members was caused to pay more for finished products, that each of its members ‘uses the forests, rivers, streams, mountains, and other natural resources surrounding the Washington Metropolitan area and at his legal residence, for camping, hiking, fishing, sightseeing, and other recreational [and] aesthetic purposes,’ and that these uses have been adversely affected by the increased pollution caused by the modified rate structure, and that each member has been forced to pay increased taxes because of the sums which must be expended to dispose of otherwise reusable waste materials.”

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61 Id. at 737. The claimant is not therefore limited to arguing the claims upon which standing is granted.
62 The Environmental Defense Fund was established earlier in 1965, and was soon followed by the Natural Resources Defense Council, the Earth Justice Foundation (formerly the Sierra Club Legal Defense Fund), Conservation Law Foundation, and the Conservation Law Foundation of New England. The Sierra Club blossomed. Other established environmental organizations such as the National Audubon Society, the Wilderness Society, World Wildlife Federation, and the Izaak Walton League grew in membership. Defenders of Wildlife quickly emerged, while Greenpeace has been the most active internationally. The Nature Conservancy and Save the Redwoods League continued their policies of acquiring environmentally critical lands. The National Parks Association renamed itself the National Parks Conservation Association.
63 412 U.S. 669 (1973). The suit was initiated by students in Professor John Banzhaf’s seminar at George Washington Law School.
64 The existing rate structure charged recyclables for $3 versus $1 for raw materials. The existing differential of $2 would now be $2.05 after the increase, putting recyclables at a greater competitive disadvantage.
Having accepted the expansive standard for standard, the Court then admonished “Of course, pleadings must be something more than an ingenious academic exercise in the conceivable.”65

An important caveat from SCRAP is that the stage of the case was preliminary pleadings. The Court recognized that plaintiffs would still have to prove the truth of their allegations after discovery. Extensive discovery battles over standing have ensued.66

SCRAP’s standing holding “stands” by itself, but its holding that standing will not be denied to an individual plaintiff just because large numbers are similarly aggrieved persists. This rule was reaffirmed in Massachusetts v. Environmental Protection Agency,67 which in a 5:4 decision granted standing to Massachusetts, recognizing that states have special standing because of their “quasi-sovereign” status. While the procedural issue of standing is significant, the more critical holding of the majority is that carbon monoxide and other greenhouse gases constitute air pollution within the meaning of the Clean Air Act. Therefore, the EPA must exercise its authority to regulate them with respect to new motor vehicles.

The true significance though is that the Court’s reasoning should apply by analogy to the other provisions of the Act, thereby giving the agency the power to regulate carbon dioxide emissions from stationary sources. The reality for President Obama’s administration is that even if Congress does not enact a cap and control program for coal emissions, the EPA may do so.

In spite of the basic lessons from Sierra Club v. Morton, the Court has often readdressed the issue in a variety of environmental, political, and constitutional issues without consistency.68

2. Standards of Review

The Supreme Court in Citizens to Preserve Overton Park v. Overton69 clearly defined the standards of review and held that an agency’s discretion had to be measured within the context of the relevant statutes. Unreviewable discretion exists only if there is no law to apply or if Congress bars the agency action from judicial review. Normally, the Administrative Procedure Act would apply in laying out the standards of review.

65 412 U.S. at 688. The Supreme Court has never been known for irony.
66 As Professor Rodgers has commented “Pointless discovery, even day-long depositions, are now the norm.” William H. Rodgers, Jr., The Environmental Laws of the 1970’s: They Looked Good on Paper, 12 Vt. J. of Env’t I. 1, 14 (2010).
68 401 U.S. 402 (1971). The proposal was to build a six lane highway through Overton Park in Memphis, severing the zoo from the rest of the park. The segment was never built. 26 acres of the 342 acre park would be destroyed. A look at Overton Park on GoogleMaps will show why the highway planners were extremely limited in their options. Highways do go through parks though in such cities as Philadelphia, San Diego and Seattle. The case also foreshadowed the extensive nature of environmental litigation. The record was over 10,000 pages.
No formal findings of fact were made by the Secretary of Transportation. Section 701\textsuperscript{70} of the APA provides that agency standards are subject to review unless a statutory prohibition on review exists or agency discretion is committed to agency discretion by law; that is, there is no law to apply.

Section 4(f) of the Department of Transportation Act of 1966 provided the Secretary of Transportation shall not approve any program or project “unless (1) there is no feasible and prudent alternative to the use of such land, and (2) such program includes all desirable planning to minimize harm to such project.”\textsuperscript{71}

Thus, there was law to apply. Most significantly, the case substantially reined in the unreviewable exercise discretion by agencies.

3. Administrative Procedures

The Administrative Procedure Act by default sets forth the procedures to be followed by administrative agencies. The famous case of \textit{Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council} \textsuperscript{72}delineated the procedural requirements in administrative hearings.

The case involved the contrast between the hard look approach of the D.C. Circuit and the soft look of the Supreme Court. The agency twice approved the licensing of the nuclear power plants, was twice reversed by the D.C. Circuit, which in turn was twice overruled by the Supreme Court. The two underlying environmental issues in \textit{Vermont Yankee} involved the disposal of nuclear waste and energy alternatives and conservation. Significantly, these issues remain with us today.\textsuperscript{73}

The staff of the Nuclear Regulatory Commission prepared a table to reflect the environmental effects of the fuel cycle. The NRC concluded the environmental effects were insignificant. Part of the problem occurred with how the NRC at the hearings treated Dr. Frank Pittman, who presented the staff’s 20-page conclusionary study, with great deference, versus the intervenors with open hostility.

The thrust of the intervenors’ position was “that the problems involved are not merely technical, but involve basic philosophical issues concerning man’s ability to make commitments which will require stable social structures for unprecedented periods.”\textsuperscript{74} Judge Bazelon’s concurring opinion laid out the markers: “[D]ecisions in areas touching the environment or medicine affect the lives and health of all. These interests, like the First Amendment, have ‘always had a special claim to judicial protection.’ Consequently, more precision may be required than the less rigorous development of scientific facts which may attend notice and comment procedures.”\textsuperscript{75}

\textsuperscript{70} 5 U.S.C. §701.
\textsuperscript{71} 435 U.S. 519 (1978).
\textsuperscript{72} See \textit{e.g. New York v. United States}, 505 U.S. 144 (1992).
\textsuperscript{73} \textit{Natural Resources Defense Council, Inc. v. United States Nuclear Regulatory Commission}, 547 F.2d 633, 652 (D.C. Cir. 1976). One nuclear waste product is plutonium, which as a half life of 25,000 years and must be kept safely isolated for 250,000 years before it becomes harmless.
\textsuperscript{74} \textit{Id.} at 657 (D.C. Cir. 1976)(Bazelon, concurring).
The majority opinion was concerned by the inadequate Agency’s inadequate findings and procedures in light of the uncertainties and risks involved with nuclear energy and waste disposal.

To the extent that uncertainties necessarily underlie predictions of this importance on the frontiers of science and technology, there is a concomitant necessity to confront and explore fully the depth and consequences of such uncertainties. Not only were the generalities relied on in this case not subject to rigorous probing — in any form — but when apparently substantiated criticisms were brought to the Commission’s attention, it simply ignored them or brushed them aside without answer. Without a thorough exploration of the problems involved in waste disposal, including past mistakes, and a forthright assessment of the uncertainties and differences in expert opinion, this type of agency cannot pass muster as reasoned decision making.\(^{76}\)

It criticized DR. Pittman’s conclusionary statement and the “complete absence” of any agency probing of the underlying basis of the statement.\(^{77}\) In short, the appellate court was adopting a hard look approach to these issues of risk.

As compared to the Court of Appeals hard look approach to nuclear risks, the Supreme Court adopted a soft look approach to the risks of nuclear power, adopting the traditional rules of deference to the agency. A reader laying the appellate and Supreme Court opinions side by side might not recognize that the two courts were deciding the same case.

The Supreme Court\(^{78}\) held agencies do not have to impose additional procedural requirements above those required by statute.\(^{79}\) The Court held NEPA was a procedural statute, whose purpose “is to ensure a fully informed and well-considered decision — not one the courts necessarily might have reached had they been the decision makers.”\(^{80}\)

The majority opinion contained a critical caveat from the Court: “Nuclear energy may some day be a cheap, safe source of power or it may not. But Congress has made a choice to at least try nuclear energy, establishing a reasonable review process in which courts are to play only a limited role.”\(^{81}\) The Court the second time around reaffirmed the deference to the agency:

We are acutely aware that the extent to which this nation should rely on nuclear power as a source of energy is an important and sensitive issue. Much of the debate

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\(^{76}\) id. at 653.

\(^{77}\) Id. at 651.


\(^{79}\) “Absent constitutional constraints or extremely compelling circumstances” administrative agencies are free to fashion their own rules of procedure methods of inquiry. Id. at 543.

\(^{80}\) 451 U.S. 519, 558 (1978).

\(^{81}\) Id. at 557-8.
focuses on whether development of nuclear generation facilities should proceed in the
face of uncertainties about their long-term effects on the environment. Resolution of these
fundamental policy questions are, however, with Congress and the agencies to which
Congress has delegated authority, as well as with state legislatures and, ultimately, the
populace as a whole.82

The courts' role is to "ensure that the agency has adequately considered and disclosed the
environmental impact of its actions and that its decision is not arbitrary or capricious."83

4. The Role of the Citizen

Professor Sax pioneered the concept of citizen suits while a professor at Michigan.84 He convinced
the Michigan Legislature to enact the pioneering Thomas J. Anderson, Gordon Rockwell Environmental
Protection Act of 1970,85 which allowed "any person, partnership, corporation, association or other legal
entity" to bring suit in addition to the traditional public attorney general.

One of the major features of many federal environmental law statutes is the citizen suit provision.86
The first citizen suit provision was included in the Clean Air Act of 1970,87 and then added to several
environmental statutes that followed. The citizen suit provisions normally provide that "any person"
may sue "any person" alleged to be in violation of the statute. Potential defendants can include state
officials.88 The successful complainant may receive attorneys fees and the costs of the suit.

The Clean Water Act differs in one significant remedy. The plaintiff may seek as a penalty the fines
that would be imposed in a government suit against the violator.89 As an alternative remedy, the
violator can seek a settlement with the complainant with a sum paid to a non-profit environmental
organization. The suit would be settled with the advantage to the violator of being able to write off the
settlement as a charitable contribution instead of a non-deductible fine.

III. Legal Theories

A. Statutory

83 Id. at 97-98.
arose in Washtenaw County, Michigan in 1972. The county prosecutor obtained an injunction against a rock
concert on public nuisance grounds. A disgruntled graduate student copied the complaint and sought to enjoin the
Michigan-Michigan State football game on October 14, 1972 on the grounds that every offense that allegedly could
have occurred at a rock concert would occur at the football game. The judge tossed the citizen's complaint on the
grounds of lack of standing.
86 Hallstrom v. Tillamook County, 493 U.S. 20 (1989), contains a list of statutes with citizen suit provisions in
footnote 1. See also, Gwaltney of Smithfield, Inc. v. Chesapeake Bay Foundation, Inc., 481 U.S. 49 (1987), and
87 "Any person may commence a civil action on his behalf." 42 U.S.C. §7604.
88 In general, see Barton H. Thompson, Jr., The Continuing Innovation of Citizen Enforcement, 2000 U. Ill. L. Rev. 185
and Eileen Gauna, Federal Environmental Citizen Provisions: Obstacles and Incentives on the Road to Environmental
89 33 U.S.C. §1365(a).
1. The Proliferation of Legislation

As environmental issues arose, the cries "There ought to be a law" followed. A flood of environmental legislation poured out of the federal, state and local legislative halls. Congress, the states, and local government enacted thousands of statutes and ordinances that in totality or in part contained environmental protection measures. Each new crisis seemingly resulted in at least one new statute or amendments to existing statutes, followed by the promulgations of tens of thousands of pages of regulations. Environmental Law was transformed into Administrative Law.

An example of legislative response is illustrated by the recurring issue of massive oil spills. Congress enacted the Ports and Waterways Safety Act of 1972 after Santa Barbara and the Torrey Canyon. It also enacted the Coastal Zone Management Act of 1972. The Exxon Valdez led to the Oil Pollution Act of 1990, which required greater response plans and assurances that effective contingency plans would be established.

One of the most critical obligations of government is to provide safe drinking water to the population. Congress enacted 5 major statutes, whose purpose is to preserve the quality of America’s drinking water; The Clean Water Act, formerly known as The Federal Water Pollution Control Act, The Comprehensive Environmental Reform, Cleanup and Liability Act, The Resource Conservation and Recovery Act, The Toxic Substances Control Act, and The Safe Drinking Water Act.

2. The Statutory Schemata

The common characteristics of the federal statutes developed early: citizen suits, savings clauses, cooperative federalism, command and control, administrative and judicial review, and no victim compensation. A major aspect of many of the statutes is that they do not prohibit pollution or development. Zero discharge is not normally the statutory mandate; they simply prohibit discharges without a permit, or in violation of the terms and conditions of a permit. Adherence to a permit means

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50 Professor Plater noted over 30 environmental statutes were enacted in the three years that followed NEPA. Zygmunt J. B. Plater, Environmental Law and Three Economies: Navigating a Sprawling Field of Study, Practice. And Societal Governance in Which Everything is Connected to Everything Else, 23 Harv. Envtl. L. Rev. 359, 372, n. 28 (1999).
51 For example, the Town of Casey, a rural town of 400-500 between Spooner and Superior in Wisconsin enacted a comprehensive pesticide regulation ordinance. Wisconsin Public Intervenor v. Mortier, U.S. (1971) (Supreme Court held the local regulation was not preempted by FIFRA).
53 33 U.S.C. §1321
54 Obviously, this statute came up short with the BP Gulf Oil Blowout in 2010. See Denis Binder, Lessons From the BP Emergency Plan in Action, 40 ELR 11115 (Nov. 2010), part of a symposium, Special issue: Scientific, Legal, and Policy Lessons From the Deepwater Horizon Disaster, 40 ELR #11 (Nov. 2010).
55 CERCLA, the great toxic cleanup statute, does not include a victims compensation provision.
57 The Federal Water Pollution Control Act originally had a goal of Zero Discharge, but it has fallen by the wayside.
58 CAA, CWA, RCRA (cradle to grave)
legal pollution can continue, subject to the Savings Clause allowing a private remedy for any damages inflicted.

The major statutes generally create a permit system. Air and water pollution are not illegal per se, but only if the effluents are discharged without a permit or in violation of the terms, conditions, and limits of the permit. The permit requirements include filing a periodic statement, the discharge monitoring report (DMR), which is signed by an official with the discharging organization. Since these statutes include criminal penalties for violations, the signer has received the nickname of “The Designated Jailee.”

Some statutes provided for bans100 or restrictions on specific activities.101 Statutes also evolved from environmental protection to environmental disclosure. For example, EPCRA, 102 requires the annual disclosure of air and water effluents.

One characteristic of most of the federal statutes was to create a command and control structure implemented by federal agencies, usually the Environmental Protection Agency.102

3. The Path Not Taken

The alternative would be to set goals, avoid micro-managing, and leave the means to the states. By way of contrast is the banning of hydraulic mining in California over a century ago. California experienced one of the first major environmental battles in the aftermath of the 49ers.

The 49ers early discovered hydraulic mining by which water was forced through a hose at high pressure. The force of the water would wash away the soil and rocks, making the recovery of gold much easier.

The environmental effects were devastating. Mountains were washed away, fertile lands became deserts, and siltation both clogged the Sacramento River and formed a sandbar off San Francisco Bay.103 A court decision in 1884 decried hydraulic mining.104 It was followed by the California Legislature enacting a statute in 1893 which conditionally barred hydraulic mining: “The business of hydraulic mining may be carried on within the state wherever or whenever it can be carried on without material injury to navigable streams, or the lands adjacent thereto.”105

4. The Sleeper Statutes106

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100 PCB’s, polychlorinated biphenyl, were banned in by the Safe Drinking Water Act, 15 U.S.C. §2614(2).
101 LUST
102 Coincidentally, or ironically, April 17, Earth Day, is also Vladimir Lenin’s birthday.
104 People v. Gold Run D. & M. Co., 4 P. 1152 (Cal. 1884).
Two sleeper statutes with great impact were NEPA and the Endangered Species Act of 1973. These two statutes received little attention at the time of enactment. They seemed like feel good statutes with no real significance, easy for Congress to enact, and claim credit with voters.

a. Tellico Dam,\textsuperscript{107} Law Professors, and Environmental Law Clinics

\textit{Tennessee Valley Authority v. Hill}\textsuperscript{108} is one of the most significant Supreme Court environmental law decisions, construing the Endangered Species Act. Professors Zygmunt Plater and Don Cohen of the University of Tennessee Law School represented the aggrieved residents, whose cause looked hopeless under existing law. The Tellico Dam was 95\% completed at the time. They were taking on the established ethos of dams and infrastructure of the Tennessee Valley Authority, the New Deal Authority which electrified much of the southeast.

The Endangered Species was enacted to save species - not just from direct harm, but also from impairment of their critical habitat. ESA allows anyone to file a petition for the listing of an endangered species, which triggers a duty on the part of the Fish and Wildlife Service to investigate. The ESA contains the standard citizen suit provision.\textsuperscript{109}

Section 7, applicable only to the federal government, provides that each federal agency, in consultation and assistance of the Secretary of the Interior, shall “insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary ... to be critical.”\textsuperscript{110}

The federal district court was about to lift an injunction issued under NEPA against the 95\% completed dam,\textsuperscript{111} when a scientist discovered an endangered species, the three inch snail darter, downstream of the dam. The tiny snail darter had a revolutionary impact on Environmental Law.

Chief Justice Burger wrote “One would be hard pressed to find a statutory provision whose terms were any plainer than those in §7 of the Endangered Species Act. Its very words affirmatively command all federal agencies “to ensure that actions authorized, funded, or carried out by them do not jeopardize the continued existence” of any endangered species or “result in the destruction or modification of habitat of such species...”\textsuperscript{112}

\textsuperscript{107} \textit{Tennessee Valley Authority v. Hill}, 437 U.S. 153 (1978). One of the rumors about the case was that Chief Justice Burger was opposed to a liberal interpretation of the Act. When he realized a majority of the Justices were prepared to affirm the lower court ruling 5:4, he switched to the majority and assigned the opinion to himself, delivering a 6:3 majority. He hoped that by giving the statute an extensive reach that Congress would change the law.


\textsuperscript{109} The petition for the listing of the Northern Spotted Owl came from a student in Boston who lived in his VW camper.

\textsuperscript{110} 18 U.S.C. §1536(a)(2).

\textsuperscript{111} \textit{Environmental Defense Fund v. TVA}, 371 F. Supp. 1004 (E.D. Tenn.1973), aff’d 492 F.2d 466 (6th Cir. 1974)

\textsuperscript{112} 437 U.S. at 173.
He recognized that "As it was finally passed, the Endangered Species Act of 1973 represented the most comprehensive legislation for the preservation of endangered species even enacted by any nation."\(^{113}\)

The Tellico Dam litigation was critical in two respects. First, the Supreme Court opinion turned a sleeper statute into a great source of environmental protection, one of the most significant Environmental Law decisions and instruments of environmental protection. Let us recognize that the underlying environmental issue was not the snail darter, or even the dam itself, but the future of infrastructure and pork barrel projects.

Since plaintiffs must have a specialized grievance to get into federal courts,\(^{114}\) the Endangered Species Act often provided the legal means. If a species is listed under the statute, then its prohibitory provisions apply. Thus, the snail darter became a surrogate for fighting dam construction, the Northern Spotted Owl over timber management in the Pacific Northwest, and more recently the Polar Bear against global climate change.\(^{115}\)

Second, it marked the end of the era of The Master Builder. From then on, environmental considerations were as critical a factor in the decision making process, being given the same societal weight, as infrastructure project – dams, bridges, highways and roads, buildings, and even nuclear power plants. Environmental Law was vindicated. It was no longer business as usual. The era of big dams ended.

The Supreme Court decision was not warmly received in Tennessee. As Professor Plater has stated, he "was fired" from the University as was his colleague Don Cohen.\(^{116}\)

In some respects Professor Plater's travails presage the issues faced by today's environmental law clinics. They may face backlashes to the extent they take on powerful legal entities. The efforts of Tulane's Environmental law Clinic against facilities in Louisiana's "Cancer Alley"\(^{117}\) prompted a reaction by the Governor and some legislators spanning over a decade, including an unsuccessful attempt in 2010 to cut off funding to the clinic.\(^{118}\) More recently the University of Maryland Environmental Law

\(^{113}\) Id. at 180.
\(^{114}\) Cries of save the trees or stop the dam do not constitute a legal claim.
\(^{115}\) See e.g. in Re Polar Bear Endangered Species Act Listing and §4(D) Rule Litigation. 749 F. Supp. 2d 19 (D.D.C. 2010). As I write this article, suit has been brought in the name of the desert tortoise to stop solar energy facilities in the Mohave Desert.
\(^{116}\) Professor Plater said he was told "You do not understand the moderation expected of a Tennessee law professor." For Professor Plater's perspective on the case, see Zygmunt J. B. Plater, Environmental Law in the Political Ecosystem – Coping With the Reality of Politics, 19 Pace L. Envtl. L. Rev. 423 (2002). See also Kenneth Murchison, The Snail Darter Case: TVA Versus the Endangered Species Act (2007).
\(^{117}\) "Cancer Alley" is the 85 mile stretch of U.S. 61 between New Orleans and Baton, often abutting the Mississippi River. Roughly 100 petrochemical facilities line the highway. For a discussion of one of the facilities, see S. Lerner, Diamond: A Struggle for Justice in Louisiana's Chemical Corridor (XXXX).
\(^{118}\) See Bill Barrow, Senator, Louisiana Chemical Association get no support for bill to limit student law clinics, New Orleans Times Picayune, May 19, 2010 at http://blog.nola.com/politics/print.html?entry=/2010/05/senator_louisiana_chemical_ass_h (visited on August 13, 2011). See also, Adam Babich, How the Tulane Environmental Law Clinic Survived the Shintech Controversy and
Clinic fended off a similar legislative initiative by the Maryland legislature in response to a suit brought against a poultry supplier to the large Frank Perdue Poultry Company.\textsuperscript{119}

The Supreme Court subsequently reaffirmed the broad sweep of the Endangered Species Act.\textsuperscript{120} Section 9 of the statute is even broader in its application than §7 because it applies to private parties. It prohibits any person from taking any endangered or threatened species.\textsuperscript{121} "Take" is defined to include "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct."\textsuperscript{122} The agency’s regulations further defined “harm” to include “significant habitat modification or degradation where it actually kills or injures wildlife."\textsuperscript{123} The Court upheld this regulation in \textit{Babbitt v. Sweet Home Chapter of Communities for a Great Oregon}.\textsuperscript{124}

In some respects, the ESA is stronger than NEPA; its ban can be absolute.\textsuperscript{125} However, NEPA has a broader reach.

b. NEPA

Of all the federal environmental statutes, the National Environmental Policy Act of 1970 (NEPA)\textsuperscript{126} is the most simple – deceptively simple. The critical provision of the statute is §102, which requires federal agencies to include in every recommendation or report on proposals for legislation or any major action significantly affecting the quality of the human environment, a detailed statement on:

(i) The environmental effects of the proposed action;

(ii) any adverse environmental effects which cannot be avoided should the proposal be adopted;

(iii) alternatives to the proposed action;

(iv) the relationship between local short-term uses of man’s environment and the maintenance of long-term productivity; and

(v) any irreversible and irrevocable commitments of resources which would be involved in the proposed action should it be implemented.\textsuperscript{127}


\textsuperscript{120} See \textit{e.g., Babbitt v. Sweet Home Chapter of Communities for a Great Oregon}, 515 U.S. 687 (1995).

\textsuperscript{121} 16 U.S.C. §1538(a)(1).

\textsuperscript{122} Id. at §1532 (19).

\textsuperscript{123} 50 C.F.R. §17.3(c)(3) (2010).

\textsuperscript{124} 515 U.S. 687 (1995).

\textsuperscript{125} Professor J. B. Ruhl of Vanderbilt has become the expert on the ESA.

\textsuperscript{126} 42 U.S.C. §4321 et seq. NEPA was enacted in 1969, but became effective on January 1, 1970.

\textsuperscript{127} Id. at §4332-2(c).
The leading case was *Calvert Cliffs Coordinating Council, Inc. v. Atomic Energy Commission.* Judge Skelly Wright authored many of the D.C. Circuit environmental opinions. He sat the stage for the interpretations of NEPA by federal district court and court of appeals judges. He wrote that the court faced the challenge of ensuring that NEPA’s “important legislative purposes, heralded in the halls of Congress, are not lost or misdirected in the vast hallways of the federal bureaucracy.” The D.C. Circuit held that NEPA makes environmental protection a part of the legislative mandate of every federal agency and department unless specific legislation directs a contrary result.

A critical holding is that environmental issues must be considered at every important stage in the decision-making process: “[A]t every stage where an overall balancing of environmental and nonenvironmental factors is appropriate and where alterations might be may in the proposed action to minimize environmental costs.” The judges were unimpressed with the agency’s efforts to comply with the statute, stating “We believe that the commission’s crabbed interpretation of NEPA makes a mockery of the Act.” The court further stated that the AEC’s “responsibility is not simply to sit back, like an umpire, and resolve adversary contentions at the hearing stage. Rather, it must itself take the initiative of considering environmental values at every distinctive and comprehensive stage of the process beyond the staff’s evaluation and recommendation.”

*Calvert Cliffs* was followed the next year by *Greene County Planning Comm. v. Federal Power Commission,* which involved the siting of transmission lines. The Court of Appeals emphasized that NEPA is a mandate to consider environmental values at every distinctive and comprehensive stage of the agency’s process.

A major split occurred between the lower courts and the Supreme Court on the proper interpretation of NEPA. The lower courts interpreted NEPA broadly to turn it into a substantive statute. The federal courts ran with NEPA, but the Supreme Court took the opposite perspective.

District courts and courts of appeals quickly held NEPA applied to federal actions even if they were approved, such as by Congress, before enactment, but if major federal decisions still remained as with many infrastructure projects. In essence, NEPA was both prospective and retroactive. No more business as usual.

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129 Id. at 1111.

130 Id. at 1112.

131 Id. at 1118.

132 Id. at 1117.

133 Id. at 1118.


135 Id. at 420.
The informational aspect of NEPA flushed out some suspect ideas, such as spraying paraquat on Mexican marijuana farms\textsuperscript{136} or planting Kudzu on stream banks in the Southeast.\textsuperscript{137} NEPA also turned out to be remedyless if the plan was not adhered to.\textsuperscript{138}

NEPA has turned out to be one of America’s great contributions to environmental protection on a global level, such as states and foreign countries enacting their versions of NEPA.

However, the Supreme Court was not as receptive to NEPA as the lower courts. Unlike its approach to the Endangered Species Act, it provided a narrow interpretation of NEPA.\textsuperscript{139} Kleppe v. Sierra Club held an environmental impact statement was not required until there is a report or recommendation on a proposal for a major federal action.\textsuperscript{140} The only procedural requirements imposed by NEPA are those expressly provided in the statute.\textsuperscript{141} Thus, if another statute, such as the Administrative Procedures Act, does not require a public hearing, then NEPA doesn’t. The Court further held that NEPA “merely prohibits uninformed-rather than unwise-agency action.”\textsuperscript{142} The Court also held that the issuance of injunctive relief in NEPA cases was discretionary.\textsuperscript{143}

The SCRAP opinion included the holding that “NEPA was not intended to repeal by implication any other statute.”\textsuperscript{144} The Court held in Robertson v. Methow Valley Citizens Council that no need exists to prepare a worse case analysis in evaluating the environmental impacts of a project from which there is insufficient information.\textsuperscript{145} Nor did NEPA encompass psychological trauma with the proposed restart of Three Mile Island. The risk of an accident is not an effect on the physical environment,\textsuperscript{146} which NEPA was directed at.

However, NEPA does not have the same impact today as in its early days. Agencies have learnt to “play the game.” The discussion of alternatives might include boilerplate. The agencies also learnt a great Catch 22. The draft EIS requests comments as it is circulated to the public. The final EIS addresses the comments, perhaps in an appendix; the discussion displays the agency’s “reasoned” consideration of the comments. Failure to comment results in the argument that the complainants failed to exhaust their administrative remedies.


\textsuperscript{137} Natural Resources Defense Council, Inc. v. Grant, 355 F. Supp. 289 (E.D. N.C. 1973)

\textsuperscript{138} Ogunquit Village Corp. v. Davis, 553 F.2d 243 (1st Cir. 1977). An EIS for Ogunquit Beach in Maine called for restoring the beach with white sands, as part of its tourist appeal. The beach contained a fine white quartz sand native to the Ogunquit Dune. The Soil Conservation Service replaced it with a coarse yellow sand and gravel.


\textsuperscript{140} Id. at 399.

\textsuperscript{141} Id. at 405-6.


\textsuperscript{144} 412 U.S. at 694.

\textsuperscript{145} 109 S. Ct. 1835 (1989).

\textsuperscript{146} Metropolitan Edison Co. v. People Against Nuclear Power, 460 U.S. 766 (1983).
NEPA became a key tool in NIMBY litigation. It serves to delay an action until political and economic pressures can be brought to bear to end it.\textsuperscript{147}

B. The Expanding, Ever So Slowly, Common Law Public Trust Doctrine

Professor Sax wrote one of the classic environmental articles in 1970, The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention.\textsuperscript{148} His thesis, after an extensive review of the history of the doctrine, was "to encourage public agencies to engage in creative water management that serves the overall public interest."\textsuperscript{149}

His thesis was echoed in the famous Mono Lake decision, when the California Supreme Court held "[T]he public trust is more than an affirmation of state power to use public property for public purposes. It is an affirmation of the duty of the state to protect the people’s common heritage of streams, lakes, marshlands and tidelands, surrendering that right of protection only in rare cases when the abandonment of that right is consistent with the purposes of the trust."\textsuperscript{150} The Mono Lake case changed the settled expectations of the Los Angeles Department of Water and Power, which had been diverting Owens valley and Mono Lake waters for decades pursuant to permits issued by the state.

The major case that forms the background of his public trust analysis is the Supreme Court opinion of Illinois Central Railway v. Illinois.\textsuperscript{151} The Illinois legislature in 1869 granted 1,000 acres of submerged lands of the Chicago waterfront, the bed of Lake Michigan, to the Illinois Central Railroad. It revoked the grant 4 years later. The Supreme Court held the state holds the lands in trust for the people for the purposes of the public trust. Small grants can be made, but not an abdication of the general control of the state over lands under the navigable waters.\textsuperscript{152}

Professor Sax looked to the suspicious path of the Illinois legislation that transferred the waterfront to the railroad, as well as similar transactions elsewhere in America,\textsuperscript{153} to posit this premise: "When a state holds a resource which is available for the free use of the general public, a court will look with considerable skepticism upon any governmental conduct, which is calculated either to reallocate that resource to more restricted uses or to subject public uses to the self-interest of private parties."\textsuperscript{154}

Professor Rodgers has an alternative explanation for the public trust doctrine as "perhaps the strongest contemporary expression of the idea that the legal rights of nature and of future generations

\textsuperscript{147} In general, see Denis Binder, Cutting the Nimbian Knot: A Primer, 40 DePaul L. Rev. 1009 (1991); Orlando Delogu, "Nimby" As a National Environmental Problem, 35 S.D. L. Rev. 198 (1990).
\textsuperscript{149} Id. at
\textsuperscript{151} 146 U.S. 387 (1892).
\textsuperscript{152} Id. at.
\textsuperscript{154} Id. at 490.
are enforceable against contemporary users.” Thus, one major purpose of the public trust doctrine is to preserve these resources, the water resources, for future generations.

States possess the primary authority to define basic property rights. Thus, they can in theory redefine property rights to the disadvantage of the owners. The public trust doctrine is a prime vehicle for doing so since the private rights, the jus privatum, are subordinate to the public rights, the jus publicum. States have redefined the public trust to the detriment of owners, and the Supreme Court has twice approved these changes.

Let’s look first at cases the Supreme Court did not review. Massachusetts and Vermont recognized the shift of the waterfront from the historic use in maritime commerce to urban development, such as restaurants, hotels, gift shops, and condos. The Burlington, Vermont case involved the ownership of 1,100 acres of filled lands lying along the waterfront. The underlying issue was not the preservation of traditional public trust purposes of fishing, navigation and commerce, but who got to control and profit from the redevelopment of the ports. The states used the public trust doctrine to reclassify the original grants for ports and waterways from a fee simple absolute to a fee simple subject to a condition subsequent with a right of reentry by the public, including lands filled in by the grantee, if the original purposes of the grant are no longer adhered to.

The effective result was that the City of Burlington, Vermont now owned, and hence controlled and profited by the development of, its waterfront, eventhough the railroad’s rights traced back to 1827, and the Vermont Legislature reaffirmed them in 1874.

The California Supreme Court recognized in *Marks v. Whitney* that the traditional protected rights of the public trust doctrine are navigation, commerce, and fishing, but modernized the rule:

> The public uses to which tidelands are subject are sufficiently flexible to encompass changing public needs. In administering the trust the state is not burdened with an outmoded classification favoring one mode of utilization over another. There is a growing public recognition that one of the most important public uses of tidelands - a use encompassed within the tidelands trust - is the preservation of those lands in their natural state, so that they may serve as ecological units for scientific study, as open space, and as environments which provide food and habitat for birds and marine life, and which favorably affect the scenery and climate of the area.

*Marks v. Whitney* was decided in the background of the exponential population growth of post-World War II California, with most of the growth concentrated in the narrow coastal zone.

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156 1827, No. 38
159 *Id.* at 796.
The California Supreme Court in Associated Home Builders of the Greater East Bay, Inc. v. City of Walnut Creek upheld a few months earlier a compulsory dedication statute. It wrote: The elimination of open space in California is a melancholy aspect of the unprecedented population increase which has characterized our state in the last few decades. Manifestly governmental entities have the responsibility to provide park and recreation land to accommodate this human expansion despite the inexorable decrease of open space available to fulfill such need.\footnote{161}

The Washington Supreme Court reached a decision similar to Marks v. Whitney in Wilbour v. Gallagher,\footnote{162} when it extended the public trust doctrine to include “incidental rights of fishing, boating, swimming, water skiing, and other related recreational uses.

The first of the two cases upheld by the Supreme Court was Phillips Petroleum Co. v. Mississippi.\footnote{163} Plaintiff owned several tracts of land ranging between ½ to almost 10 acres in size. They traced ownership to Spanish landgrants predating statehood, and had paid property taxes for over a century. The land was non-navigable wetlands adjacent to navigable river and influenced by tides. The land became potentially valuable because of the possible presence of oil underground. The state then claimed ownership under the public trust doctrine and the Court concurred.\footnote{164}

The recent case of Stop the Beach Renourishment, Inc. v. Florida Department of Environmental Protection,\footnote{165} involved a major change in Florida law. Hurricanes eroded several miles of beachfront in Destin and Walton County. The state proposed to restore the beach, but the effect would be to cut off the riparian/littoral owner’s connection to the ocean. The right of accretion would end.\footnote{166} Significantly, the Supreme Court had earlier invalidated an attempt by the state of Washington to cut off the right of accretion.\footnote{167}

Florida had recognized the common law rule that the mean high tide is the ordinary boundary between private beachfront and state-owned land. The rights of the littoral owner included beach access, to use the water for certain purposes, unobstructed view of the water, and the right to accretion and refliction. The ocean shore ebbs and flows through natural processes. It can be built up or washed away.

\footnote{160} 94 Cal. Rptr. 630 (1971).
\footnote{161} Id. at 637. The California Supreme Court also wrote in an implied beach dedication case “This intensification of land use combined with the clear public policy in favor of encouraging and expanding public access to and use of shoreline areas leads us to the conclusion that the courts of this state must be receptive to finding of implied dedication of shoreline areas as they are to a finding of implied dedication of roadways.” Gion v. City of Santa Cruz, 84 Cal. Rptr. 162, 171 (1970).
\footnote{163} 484 U.S. 469 (1988).
\footnote{164} Most of the lands were subsequently reconveyed to the owners.
\footnote{166} Accretions are the gradual and imperceptible addition of sand, sediment or other deposits to the waterfront land. Conversely, avulsion is the sudden or perceptible loss of land or the sudden change in the bed of a lake or stream, such as through a storm. Avulsion does not change the boundary line at common law. Thus, the owner has the right to subsequent accretion if avulsion has pushed the shore out.
away. The Florida Supreme Court redefined the right to accretion as a future contingent interest rather than a vested property right.168

The United States Supreme Court held the state had the right to fill its own seabed with the rights of accretion subordinate to the state’s right to fill. Thus, whether the avulsion is natural or artificial, the littoral owner loses the right of accretion, and could forever be cut off from the right to exclude. It’s no longer riparian or littoral land. The jus privitum no longer exists.

The public trust doctrine, especially as applied in recent decades, has a broad application, but it is limited to water. It does not extend to protect our forest and park lands.

C. In-Stream Flow

A major example of the shift in uses deals with the allocation of water. Water, too valuable in the West to be wasted,169 was to be used, be it for domestic consumption, irrigation, hydro, or cattle. Water flowing into the oceans was and is viewed as waste.

The traditional common law view is that riparians have priority to water resources. Riparian rights might work well in the wet East and South, but the West, especially Texas, the Southwest, and Southern California are dry. California pioneered water allocation based on prior appropriation.170 Since water had to be put to constructive use, the first to use it received a prior right to the resource.

The modern approach is that in-stream flows must be preserved for habitat protection and fish flows. For example, dams on the Columbia River are managed for salmon runs as well as hydro. The concept of in-stream flows is not totally new. Oregon, about a century ago recognized that the mountain runoffs should flow undiverted into the rivers of the state.

D. The False Appeal of Nuisance Law as a Global Problem Solver

The standard definition of a private nuisance is relatively simple: the interference with the use and enjoyment of one’s land. The interference must be substantial, plaintiff’s use of his land must be reasonable, and defendant’s use unreasonable.

A public nuisance is an interference with a right common to the public, such as the public health, safety, convenience, and morals. Air and water pollution and toxic contamination clearly pose a risk of the public. The common law limitation is that normally a public nuisance action can only be brought by a public representative, that is, the attorney general, district attorney, or county attorney. A private party can only bring a public nuisance suit if the injury is different in degree and kind from that suffered by the public as a whole. A personal injury usually qualifies for a private cause of action. As we have seen, standing can also be conferred by a statute, such as the citizen suit provisions common in federal environmental legislation.

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169 Mark Twain once remarked: “Whiskey is to drink; water to fight over.”
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Nuisance law provided an effective remedy in many private cases and provided a path to punitive damages in intentional nuisance cases.

However, the courts have been unresponsive to broad nuisance claims, especially when brought by private plaintiffs, seeking global solutions. The first harbinger was Boomer v. Atlantic Cement Co. in 1979, followed in 1971 by Diamond v. General Motors in California. Boomer involved a cement plant constructed south of Albany, New York in the economically depressed Hudson River Valley. Neighbors complained of the air pollution emissions from the plant as well as the nuisance associated with heavy truck traffic in their community.

The neighbors incurred economic losses of $185,000 whereas the capital investment in the plant was $45,000,000 and it employed 300 workers. The plant had been encouraged to come into the area.

Plaintiffs sought injunctive relief, but the New York Court of Appeals essentially limited them to the $185,000 compensatory. The court held air pollution was an unsolved problem, which would need a massive expenditure at the regional and interstate level to resolve. The court called for judicial restraint and deferred to legislative and regulatory agencies to act:

A court should not try to [control air pollution] on its own as a by-product of private litigation and it seems manifest that the judicial establishment is neither equipped in the limited nature of any judgment it can pronounce nor prepared to lay down and implement an effective policy for the elimination of air pollution. This is an area beyond the circumference of one private lawsuit. It is a direct responsibility for government and should not thus be undertaken as an incident to solving a dispute between property owner and a single cement plant – one of many – in the Hudson River Valley.

Diamond was a class action suit brought by an attorney in pro per on behalf of 7,119,184 residents of Los Angeles County against 293 corporations and municipalities seeking damages for air pollution and injunctive relief. The causes of action included negligence, nuisance, trespass, and products liability in an attempt to deal with the problems of air pollution in the county.

The court found that the requirements for class action suits were not met because of significantly disparate interests of the class members. The decision on the merits held a superior court cannot by

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172 Nevada Cement Co. v. Lemler, 514 P.2d 1180 (Nev. 1973)


174 97 Cal. Rptr. 637 (Ct. App. 1971).

175 The majority opinion ignored the health effects of air pollution whereas the dissent emphasized them.

176 257 N.E.2d. at 871.
decree abolish air pollution.\textsuperscript{177} The resolution had to be by the legislature and the regulatory agency. Plaintiff’s objective through the class action suit was “judicial regulation of the processes, products and volume of business of the major industries of the county” is beyond the effective capability of the courts.\textsuperscript{178}

The Oregon Supreme Court in an earlier opinion, \textit{Martin v. Reynolds Metals Co.}, held an air pollutant, aluminum fluorides, could be both a nuisance and trespass. The molecular invasion of the fluorides could be a sufficient physical invasion to be a trespass. Plaintiffs’ lawyers then applied this theory to the effluents from ASARCO’s Tacoma Smelter four miles from their property.\textsuperscript{179} Arsenic and cadmium discharges were found in their backyard soils, but within safe levels. No physical injuries existed. The argument therefore was that the presence of the effluents constituted a compensable injury. The federal district case\textsuperscript{180} was referred to the Washington Supreme Court for an opinion.\textsuperscript{181}

The Washington Supreme Court was unwilling to grant relief without an injury and the decision could close an existing manufacturing plant:

The issues present the conflict in an industrial society between the need of all for the production of goods and the desire of the landowner near the manufacturing plant producing those goods that his use and enjoyment of his land not be diminished by the unpleasant side effects of the manufacturing process. A reconciliation must be found between the interest of the many who are unaffected by the possible poisoning and the few who may be affected.

The court cautioned:

While at common law any trespass entitled a landowner to recover nominal or punitive damages for the invasion of his property, such a rule is not appropriate under the circumstances before us. No useful purpose would be served by sanctioning actions in trespass by every landowner within a hundred miles of a manufacturing plant. Manufacturers would be harassed and the litigious few could cause the escalation of costs to the detriment of the many. The elements that we have adopted for our action in trespass ... require that a plaintiff has suffered actual and substantial damages.\textsuperscript{182}

Next in chronological order are the unsuccessful public nuisance lead paint cases, which we will look at under risk.\textsuperscript{183}

\textsuperscript{177} 97 Cal. Rptr. at 644.
\textsuperscript{178} Id. at 646.
\textsuperscript{179} I taught at the University of Puget Sound from 1975-1978 and was able to take a class on a tour of the facility. The smelter opened in 1889, and lasted almost a century, closing in 1985. It looked like a relic of the Industrial Age that one could picture in old movies.
\textsuperscript{182} Id. at 791.
\textsuperscript{183} See notes infra, and accompanying text.
We conclude with a recent opinion of the United States Supreme Court, *American Electric Power Co., Inc. v. Connecticut*. The Court was unreceptive to the use of public nuisance law to fight global climate change. Eight states, three land trusts, and New York City filed suit against five electric utilities that ran fossil fuel plants in 20 states, the emissions of which allegedly constituted a public nuisance contributing to global warming through carbon dioxide emissions. The complaint alleged violations of the federal common law of interstate nuisance and of state tort law. Injunctive relief was sought. They sought caps on carbon dioxide emissions, and then annual reductions for a decade.

The Court referred to the *Illinois v. City of Milwaukee* cases to hold that Congress had displaced the federal common law of interstate air pollution by speaking directly to the question at issue. The Court further reasoned that the EPA is “best suited to serve as primary regulator of greenhouse gas emissions.” The agency with the expertise is in a better position to regulate the emissions rather than individual federal district court judges, who lack the scientific, economic, and technological resources of the agency. Since the Clean Air Act provided one track to seek limits on the emissions, no room exists for a parallel track.

The pattern has been a closed loop since *Boomer* and *Diamond* continuing through *AEP*. The courts have been unwilling to resolve broad societal problems using public nuisance law. These believe that the legislatures and regulatory agencies are in a better position to address air and water pollution on a macro level.

### B. Constitutional Issues

Constitutional Law became a critical component of Environmental Law with early emphasis on the Takings Clause. Soon though, the Commerce Clause became more critical, either as a source of authority for the enactment of environmental protection statutes or as a restraint on state and local protectionist measures. Also playing a role are the Property Clause, Spending Clause, Taxation Clause, Compact clause, and even the First Amendment.

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184 *U.S. v. 131 S. Ct. 2527 (2011).*
185 The 4 private utilities and the Tennessee Valley Authority allegedly emitted 25% of the domestic emissions from power plants, 10% of emissions from all domestic activities, and 2.5% of anthropogenic emissions globally.
186 *Id.* at 2537. The Court did not decide the issue of the applicability of state tort law.
187 *Id.* at 2549.
180 The Property Clause provides: “[T]he Congress shall have power to dispose of and make all needful Rules and Regulations respecting the territory or other Property belonging to the United States.” *U.S. Const., art. IV, §3, cl.2.* The Supreme Court held in *Kleppe v. New Mexico*, 429 U.S. 529, 540 (1976) that the United States acts as both a
Even questions of sovereign immunity were raised with Congress reiterating that it intended for federal facilities to be bound by the federal statutes, especially air and water. The Supreme Court held in several cases that Congress had not clearly waived sovereign immunity in requiring federal facilities to comply with federal and state environmental protection measures. 155

1. The Constitutional Right to a Clean, Healthy, Safe Environment

Early attempts to craft a federal constitutional right to a clean environment failed since no such right expressly appears in the Constitution and courts were unwilling to stretch the 9th Amendment that far. 156

Proprietor and in a legislative capacity. The Property Clause is a critical tool for federal regulation since roughly 1/3 of the nation's lands are owned by the federal government.


As long as the measure raises revenue, the Supreme Court has decided not to pass upon the reasonableness of the measure. City of Pittsburgh v. Alco Parking Corp., 417 U.S. 369 (1974)(20% gross revenue tax was imposed on private parking garages, but not their public competitors). See also, Puget Sound Co. v. Seattle, 291 U.S. 619 (1934)(city imposed a gross receipts tax on a competitor — a private utility).


See e.g. Ely v. Velde, 451 F.2d 1130 (4th Cir. 1971), Pinkney v. Ohio Environmental Protection Agency, 375 F. Supp. 532 (S.D. Texas 1972). Justice Douglas believed the environment was clearly entitled to constitutional protection. He once opined “[T]he right of the people to education or to work or to recreation ..., like the right to pure air and pure water, may well be rights retained by the people under the Ninth Amendment,” Palmer v. Thompson, 403 U.S. 217, 233-334 (1971)(Douglas, dissenting).
However, several states had constitutional provisions providing for environmental protection. New York’s Forever Wild Clause was intended to protect the forever wild sections of the Adirondacks against development.\textsuperscript{197} More general provisions simply have not been effective, often because they are not self-enforcing.\textsuperscript{198}

2. The Takings Issue

The Takings Issue was an enigma 4 decades ago. The fear was that in light of a series of state cases on wetlands preservation, floodplains zoning,\textsuperscript{199} and strip mining,\textsuperscript{200} the Takings Clause of the 5\textsuperscript{th} Amendment could pose a major restriction on environmental legislation. Several distinguished professors sought a grand theory, a unitary theory of takings. This analytical quest rapidly became the legal equivalent of the search for the Holy Grail. We consequently with trepidation read each new Supreme Court takings opinion, looking for nuances.\textsuperscript{201} After 40 years, it’s still wetlands and takings.\textsuperscript{202} The only clear certainty is that today’s property rights are not as great as those of our ancestors.

3. The Diminution of Traditional Property Rights

The result of the lack of definitive standards, or even a gray line, is that uncertainty exists as to the present day rights of property owners. The Environmental Age has clearly diminished these rights.\textsuperscript{203} Professor Donald Large wrote a prophetic article, \textit{This Land is Whose land? Changing Concepts of Land as Property}\textsuperscript{204} in 1973:

Present pressures on the land ... are not the result of villainy or even-minded people bent on destroying the environment for personal profit. They are the result of our attitude toward land as property, an attitude which initially was neither evil nor wrong. Our property concepts were developed in a time when exploitation of the land’s bounty was seen as a social good to be

\textsuperscript{197} See Association for the Protection of the Adirondacks v. MacDonald, 170 N.E. 1902 (N.Y. 1930).
\textsuperscript{198} See e.g., Commonwealth v. National Gettysburg Battlefield Tower, Inc., 311 A.2d 588 (Pa. 1973). The case involved the proposed construction of a 307' observation tower overlooking the Gettysburg battle site. The developers, having won the case, built the tower. However, it was demolished 25 years later on July 3, 2000 after the state paid $3 million in eminent domain proceedings to acquire the tract of land..
\textsuperscript{201} The problem may also simply be trying to figure out the holding of a case. Rapanos is a prime example of adding another layer of complexity to confusion.
\textsuperscript{202} Any scholar so far today as to posit a unitary theory need only read the recent Rapanos decision to become totally lost.
\textsuperscript{203} Property rights were probably never totally laissez faire in the United States, but the Supreme Court opinion in \textit{Euclid v. Ambler Realty Co.}, 272 U.S. 365 (1926) which upheld comprehensive zoning, provided the impetus to the 20th Century diminution in property rights.

\textsuperscript{204} 1973 Wisc. L. Rev. 1039, 1041.
encouraged. While these concepts may have made sense in such a milieu, we are beginning to run out of land to waste. Although many land uses will of course continue, potential uses must now be weighed against the needs of the ecosystem as a whole. In this new context our traditional notions of land as property are becoming increasingly irrelevant and even harmful.

Professor Sax echoed these sentiments in a 1983 article: 205

I believe that we have moved in recent years from a situation (characterized by conventional urban zoning, in which we generally encourage developmental rights, though recognizing they must from time to time be restrained, to one in which developmental activity has itself become suspect. As a result, we are in the midst of a major transformation in which property rights are being fundamentally redefined to the disadvantage of property owners. 206

Professor Sax explained the transformation as follows:

I argue that Penn Central and its companions do not turn on the compensation/no compensation issue, which has traditionally dominated legal thinking about property. Instead, they address the allocational function of property. Put as bluntly as possible my thesis is this: We have endowed individuals and enterprises with property because we assume that the private ownership system will allocate and reallocate the property resource to socially desirable uses. Any such allocational system will, of course, fail from time to time. But when the system fails to allocate property to “correct” uses, we begin to lose faith in the system itself. Just as older systems of property, like feudal tenures, declined as they became nonfunctional, so our own system is declining to the extent it is perceived as a functional failure. Since such failures are becoming increasingly common, the property rights that lead to such failures are increasingly ceasing to be recognized. 207

He recognized the developmental ethic, which had controlled America prior to the Age of the Environment:

The building of the railroads, the irrigation of the arid West, the electrification of rural areas, the growth of great cities, even the belching steel mills of Pittsburgh or Gary, idealized America on the march, putting the world on wheels, serving as the breadbasket and the arsenal of democracy. Such images were at least as powerful as the current imagery of the wilderness or of our historic heritage. The nonexclusive consumption benefits of a symbolic sort that flowed to users or builders. The profits that came to landowners in allocating property to development automatically brought in their wake a sense of common purpose to a public enlivened by an idea of progress tied to development. 208

IV. Equity

206 Id. at 484.
207 Id.
208 Id. at 489.
The key to effective relief for environmentalists in many disputes is the granting of injunctive relief prior to commencement of the project,\textsuperscript{209} or in extreme cases the completion of the proposed project. Temporary restraining orders and preliminary injunctions are designed to maintain the status quo pending a full trial seeking a permanent injunction. Two early cases tested traditional rules of equity in determining the status quo.

*Canal Authority of the State of Florida v. Callaway,*\textsuperscript{210} which involved the Cross Florida Barge Canal, laid out the traditional requirements for preliminary injunctive relief: 1) a substantial likelihood plaintiff will prevail on the merits, 2) a substantial threat plaintiff will suffer irreparable injury if the injunction is denied, 3) the threatened injury to plaintiff outweighs the threatened harm to defendant if the if the injunction is issued, and 4) granting injunctive relief will not disserve the public interest. The court held plaintiffs met this burden of proof.

The Cross Florida Barge canal was first authorized by Congress in 1942 with construction beginning in 1964. An injunction was issued under NEPA in 1971, followed by an Executive Order halting the project in 1971.\textsuperscript{211} The Canal, if completed, would have been an environmental disaster, cutting Florida in half. It would have cut through north-central Florida, linking the Gulf Coast with the port of Jacksonville through a series of locks. Two of the three proposed dams, three of the locks, and four of the 11 highway bridges had been completed at a cost of $73 million when the project was halted.

Rodman Dam was completed on the Ocklawaha River in 1968 as part of the project. A lake, approximately 16 miles long, flooded 13,000 acres of partially cleared land in Ocklawaha Valley. About 1,135 acres of large hardwood trees had been left standing prior to the flooding to serve as fish habitat. These trees were now being progressively killed off by the flooding.

With the judicial and executive orders halting further work on the Cross Florida Barge Canal, opponents of the project then sought a partial drawdown. The fate of approximately 120,000 trees and the river’s swamp forest was at stake. Proponents of the project opposed any drawdown.

The basic issue faced by the court was determining the status quo pending a full trial on the merits. The physical status quo was the partial submersion of the trees, but the court held that the preservation of the trees was the status to be preserved. No other holding would effectively negate a meaningful decision on the merits.

A second case, *Punnett v. Carter,*\textsuperscript{212} involved the plight of the “Atomic Veterans,” who viewed the above ground nuclear tests in the Nevada desert between 1951 and 1962. The suit sought preliminary injunctive relief, alleging the veterans were exposed to a high level of radiation, resulting in genetic damages to the veterans, and miscarriages and mutagenic injuries to their children. The relief sought

\textsuperscript{209} Courts have historically been hesitant in stopping on-going projects, especially when a project has been completed. *But see, Tennessee Valley Authority v. Hill,* 437 U.S. 153 (1978)(95% completed dam project) 489 F.2d 567 (5th Cir. 1974).

\textsuperscript{211} President Nixon issued the Executive Order to gain points with environmentalists. Since the Cross Florida Barge Canal was not a project of his administration, the President had little difficulty in ending a predecessor's project.

\textsuperscript{212} 621 F.2d 578 (3rd Cir. 1980).
included the issuance of public warnings of the mutagenic risks, and a permanent injunction enjoining the defendants from causing anyone to participate in peace time testing of nuclear weapons without warning them of the dangers, as well as compensatory and exemplary damages and attorneys’ fees and costs.

The preliminary relief sought would have substantially changed the status quo by effectively granting the plaintiffs substantial portions of the ultimate relief they sought in the lawsuit. Plaintiffs’ case also presented substantial problems in their factual analysis and assumptions.

The legislature can, of course, change the rules of equity and the requirements for injunctive relief. For example, the Safe Drinking Water Act provides that the federal government may seek injunctive relief whenever it receives information that “a contaminant which is present or likely to enter a public water system may present an imminent and substantial endangerment to the health of persons.” Thus, the risk of injury may be sufficient may be sufficient rather than the traditional irreparable harm.

Judges in equity also changed many of the traditional rules of equity to provide environmental relief. Since the purpose of TRO’s and prelims is to preserve the status quo, plaintiffs are usually required to post a bond to compensate the defendant if the injunction turns out to be improvidently granted. Forcing a public interest complainant to post a bond in a large sum could chill the filing of such complaints. Courts often upheld the letter of the law of equity, but deferred to the spirit of equity by allowing the public interest complainants to post only a nominal bond. Legislatures also set ceilings on the bonds to be required of environmentalists.

V. Issues

A. The Never Ending Issues: Sisyphus and the Environment

A Rip Van Winkle environmentalist, who just awoke after a 40 year nap, would be amazed at how many of the original issues still exist. Environmental protection to some extent echoes Nietzsche’s eternal recurrence of history or Yogi Berra’s “it’s déjà vu all over again.” Massive oil spills still occur, as witness the Exxon Valdez, the BP Gulf Oil Spill, and the TVA Coal Ash XXX.

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213 SDWA §1431.
214 See e.g. United States v. Price, 688 F.2d 204, 211 (3rd Cir. 1982) (“Congress ... sought to invoke nothing less than the full equity powers of the federal courts in the effort to protect the public health, the environment, and public water supplies from the pernicious effects of toxic wastes.” See also, the Comprehensive Environment Recovery and Cleanup Act, 42 U.S.C. §9696(a).
215 In general, see Dan Farber, Equitable Discretion, Legal Duties, and Environmental Injunctions, 45 U. Pitt. L. Rev. 513 (1984).
218 Nietzsche was a favorite of the Children of the 1960’s.
219 The Environmental Law Institute published a Special Issue, Scientific, Legal and Policy Lessons From the Deepwater Horizon Disaster, 40 ELR, No. 11 (November 2010).
The country is still fighting the toxics issue, with many of the chemicals that replaced DDT also being banned. Our air and water are cleaner. Smog itself no longer exists, but only because the EPA changed the name from smog to ozone. We still have an ozone problem, but the air of cities such as Los Angeles and Denver is measurably improved.

1. Strip Mining

Strip mining, also known as surface mining or open cut mining, was a major environmental problem 40 years ago. Unregulated strip mining resulted in substantial acid mine waters polluting the streams of Appalachia, landslides, and erosion, cutting off animal trails, and aesthetic degradation. John Prine wrote a song, Paradise, about Peabody Coal Company’s strip mine in Paradise, Kentucky. Peabody invited the musician to view the mine. He proclaimed in an early issue of People Magazine that it was worse than he thought.

The attitude of the traditional coal barons four decades ago was shown in this statement of a Consolidation Coal Company Vice President:

Conservationists who demand that strip miners do a better job of restoring what they tear up are “stupid idiots, socialists, and commies who don’t know what they are talking about. I think it is our bounden duty to knock them down and subject them to the ridicule they deserve.”

Traditional strip mining was regulated, but modern issues include the 2 acre exemption and mountain top mining. The ravages of strip mining were a major environmental issue in the 1970’s. President Carter signed the Federal Surface Mining Control and Reclamation Act in . The Act though did not resolve all environmental issues. For example, it had an exemption for small lots, 2 acres or less. This loophole was soon exploited. A great issue today is hilltop mining in which the entire top of a mountain is decapitated to get at the coal reserves.

The energy crisis of the 1970’s brought to the fore the issue of conservation and recycling. Vermiculate is a mineral that can be used in gardens, as well as for insulation in houses. W.R. Grace proposed a vermiculate mine in Virginia to supply demand. It would supplement production from the mine it acquired in Libby, Montana. We now know that the Montana mine was contaminated with naturally occurring asbestos, which has become a tragedy to the residents of Libby as well as the miners.

2. Aesthetics and Billboards

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120 Should never have happened after Buffalo Creek
121 The Stockholm Convention on Persistent Organic Pollutants is an international treaty, which was signed in 2001 and effective in 2004. An initial “Dirty Dozen” of proscribed chemicals included chlordane, heptachlor, mirex, and toxaphene, some of which had been involved in Toxic Torts litigation.
122 See Denis Binder, A Novel Approach to the Reasonable Regulation of Strip Mining, 34 U. Pitt. L. Rev. 340 (1973)
124 A classic description of the ravages of unrestrained and unregulated coal mining in Appalachia is Harry M. Caudill, Night Comes to the Cumberlands: A Biography of a Depressed Area (1962, 1963).
One of the longest running battles is the control of billboards, the epitome of aesthetic pollution. Anyone driving the nation’s highways recognizes the billboards persist. The visibility of billboards aroused opposition a century ago, making them one of the longest running environmental struggles.

Under the Highway Beautification Act of 1965, signs, displays, and devices such as billboards within 660’ of a primary or interstate highway are banned, except for directional and other official signs or notices, on-premises signs, or signs within zoned commercial or industrial signs. The result was a flurry of large billboards set slightly more than 660’ back from the right of way.

Courts once held that aesthetics are not a proper basis for the exercise of the police power, but then relented and held aesthetics could be a factor in regulating billboards. States and local communities continued to regulate billboards. The Supreme Court in Metromedia, Inc. v. City of San Diego laid down a roadmap, distinguishing between on-site and off-site ads and commercial versus non-commercial signs. San Diego’s ordinance allowed on-site commercial signs and some off-site non-commercial signs, but banned most off-site signs. While commercial speech is not entitled to the same protections as non-commercial speech, the city does not have the same range of choice in distinguishing non-commercial speech. The ordinance allowed on-site commercial speech, but placed restrictions on non-commercial speech, which has a First Amendment protection.

3. Wetlands Preservation

Professor Sax emphasized the need to preserve our wetlands before it became a popular environmental objective. Two of us wrote articles on the need for wetlands preservation under his tutelage. The issues with wetlands include the basic definition of a wetland, and the extend of jurisdiction, legislation and regulations.
Early cases were brought under the Rivers and Harbors Act of 1898. Then Congress went to 404A and NPDES (National Pollution Discharge Effluent System) permits in 1972.234 Wetlands have received great attention and protection from federal and state agencies.

One of Vice President George H. W. Bush’s campaign planks in 1988 was “No net loss of wetlands,” which President Bush’s administration adopted in 1989. Every succeeding administration has continued the policy. However, confusion still exists about the scope of regulation of wetlands, especially at the federal level, in light of the Supreme Court decisions in SWANCC and Rapanos.235

This predilection of the Supreme Court to decide cases on narrow grounds was present in the famous SWANCC case, Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers.236 Congress conditioned the filling of wetlands on the issuance of a 404A permit from the Army Corps of Engineers. Congress, in its infinite wisdom in the Clean Waters Act, asserted jurisdiction over “navigable waters,” but then defined navigable waters broadly and cryptically as “waters of the United States.” Logic would turn the provisions around, especially since Congress provided no additional definitions. Congress thus punted jurisdiction to the Supreme Court to interpret the statute. Presuming that jurisdiction is being asserted pursuant to the Commerce Clause, the underlying constitutional issue is whether the Commerce Clause’s jurisdiction extents to isolated wetlands, and by analogy isolated endangered species.

The Corps’ regulations defined navigable waters to include wetlands adjacent to navigable or interstate waters and their tributaries. The Court approved this interpretation in United States v. Riverside Bayview Homes, Inc.237

The issue returned to the Court in SWANCC. The agency proposed a non-hazardous solid waste, bale fill disposal site on a 533 acre site - an abandoned sand and gravel surface mine. 17.6 acres of wetlands would be filled, to be offset by creating 17.6 acres of new wetlands elsewhere on the site.

The Corps had initially denied jurisdiction to issue a permit, but subsequently reversed itself and denied the permit. It claimed jurisdiction as far as the Commerce Clause permitted, including isolated wetlands which might affect endangered species, such as migratory birds touching down on the wetlands, the migratory bird test.

Some referred derisively to the Corps position as “the glancing bird test.”

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235 John Rapanos may have won the battle before the Supreme Court, but he ultimately lost the battle by entering into a consent decree whereby he paid $150,000 in civil penalties and agreed to an additional $750,000 in offsite mitigation. David Shepardson, Man Avoids Prison in Land Feud, March 16, 2005; U.S. Department of Justice, Press Release, Dec. 29, 2008, John Rapanos Agrees to Pay for Clean water Act Violation (available on line). Of course, we do not know how much John Rapanos profited from the transgression.
The Court in a 5:4 opinion held the government’s definition did not fall within the statutory definition of “waters of the United States,” leaving unresolved the underlying constitutional issue: Does the Commerce Clause support federal jurisdiction over isolated wetlands and endangered species.

For the ultimate Supreme Court opinion of wetlands confusion, we have *Rapanos v. United States*, a 2006 opinion, picking up on *SWANCC*. John Rapanos discharged dredge and fill materials on his Michigan farm without obtaining a 404 permit from the Corps. His wetlands were not adjacent wetlands, but they were hydrogeologically connected.

The decision was a 4-1-4 vote with Justice Kennedy’s concurring vote of one being the decisive vote in upholding for Rapanos. Justice Scalia, in writing for the plurality of four, held “waters of the United States” would include finding first “the adjacent channel contains a ‘water’ of the United States;” that is, a relatively permanent body of water connected to traditional interstate navigable waters, and that second “the wetland has a continuous surface connection with that water, making it difficult to determine where the ‘water’ ends and the ‘wetland’ begin.”239

Justice Kennedy’s concurring opinion of one posited a “significant nexus” test between wetlands and navigable waters: “[W]etlands possess the requisite nexus, and thus come within the statutory phrase navigable waters, if the wetlands, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as ‘navigable’.”240

Clear as mud!

4. Risk Analysis and the Limits of Technology

One of the first acts of the new EPA was to ban DDT, but that act hardly resolved the issue of acceptable risk. Indeed, several of the pesticides that replaced DDT in the market were subsequently banned because of their health risks.

The courts have struggled with the assessment of risk. The problem is a combination of initially assessing the risk itself and then deciding how much risk is acceptable to society. The dilemma is compounded by limited scientific knowledge. The technological sophistication of the modern industrial world exposes the public to hundreds of thousands of chemicals and substances whose adverse effects and risks are, at best, just beginning to be understood. It is not necessarily that the world is less safe than a century ago, but that these new risks are just beginning to be understood.

239 Id. at 742.
240 Id. at 780.
243 Toxaphene, chlordane, and heptachlor were among the 12 chemicals proscribed in the Stockholm Convention.
244 The problem may be analogous to strict liability in Torts for abnormally dangerous activities. We don’t ban the activity because of its value to society, but hold the actor strictly liable for injuries caused by the activity.
The legislature can decide the issue by enacting a no-risk policy as Congress did for decades with the Delaney Amendment, which posited a standard of no carcinogenic risk from food additives. Similarly, the Clean Air Act was technology forcing. Congress can also reverse itself as it did with repealing the Delaney Amendment in 1996.

The benefits of the product can be felt immediately in the form of its uses and jobs created in production and distribution. The long-term risks, such as occupational carcinogenesis, are often unknown or speculative. The problem is balancing the unknown risks, including health risks, against the present benefits of the product. A good example occurred during World War II when the nation’s utmost priority was the production of warships with little thought given to the long-term health hazards to the shipyard workers and boiler room operators from asbestos exposure.

The problem of technology assessment is “the process of balancing the desirable consequences against the undesirable, including, to the extent possible, effects that are unknown.” Much of the problem is that the alleged harm is long-term and speculative, but yet potentially grave and irreversible. As expressed by Professor Rodgers, “A major difficulty with modern pollution cases is that they deal not so much with provable injuries, but with risks, and thus the question of the degree of injury is complicated both by actual uncertainties and burden of proof problems.” The dilemma faced by regulators was summarized by an EPA official: “We have to hurry up without making a mistake. You don’t want harmful exposures to go on too long, but you don’t want to make a snap decision either.”

Agencies and courts must make decisions in cases where the available knowledge is slender. As recognized in Industrial Union Department, AFL-CIO v. Hodgson,

Some of the questions involved in the promulgation of these standards are on the frontiers of scientific knowledge, and consequently as to these insufficient data is presently available to make a fully informed factual determination. Decision making must in that circumstance depend to a greater extent upon policy judgments and less upon purely factual analysis. Thus, in addition to currently unresolved factual issues, the promulgation of standards involves choices that by their nature require basic policy determinations rather than resolution of factual controversies. Judicial review of inherently legislative decisions of this sort is obviously an undertaking of different dimensions.

241 P.L. 104-170, §404. The repeal received very little publicity at the time.
242 This example is not perfect though because many of the asbestos companies knew of the health risks of asbestos and failed to disclose, indeed conspired to suppress the health risks. See for a discussion of the “Summer Simpson” papers detailing the conspiracy.
244 William Rodgers, Hornbook on Environmental Law 115 (1986).
246 499 F.2d 467 (D.C. Cir. 1974).
247 Id. at 474-75.
The Court of Appeals for the District of Columbia frequently split with the Supreme Court on the standards to apply in environmental cases, often in the context of nuclear power. The underlying issue was often how to assess risk. The D.C. Circuit was influenced by the apparent risk to public life, health and safety. Judge Newman of the second Circuit wrote in City of New York v. United States Department of Transportation.\textsuperscript{253}

Every age has experienced scientific advances. A distinguishing feature of our era is the effort of the scientific community is making to quantify the risks that seem inevitably to accompany the results of technological progress. The availability of this data has doubtless played a part in raising public consciousness about the mixed blessings of "progress," and public concern has led to rigorous governmental regulation. These trends, in turn, have brought before the courts controversies that present old issues in new contexts of unusual complexity. In determining whether regulatory actions conform to statutory requirements, courts are now obliged to review agency consideration of sophisticated data concerning the potential gravity of adverse consequences and the probability of their occurrence.\textsuperscript{254}

Risk analysis and the limits of technology arose early as administrative agencies and courts wrestled with assessing risks when science could not provide definitive answers. The law confronts the limits of technology with the realization that under normal rules whoever has the burden of proof should lose.

A second aspect of the risk issue overlaps the NIMBY phenomenon. We all wish to enjoy the benefits of the project, but don't want to bear the risks.

\textbf{a. Love Canal}

The problem for regulators, litigators, and policy makers is shown by the infamous Love Canal\textsuperscript{255} toxic waste dump in the Niagara Falls, New York area. An exploratory study conducted for the EPA in the spring of 1980 indicated some Love Canal residents had unusual patterns of aberrant chromosomes.\textsuperscript{256} The federal government responded by deciding a potential health threat existed in the area near Love Canal and established an emergency declaration area (EDA). About 1,000 families were evacuated. No clear evidence existed at the time though of substantial and widespread contamination of the EDA by toxic chemicals from Love Canal.

A subsequent study sponsored by the Centers for Disease Control, Brookhaven National Laboratory, and Oak Ridge National Lab found that people who lived close to the chemical dump did not show an increased incidence of chromosomal damage when compared to other persons living in the Love Canal

\textsuperscript{253} 547 F.2d 732 (2\textsuperscript{nd} Cir. 1983).
\textsuperscript{254} Id. at 736.
\textsuperscript{255} Love Canal became the poster child for toxic waste imperiling the health and lives of the public.
area. This study stated that if chromosome damage had been found, it would be impossible to know whether such damage might foretell later occurrences of chemical illness.\textsuperscript{257}

The Office of Technology Assessment issued a report at roughly the same time questioning a 1982 Department of Health and Human Services opinion that the area near Love Canal was habitable if safeguards against canal leakage were imposed. The OTA study concluded that “with available information, it is not possible to conclude either that unsafe levels of toxic contamination exist or do not exist.”\textsuperscript{258}

Yet another study of meadow voles, field mice, in and around the Love Canal area found that voles living near Love Canal had a reduced life expectancy compared with a control a mile away. The closer the voles were to Love Canal, the younger they were dying. Signs of liver damage were in the form of a characteristic response of the liver to a wide variety of toxic compounds was found.\textsuperscript{259} Another report raised questions in 1990 about the original study.\textsuperscript{260} A study by Children's Hospital of Oakland, California found that children living near Love canal suffered low birth rates, below normal growth rates, and a variety of health problems.\textsuperscript{261}

Such is the scientific basis upon which legislators, regulators, and judges must make decisions of risk analysis. In hindsight, Love Canal was a rush to judgment, but is engraved in the American consciousness as a shorthand phrase for toxic contamination.

b. Reserve Mining

Three early cases laid out the parameters for future courts. Two, which bootstrapped on each other, were \textit{Ethyl Corp. v. Environmental Protection Agency},\textsuperscript{262} which involved the ban of leaded gasoline, and Reserve Mining Company.\textsuperscript{263} Environmental litigation required judges to reach decisions involving the limits of technology.

Reserve Mining involved the deposit of taconite tailings into Lake Superior, the cleanest of the Great Lakes. It was, in essence a water pollution case, albeit of great magnitude. Then asbestos was found in the tailings, which also changed the case into one of toxic contamination. By this time the health effects of asbestos were emerging. However, the asbestos exposure to the community would be through

\textsuperscript{257} Centers for Disease Control, 32 MMWR No. 20 (May 27, 1983), Centers for Disease Control, U.S. Dept. of Health & Human Services, Cytogenetic Patterns for Persons Living Near Love Canal-New York, 32 Morbidity and Mortality Weekly Report No. 20 at 261, 262 (May 27, 1983).

\textsuperscript{258} Office of Technology Assessment, Habitability of the Love Canal Area: An Analysis of the Technical Basis for the Decision on the Habitability of the Emergency Declaration Area 3 (June 1983). The OTA assessment of the DHHS study was based on several factors, including the uneven sampling of the soils, an inadequate number of soil samples, inadequate controls and wide variability in performance of the contract laboratories.


\textsuperscript{260} See Kolata, supra n. 258.


\textsuperscript{262} 541 F.2d 1 (D.D.C. 1976)

\textsuperscript{263} Reserve Mining Co. v. United States, 498 F.2d 1073 (8th Cir. 1974). Studies of the Reserve Mining environmental controversy are Thomas F. Bastow, "This Vast Pollution ..." United States of America v. Reserve Mining (1986) and Frank D. Schaumberg, Judgment Reserved: A Landmark Environmental Case (1975).
ingestion rather than inhalation. Studies did not show any adverse health implications from, in essence, drinking asbestos rather than breathing it.

The underlying issue then, and indeed currently, was laid out by the Eighth Circuit: “The relevant legal question is thus, what manner of judicial cognizance may be taken of the unknown?” 264

The appellate court recognized “[A] risk may be assessed from suspected, but not completely substantiated, relationships between facts, from trends among facts, from theoretical projections from imperfect data, or from probative data not yet recognized as fact.” 265 The earlier appellate opinion recognized “We are a court of law, governed by rules of proof, and unknowns may not be substituted for proof of a demonstrable hazard to the public health.” 266

The dilemma encountered by the courts in Reserve Mining was expressed as follows:

In the absence of proof of a reasonable risk of imminent or actual harm, a legal standard requiring immediate cessation of industrial operations will cause unnecessary economic loss, including unemployment and, in a case such as this, jeopardize a continuing domestic source of critical metals without conferring countervailing benefit. 267

Some of the uncertainties today can be filled in through modeling, 268 which has become an accepted tool. In addition, courts have devised the innovation remedy of medical monitoring.

The courts ultimately weighed on the side of public health.

c. Lead

Lead is both a benefit and curse to society. “Getting the lead out” is still a major problem. We have lead arsenate pesticides, balloons, batteries, bullets, crystal, figurines, pencils, pipes, plumbing, water coolers, resin, solder, toy soldiers, type and weights. It has appeared recently in paint on toys from China and in vinyl plastic baby products and lunch boxes.

Lead is highly perilous for children 6 and under because of their immature organs as well as their developing nervous systems and immunological systems. The brain is especially vulnerable in early development through ages 5-6. Low levels of exposure cause IQ reductions, shortened attention spans, hyperactivity, loss of appetite, vomiting, and abdominal pains. High exposure levels can lead to convulsions, brain damage and death.

Major sources of lead exposure are dietary, lead in the ambient atmosphere, lead paint, and leaded gas. The federal government banned lead paint after studies linked it to learning disabilities, mental

264 Reserve Mining Co. v. United States, 498 F. 2d 1073, 1084 (8th Cir. 1974)(en banc).
265 Reserve Mining Co. v. United States, 514 F. 2d 494, 529 (8th Cir. 1974).
266 498 F. 2d at 1084 (en banc).
267 514 F. 2d at 573. See also, ASARCO
268 See e.g. Sterling v. Velisco Chemical Corp., 855 F.2d 1188 (6th Cir. 1988). See also, State of Ohio v. United States Environmental Protection Agency, 784 F.2d 224 (6th Cir. 1986).
retardation, and deaths. Children are still exposed to lead through lead piping, fixtures, and water coolers.

1. Ethyl and leaded Gas

Charles Kettering of GM discovered in the early 1920’s that tetraethyl lead was a wonderful additive in increasing octane and eliminating the “knock” in gasoline. Its wide use led to auto emissions contributing about 90% of the lead in the air.\(^{269}\)

The EPA, in one of its most significant early decisions, found that the lead additive on gas presented “a significant risk of harm” to the public health. It thereby promulgated a phase out schedule of lead in gasoline. The statutory standard for EPA was “will endanger the public health or welfare.” The EPA relied on theoretical, epidemiologic, and clinical tests to establish the risks of lead in the air, especially near highways and adjacent to homes with lead paint.

Not all the risks of lead in gasoline could be quantified. The lead manufacturers argued for a “high quantum of factual proof, proof of actual harm rather than of a ‘significant risk of harm’”\(^{270}\)

The Court of Appeals disagreed. It looked to both caselaw and the dictionary to define “endanger” to mean less than an actual harm. Endanger therefore is a precautionary standard with “will endanger” meaning “presents a significant risk of harm.”\(^{271}\) The court recognized that Reserve Mining “convincingly demonstrates that the magnitude of risk sufficient to justify regulation is inversely proportionate to the harm to be avoided.”\(^{272}\) Since danger is a risk, it “must be decided by assessment of risks as well as proof of facts.”\(^{273}\)

Between Ethyl Corp. and Reserve Mining the federal district courts and courts of appeal generally adopted a hard look approach to toxic wastes.

2. Lead Paint

The tragedy of lead paint illustrates that some environmental problems may defy solution even with litigation, legislation, education campaigns, and appropriations. Society still battles to remove lead paint from older housing, especially multi-unit housing, built before the 1970’s. Many landlords, either through ignorance or economics, fail to remove the lead paint from their units. Strict liability\(^{274}\) and punitive damages\(^{275}\) have been imposed against landlords.

\(^{269}\) 541 F.2d at 7.
\(^{270}\) Id. at 12.
\(^{271}\) Id. at 13.
\(^{272}\) Id. at 19.
\(^{273}\) Id. at 24.
\(^{274}\) Perry v. Frederick Investment Corp., 509 F. Supp.2d 1 (D.D.C. 2007)(liability was also imposed, pursuant to local ordinance, against the responsible corporate officials).
Congress enacted the Residential Lead-Based Paint Hazard Reduction Act in 1992. It imposes lead-based paint disclosures on lessors and sellers of housing built before 1978. Courts have split on whether minor children have standing to bring suit for violations of the statute.

Litigation against the manufacturers of lead paint or the lead pigments often failed on traditional causation grounds; the victims are unable to identify the manufacturer of the paint that injured them. Lawyers turned to novel approaches when frustrated by the causation issues, as were the DES daughters. The market share approach of Sindell v. Abbott Laboratories seemed promising, but was rejected by courts.

Public nuisance theories were advanced on behalf of public agencies. In addition to the claims by individual victims, States and local governmental bodies entail great costs in educating the public of the risks of lead paint, removing lead paint from public and private schools, residences, hospitals, and other buildings, and treating the victims of lead paint.

Since a public nuisance is a right common to the public, such as public health and safety, the health risks of lead paint seemingly qualify as prosecutors attempted to bring the hallowed law of public nuisance into the 20th and now the 21st Century. However, the public nuisance claims were generally unsuccessful. Rhode Island in a closely watched case, rejected the approach in 2008, following decisions in Missouri and New Jersey.

The New Jersey and Rhode Island cases involved the traditional principle of public nuisance law that the defendant must be in control of the instrumentality; that is, the lead pigment which created the nuisance at the time the damage occurred. Otherwise, the traditional remedy of abatement could not be imposed. Abatements are usually at the expense of the one in control of the nuisance. The possessor may be an innocent party or one who contributed to the problem, such as a landlord who refuses to inspect or remedy the nuisance, in spite of a statutory duty to do so. Thus, pre-sale defendants cannot abate post-sales problems of which they are not in control.

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276 42 U.S.C. §§4851-52. Penalties include treble damages, costs of suit, and attorneys fees.
277 Standing was found in Cudoe ex rel Cudoe v. Department of Veterans Affairs, 426 F.3d 241 (3d Cir. 2005) and McCormack v. Kissel, 458 F. Supp. 2d 944 (S.D. Ind. 2006); contra, see Mason ex rel Heiser v. Morrisette, 403 F.3d 28 (1st Cir. 2005).
279 163 Cal. Rptr. 132 (1980)
281 A similar effort was used to apply public nuisance law to the manufacturers of guns used for criminal purposes in cities. See City of Chicago v. Beretta U.S.A. Corp., 821 N.E.2d 109 (Ill. 2004).
283 City of St. Louis v. Benjamin Moore & Co., 226 S.W.3d 110 (Mo. 2007).
284 In Re Lead Paint Litigation, 924 A.2d 405 (N.J.2007).
A third theory is that the use of white lead carbonate pigment constitutes a design defect under products liability. The Wisconsin Supreme Court rejected this claim, reasoning that the presence of the lead, the alleged defect, is the essence of the product itself: “Without lead, there can be no white lead carbonate pigment.”

d. OSHA, Benzene and Zero Risk

The Supreme Court rejected an essentially zero tolerance standard for benzene in Industrial Union Department, AFL-CIO v. American Petroleum Institute. The Occupational Health and safety Administration (OSHA) issued a standard of 1ppm for benzene exposure in the workplace. Benzene is a known carcinogen at high exposures level, but dose response curves do not exist for low level exposure. The agency’s perspective therefore was that the industry could not present a safe level of exposure. Benzene, just as other chemicals such as arsenic and formaldehyde, are omnipresent in small concentrations in the ambient air.

OSHA’s policy was that when a toxic substance is a known carcinogen, no safe level of exposure can be determined, unless, of course, the industry can present such a standard. Therefore, pursuant to the statutory requirements it would impose the most stringent limitation on exposure that is technologically and economically feasible.

In short, it would set a standard as close to zero risk as it could. The theory exists that one molecule of exposure, “one hit,” could trigger the development of a cancer, and hence better to err on the side of safety.

The majority opinion recognized that as formulated “the benzene standard is an expensive way of providing some additional protection for a relatively small number of employees.” The agency’s acts must be in accordance with the governing statute. The Court held that “the statute was not designed to require employers to provide absolutely risk-free workplaces whenever it is technologically feasible to do so, as long as the cost is not great enough to destroy an entire industry.” Thus, “safe” does not equal risk-free. The Secretary must meet the threshold standard that a place of employment is unsafe, that is, it threatens the workers with a significant risk of harm.

Chief Justice Berger’s concurring opinion recognized “Perfect safety is a chimera: regulation must not strangle human activity in the search for the impossible.”

e. Illinois and Zero Risk

186 448 U.S. 607 (1980).
187 OSHA’s then standard policy for carcinogens was “in the absence of definitive proof of a safe level, it may be assumed that any level above zero presents some increased risk of cancer.” Id. at 635.
188 Id. at 635, fn. 41.
189 Id. at 628.
190 Id. at 642.
191 Id. at 615, 642, 645. The Court looked also to legislative history to support this premise. Id. at 646-49.
192 Id. at 664 (Berger, concurring).
The legacy of Love Canal had a major impact in Illinois. Residents of the rural community of Wilsonville were opposed to the siting of a toxic waste landfill in their community. The 130 acre landfill was surrounded on three sides by farmland and on the 4th side by Wilsonville. The landfill was located above an abandoned coal mine, and was thus subject to a high risk of subsidence. The transportation of hazardous wastes into the site had to go through the village on Main Street. In addition to the dust and odors from the landfill, the residents complained of leakage and toxic spills from the trucks, as well as noise and vibration. Plaintiffs’ expert witnesses testified as to the high risks of subsidence, explosive interactions, and leakage, all in the background of Love Canal which was dominating national news at the time.

The Illinois Supreme Court took a zero risk standard for facility siting. The Circuit Court issued an injunction against the site, ordering removal and reclamation. It was affirmed on appeal by the Court of Appeals and the Supreme Court of Illinois. The court cited Dean Prosser that an injunction may issue when it is highly foreseeable that an activity will lead to a XXXX. The court found highly probable the risk of escape causing a substantial injury.

The court found it was a hazardous undertaking at an unsuitable site. It seriously and eminently posed a threat to the public health. The Illinois Supreme Court posited a zero risk standard for hazardous waste facilities. Such facilities "must be located in a secure place, where it still pose no threat to health or life, now, or on the future."

A. The Disappearing Issues

1. Environmental Problems

a. Noise Pollution

Little discussion occurs today over noise pollution, but it was a major issue 40 years ago when Boeing proposed to build a supersonic transport (SST). Opposition scuttled the large plane, while the Concorde, the much smaller European entry was limited to Dulles and Kennedy airports in the United States. New York City tried to block the SST from JFK Airport by studying it to death. One critical lesson from the SST debate was the use of the Freedom of Information Act to obtain information regarding the proposed American construction of an SST, and thus as a critical information tool in future environmental disputes. Noise pollution issues helped scuttle proposed international airports in the Everglades, Chicago, Palmdale and El Toro, California, and Steward Air Force base in New York.

b. Thermal Pollution

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296 426 N.E.2d at 836.
297 British Airways Bd. v. Port Authority, 564 F.2d 1002 (2nd Cir. 1977).
Fossil fuel and nuclear plants generate electricity by boiling water to turn turbines which produce electricity. The issue is the disposal of the waste hot water. Many facilities would dispose of the heated water directly into rivers and lakes, producing thermal pollution. The heated water would substantially affect the ecology of the discharge zone. Many power plants, especially nuclear facilities, went to close-cycle cooling towers.

c. Sewage Sludge

One clear victory is the banning of sewage sludge disposal into the nation’s oceans. Litigation delayed implementation of the ban, but finally the last two holdouts, New York City and Orange County, California finally complied. Of course, the ban on ocean dumping did not alter the reality that communities still had to dispose of the sludge. Los Angeles was sending its sludge to neighboring Kern County, whose residents responded through a referendum that banned the receipt of sludge in the county. The ban is currently in litigation.

2. Legal Theories

a. Appearance of Fairness and the Questioning of Legislative Motives

A potentially powerful, but disappearing approach, is the appearance of fairness doctrine. Its growth was fueled by the "cynical" reaction to Watergate, Vietnam, and the pattern of land use corruption at the state and local level. Decisions often seemed to be based on the influence of money rather than the merits. The premise is that not only must justice be done, but it must appear to be done. The underused appearance of fairness doctrine emerged out of land use planning cases with a history of corruption at the state and local level. As stated by the Washington Supreme Court "The process by which such decisions [changes in zoning plans] are made must not only be fair but must appear to be fair to insure public confidence therein."

The next step would be the risky one of questioning the motives of legislators. Only rarely have courts noted improper legislative meddling in the administrative or statutory decision making process. The

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299 Amendments to the Marine Protection, Research and sanctuaries Act of 1972 required the ocean dumping of sewage sludge and industrial wastes to cease by December 31, 1981. 33 U.S.C. §§1401-1444. I had a poster once which showed a man staring out at the Pacific Ocean from Ocean Beach in San Francisco. The caption was "I fled from the land and arrived at last by the infinite sea." The irony was that in the background of the picture was a worn out pipe running from the sewage treatment plant at the foot of Golden gate park into the Pacific Ocean.


301 Fleming v. City of Tacoma, 502 P.2d 327, 329 (Wash. 1972). Not all courts accepted this premise though. The Supreme Court of Florida in Schnaur v. City of Miami Beach, 112 S.2d 838 (Fla. 1959) followed the general rule of declining to intervene even though members of the legislative body were motivated by bias or self-interest. A rezoning vote was upheld eventhough a councilman, who cast a critical vote for passage, could gain up to $600,000 in increased property value from the rezoning.
strong presumption is for courts to rely upon the honesty and integrity of public officials, and thus “ignore” most allegations of influence peddling. 302

One of the few exceptions involved the Three Sisters Bridge Litigation in Washington, D.C. Because of traffic congestion in the vicinity of, and across the river from, Georgetown in northwest Washington, plans were prepared for additional highway access into D.C. The plans called for erecting the Three Sisters Bridge across the Potomac as an essential part of the highway improvement project for the metropolitan area. The Georgetown Historic Area would lie slightly to the east of the Three Sisters Bridge. The bridge would cross the Three Sisters Islands, which are three rocks in the Potomac. They are connected at low tide by a sand bar.

The National Capital Planning Commission, the official planning body for the District of Columbia, adopted in December 1968 a comprehensive transportation plan, which did not include the Three Sisters Bridge. The Federal Highway Administrator deleted the bridge from the Interstate Highway System at the request of the District of Columbia government.

However, many members of Congress were intent on seeing the highway constructed. Congressman Natcher, Chair of the Subcommittee on the District of Columbia of the House Appropriations Committee, threatened to delete the appropriations for the planned rapid transit district desired by the District of Columbia unless the District accepted the highway plan.

In response to an injunction enjoining construction of the Three Sisters Bridge, 303 Congress enacted §23 of the Federal Highway Act of 1968, 304 which provides:

(a) Notwithstanding any other provisions of law or any court decisions or administrative actions to the contrary, the Secretary shall ... construct all routes on the Interstate System ... Such construction shall be undertaken as soon as possible after the date of enactment of this Act, except as otherwise provided in this section and shall be carried out in accordance with all applicable provisions of Title 23 of the United States Code.

(b) Not later than 30 days after the date of enactment ... the government of the District of Columbia shall commence work on the following projects:

(1) Three Sisters Bridge

Irrespective of what would appear to be an unequivocal Congressional intent to build the project, the Court of Appeals held that all the hearing and planning requirements of Title 23 had to be complied with. This opinion did not mention the Congressional pressures on the District of Columbia. 305

302 See e.g. State of Missouri ex rel The Missouri-St. Louis Metropolitan Airport Authority v. Coleman, 427 F. Supp. 1252 (D.D.C. 1977)(allegations do not warrant investigation into the mental processes of the Secretary of Transportation)..
304 82 Stat. 819.
The District Court on remand noted the political pressures, but found them relevant only if they caused other officials “to disregard obligations, imposed on them by statute...” The District judge made no such finding.

However, Judge Bazelon on appeal felt the pressures existed, and that on remand the secretary “must make new determinations based strictly on the merits and completely without regard to any considerations not made relevant by Congress in the applicable statute.” Judge Bazelon wrote:

[T]he impact of this [Congressional] pressure is sufficient, standing alone, to invalidate the secretary’s action. Even if the Secretary had taken every formal step required, in my opinion, because extraneous pressure intruded into the calculus of consideration on which the secretary’s decision was based.

He further stated:
The ‘unusual situation’ posited here is entirely the product of action by a small group of men with strongly-held views on the desirability of the bridge, who, it may be assumed, are acting with the interests of the public at heart. They may well be correct in concluding that a new bridge is needed and that no alternative location is available. But no matter how sound their reasoning nor how lofty their motives, this cannot usurp the function vested by Act of Congress in the Secretary of Transportation. Until the statute is amended or repealed by another Act of Congress, the Secretary must himself decide ....

B. The Failed Answer: UFFI

The energy crisis of the 1970’s prompted a concerted effort to promote energy conservation. One problem was applying insulation to older homes. Often the attics were accessible, but the major heat loss could be through the walls. A Scandinavian solution, UFFI, seemed at hand. Urea formaldehyde insulation could be blown into wall in a liquid form through holes drilled in the outer walls. It was inexpensive, easy to install, and quickly solidified after installation. It seemed the ideal solution, especially for retrofitting older homes.

However, when misapplied it could emit dangerous levels of formaldehyde for years into the home. The result was banning UFFI, and in some statutes removal and restoration. Trying to remove solidified UFFI from between interior walls is not an easy procedure.

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307 Id. at 1246.
308 Id. at 1245-46.
309 The risks include acute irritant effects and cancer.
The pedagogical value of UFFI is that it shows how three different agencies, federal and state, using different statutes and burdens of proof, reaching different results on a common set of facts and risks.

The energy crisis of the 1970’s brought to the fore the issue of conservation and recycling. Vermiculate is a mineral that can be used in gardens, as well as for insulation in houses. W.R. Grace proposed a vermiculate mine in Virginia to supply demand. It would supplement production from the mine it acquired in Libby, Montana. We now know that the Montana mine was contaminated with naturally occurring asbestos, which has become a tragedy to the residents of Libby as well as the miners.

C. We Didn’t Have a Name For It: Environmental Justice

An early land use issue, which now has an environmental name, is environmental justice. The early land use issues involved exclusionary zoning and the denial of services. We had discrimination in land use planning before we called it environmental justice, especially with exclusionary zoning and the denial of services. A General Accounting Office study found that a majority of the off-site hazardous waste landfills in EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee) were located in black communities. In addition, 26% of the population in four communities studied had incomes below the poverty level. Most of the population was black. EJ today deals more broadly with the discriminatory providing of services.

Environmental Justice has now become a major area of the law with many law schools offering courses in it. The government’s attitude towards issues of Environmental Justice depends heavily on who is in the White House. President Clinton issued an Executive Order on EJ.

D. The Time Has Not Yet Arrived: Ecosystem Management

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316 An early instance of the unlawful disposal of PCB’s on North Carolina roads gave rise to extensive discussion three decades ago. Among the articles dealing with the issue of disposal of the now banned chemicals is William Andreen, Defusing the “Not in My Back yard” Syndrome: An Approach to Federal Preemption of State and Local Impediments to the Siting of PCB Disposal Facilities, 63 N.C. L. Rev. 811 (1985).
317 For indices of environmental justice cases, see Denis Binder, Index of Environmental Justice Cases, 27 The Urban Lawyer 163 (1995); Environmental Justice Index II, 3 Chapman L. Rev. 147 (2001); Environmental Justice Index III, 35 Environmental Law Reporter 10605 (2005).
A critical effort towards environmental preservation would be wise ecosystem management. The reality is that only small steps have been undertaken.\textsuperscript{319} As mentioned earlier, California enacted created the San Francisco Bay Conservation & Development Commission to control future developments on the Bay. The BCDC has prevented further shrinkage of the Bay, but its powers do not extend inland. A cursory drive around the San Francisco Bay Area reveals the same urban sprawl of Southern California.

The League to Save Lake Tahoe was founded in 1957 to “Keep Tahoe Blue.” A bi-state compact\textsuperscript{320} was entered into between California and Nevada in 1969 to save Lake Tahoe. Its success is aided by the reality that 90% of the land in the Basin is owned by the federal government. As I write though, the compact is becoming frayed and Nevada wants out.

Other regional planning efforts include the New Jersey Meadowlands\textsuperscript{321} and Martha’s Vineyard.\textsuperscript{322} More recent efforts to preserve the Everglades ran into economic difficulties involved in acquiring the private, commercial interests in the Everglades.

The Endangered Species Act has a significant effect in management of the Columbia River and its tributaries to manage salmon runs and the Northern Spotted owl has stopped timber harvesting in much of the Pacific Northwest, but neither of these acts is comprehensive in its reach.

VI. The Role of the States Versus the Federal Government

A basic issue was whose laws would apply: the federal or state governments. The answers came through both judicial decisions and legislation, but litigation is never ending.

A. Litigation.

The Supreme Court in 1971 held state nuisance law should control in an interstate dispute between a state and a private defendant.\textsuperscript{323} However, only a year later in \textit{Illinois v. Milwaukee}\textsuperscript{324} the Court changed position and held federal law governs interstate water pollution.\textsuperscript{325} Indeed, federal common law could be used to resolve the dispute. After substantial amendments to the Clean Water Act, the Supreme Court held in \textit{Milwaukee II}\textsuperscript{326} that the federal legislation preempted federal common law, leaving open the question whether state common law might still apply.

\textsuperscript{319} An emerging approach in Natural Resources Law is “adaptive management,” which is part of ecosystem management. See J. B. Ruhl and Robert L. Fischman, \textit{Adaptive management in the Courts}, 95 Minn. L. Rev. 424 (2010).


\textsuperscript{323} \textit{Ohio v. Wyandotte Chemicals Corp.}, 401 U.S. 493 (1971).

\textsuperscript{324} 406 U.S. 91 (1972). Milwaukee was discharging sewage into Lake Michigan.

\textsuperscript{325} \textit{Id.} at 108.

The Seventh Circuit held in *Milwaukee II*\(^{327}\) that the Clean Water Act precluded the application of a state’s common law to a pollution source located in a different state.

The legal issue was not yet over. The question of state common law remains open. Plaintiffs in Vermont complained about water pollution from a paper mill in New York. Suit could be brought because of the Savings Clause. In a holding that doesn’t seem logical, a majority of the Supreme Court held that the lawsuit could proceed in New York, but the law of the permitting state would apply,\(^ {328}\) tempting the jury in the receiving state to engage in jury nullification.

B. Cooperative Federalism

Several major federal statutes, including the Clean Air Act, the Clean Water Act,\(^ {329}\) the Safe Drinking Water Act,\(^ {330}\) and OSHA\(^ {331}\) provided for cooperative federalism, which called for shared regulatory duties. Congress would set minimal standards which the states could then enforce as long as they complied with the minimal standards.

C. Savings Clause

Several statutes also included a “Savings Clause” which allowed private law suits for damages to be brought under state law even if substantial federal regulation of a subject existed.\(^ {332}\) In short, remedies would exist under both public law for the wrong to the people and private law to compensate the individual victim.

VII: The Academy

A. Environmental Law, Land Use Planning and Natural Resources Law as Venn Diagrams

If Environmental Law can be viewed as the law of resource allocation, then natural resources law professors would perform a major role in the development of Environmental Law. Environmental Law and Natural Resources Law are often the same; the same issues, the same policies, the same statutes, the same lawyers and professors. Indeed, several leading professors emerged from a natural resources background,\(^ {333}\), often with an emphasis on water law.\(^ {334}\) Joseph Sax started his career at

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\(^{328}\) *International Paper Co. v. Ouellette*, 479 U.S. 481 (1987)

\(^{329}\) 33 U.S.C. §1342(b).

\(^{330}\) 42 U.S.C. §1253.

\(^{331}\) 29 U.S.C. §667(b).

\(^{332}\) The Savings Clause of the Clean Water Act provides “Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief ....” 33 U.S.C. §1365. See *Middlesex County Sewerage Authority v. National Sea Clammers Association*, 453 U.S. 1 (1981).

\(^{333}\) The leading Natural Resources Law Professor, Frank Trelease of Wyoming, was nearing the end of his distinguished career as Environmental Law developed. Other leading natural resources professors were Al Utton of New Mexico, Don Zillman of Maine, and George Coggin of Kansas.

\(^{334}\) Professor Bob Beck, then at North Dakota and later at Southern Illinois, is an example. See Robert Beck & Amy Kelley, *Water and Water Rights* (LexisNexis 3rd Ed.).
Colorado, mastering Water Law. Professor William Rodgers of the University of Washington was involved for decades with the Native American Fishing Claims in the Pacific Northwest. Others soon joined the profession.

A major convergence of the two occurred in 1981 when the Rocky Mountain Mineral Law Foundation, with the assistance of the Eastern Mineral Law Foundation and the Southwestern Legal Foundation sponsored the first of the Natural Resources Teachers Law Institutes (NRTL). These biennial institutes have become a common ground for the professors to come together, exchange views and share the latest developments in both areas. The two sections of the AALS work closely together in sponsoring programs, often with joint sponsorships at the AALS annual meetings.

The Fifth Institute was held in Lexington, Kentucky outside of the normal western venues. Thanks to the efforts of Professor Cy Fox of Pittsburgh, a field trip was held to the coal mines of eastern Kentucky. MAPCO allowed access to its Martiki Coal Company surface mine and an underground mine. This field trip was the genesis of the annual AALS field trips and the continuance of the NRTL field trips.

Environmental Law and Land Use Planning often overlap, perhaps no more so than in wetlands preservation and regulation, especially in inland wetlands. Just as some environmental law professors came from Natural resources Law, others emerged from the slightly older field of Land Use Planning. A few were actually in the predecessors to Environmental Law, fighting pollution.

B. The Curriculum

George Washington, under Professor Arnold Reitze, inaugurated an Environmental Law program in 1970 and offered an LL.M. in Environmental Law. The University of Oregon established the first environmental law clinic in 1970 and sponsors the annual public interest environmental law conference. Three new law schools centered their programs on Environmental Law: Vermont, Lewis & Clark, and Pace, which inaugurated a highly popular annual Environmental Law Moot Court Competition. The

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335 Professor Sax wrote germinal articles on the Public Trust Doctrine and the Takings Clause, as well as citizen involvement.
337 These include Professors Dan Wilkinson at Colorado who joined his mentor, Dave Getches, at Colorado and Pat McGinley at West Virginia, who waged epic battles against strip mining. Michael Blumm specialized in issues of the Columbia River.
338 The Southwestern Legal Foundation is now the Center for American and International Law. The American Bar Association Section on Environment, Energy and Resources (SEER), formerly the Section of natural resources, Energy, and Environmental Law, early became a co-sponsor.
339 MAPCO, the Mid American Pipeline Co., subsequently was acquired by Williams Brothers
340 Professor Julian Juergensmeyer offered a land use planning course at the University of Florida in 1965. He believes that he was the first offered by a Florida law school, and that few were offered elsewhere at that time.
341 Professor Krier was a early scholar in air pollution. Professor Oscar Gray at Maryland and Frank Grad at Columbia had programs up and running.
traditional law schools of Columbia and Maryland\textsuperscript{342} established themselves early in Environmental Law. Other law schools, especially Colorado and Denver, built upon their natural resources law programs. Many law schools today have emphasis and certificate programs in Environmental Law, so popular is the area. Florida and Florida State have large faculties.


Early Environmental Law encompassed both public law and private law, but soon focused on public law. Traditional victim's compensation was offered in new courses, such as Toxic Torts. New areas appeared – biodiversity, Environmental Justice, Environmental Criminal Law,\textsuperscript{345} international environmental law,\textsuperscript{346} endangered species, and now Climate Change.

C. The Professoriate

I remember an early meeting,\textsuperscript{347} probably the first, in a small hotel room at the AALS Annual Meeting. Reflecting the professoriate 40 years ago, less than a dozen white male professors were in the room, and the question was: “Who wants to be the chair next year?” Obviously, the environmental professoriate has changed, reflecting the changes in the Academy. A rough estimate by attendance at AALS and NRTLI conferences shows roughly 40% female, especially among the younger professors.

In addition, a common teaching overlap was Environmental Law and Torts. Now it is Environmental Law and Property Law. My experience though is that regardless of a colleague’s background, an understanding of Natural Resources Law facilitates an understanding of environmental issues.

More significantly, today’s professors are better qualified than we were. Most took extensive environmental law and natural resources programs, either in a J.D. or LL.M. program, sometimes both, and then clerked, interned, externed, or worked at a public interest organization\textsuperscript{348} or law firm specializing in environmental law, the EPA or other administrative agency. Some of us were fortunate to

\textsuperscript{342} The University of Maryland law School started its LL.M. in Environmental Law in 197 .
\textsuperscript{343} Boalt published the Ecology Law Journal and Boston College the Environmental Affairs Law Review.
\textsuperscript{344} Early casebooks were Frank Grad, Environmental Controls: Protection, Policies & The Law (1971); Hanks, Tarlock, & Hanks, Environmental Law & Policy: Cases and Materials (1974), Bonine & Mc Garrity, Findlay & Farber
\textsuperscript{345} It is hard to conceive of a state or federal environmental violation that does not also constitute a criminal act.
\textsuperscript{346} Professor Lakshman Guwuswany of Colorado and Nicholas Robinson of Pace became leading scholars in international environmental issues. An example of the extent of the issues raised today are found in a Symposium, The Confluence of Human Rights and the Environment, 11 Ore. Rev. of International Law 223 (2009)
\textsuperscript{347} I cannot recollect who all the participants were, but Professor A. Dan Tarlock of Indiana-Bloomington and Professor, later Dean, William Hines of Iowa were present. They were early pioneers in environmental issues.
\textsuperscript{348} For example, Professor Oliver Houck founded Tulane’s Environmental Law Clinic after leaving the National Wildlife Federation in 1981.
take courses from pioneers, such as Professor Joseph Sax or Ralph Johnson, but most law schools did not offer courses in environmental law 4 decades ago.\footnote{349}

And the biggest change – 40 years ago I could master the nascent field of Environmental Law. Today – not a chance! Environmental Law resulted in law professors specializing, such as in endangered species, energy, federal lands, clean air, clean water, energy law, international, environmental justice, and most recently climate change.

The scholarship is prodigious – more than any mere mortal can keep up with. Many professors have carved out niches for themselves.\footnote{350}

The AALS Section of Environmental Law has always been an eclectic, informal body representing a diversity of environmental and natural resources interests. Seniority is irrelevant, as is the professor’s institution. Junior faculty are encouraged to become active in the Section in leadership roles and in sharing their research.

About a quarter century ago at one of these mid-year conferences, about half the professors teaching the basic Environmental Law Course reported they concentrated on a specific statute, such as Clean Air or Clean Water, and the other half concentrated on a general survey course.\footnote{351}

VII. Ani\footnote{352}

A. The Change in Paradigms

The Age of the Master Builder\footnote{353} has been replaced by the Age of the Environmentalist. Infrastructure improvements were challenged by the environmental considerations. Bridges and dams, roads and highways, and nuclear power plants, were stopped by NEPA and other statutes, just as coal power plants are fought today.\footnote{354}

\footnote{349} For example, USF offered a very traditional curriculum during my J.D. program, with no courses in such “esoteric” subjects as Environmental Law, but I was fortunate to take three courses (Environmental Law, Water Law, and an Environmental Law Seminar) from Professor Sax at the University of Michigan from 1970-1972. My early teaching and course contents were, of course, modeled on the lessons, insights and provocative thoughts I learnt from him.

\footnote{350} For example, Professor Michael Blumm of Lewis and Clark is the expert on the issues, especially the salmon, of the Columbia River. Professor J.B. Ruhl, now of Vanderbilt, is the guru on the Endangered Species Act.

\footnote{351} Unfortunately, no similar survey has recently been conducted.

\footnote{352} I’ve always wanted to use this word from crossword puzzles.

\footnote{353} The classic master builders of the 20th Century were William Mulholland and Robert Moses. Los Angeles was built on the water vision of Mulholland. He is reported to have said of the Owens Valley water “If we don’t get it, we won’t need it.” Brechin & Phillips, The Ebbing Tide at Mono Lake, Sierra 57, 58 (Sept. – Oct. 1979). Upon opening the taps of the 233 mile aqueduct from Owens Valley to the San Fernando Valley, he said “There it is. Take it.”

\footnote{354} The Sierra Club takes credit for stopping over 100 new coal plants in recent years. Again, this is not a new issue in Environmental law. Utilities planned six massive coal power plants in the Southwest, away from population centers of the West. Some, such as the Mohave and Navajo, were built, but a proposed 5,000MW plant on the Kaiparowits Plateau in southern Utah was abandoned in 1975. Environment: Defeat for Kaiparowits, Time, Apr. 26, 1976.
I. The Western Backlash Against the Changing Paradigm

A wise colleague once remarked “Make sure when you change paradigms that you engage the clutch.” Therein lies part of the problem in the Olde West, the West of resource exploitation. The late 1970’s witnessed the short rise of the Sagebrush Rebellion, which was advanced as a revolt of the colonial west against the absentee landlords and bureaucrats of Washington. Nevada unsuccessfully agued the federal land Management and Policy Act of 1976 unconstitutionally infringed upon Nevada’s 10th Amendment and Equal Footing rights.\(^{355}\) The rebellion was short lived when a cowboy boot wearing governor of the west, Ronald Reagan, was elected President.

More recently is the Country Supreme Movement, originating in Catron County, New Mexico. The premise is that the local counties have primary jurisdiction over their lands. The legal issue is simple after Kleppe v. New Mexico\(^ {356}\). The practical problem is different though. It is one of safety of government facilities and personnel. Many of the forest and park rangers work in isolated communities and remote locations, hundreds of miles from any assistance. My understanding is that a few years ago as the threat level rose, rangers were advised to always work in teams and not alone, and to carry weapons at work

B. Recycling and Conservation: The Bottle Bill

As we saw early with the SCRAP and Vermont Yankees cases the environmental benefits of recycling and conservation were quickly realized. Oregon enacted a bottle bill in XXX, and was followed by several states. An effective bottle bill not only encourages the recycling of materials, thereby reducing the XX of virgin materials, but also substantially reduces litter along the nation’s roads and frees up space in the sanitary landfills. Legal attacks under the Commerce Clause failed because the statutes did not discriminate on the basis of origin.\(^ {357}\) Bans on other substances, such as phosphate detergents, followed.\(^ {358}\)

The reality though is that most states have not adopted the bottle bill.

C. Aspirations and Reality

Our aspirations of environmental quality do not always match reality, especially when it comes to consumer preferences.\(^ {359}\) The increasing shortage of landfill space focused attention on non-biodegradables that eat up available capacity. One major suspect was the disposable diaper. Attempts

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\(^{356}\) See Paul Conable, Comment, Equal footing: County Supremacy, and the Western Public lands, 26 Envtl. L. 1263 (1996).

\(^{357}\) See e.g American Can Co. v. Oregon Liquor Control Comm., 517 P.2d 641 (Ore. 1973), Bowie Ind., Inc. v. City of Bowie, 335 A.2d 679 (Md. 1973).

\(^{358}\) See e.g. Proctor & Gamble v. City of Chicago, 509 F.2d 69 (7th Cir. 1975).

\(^{359}\) In general, see Sagoﬀ, We Have Met the Enemy and He is Us or Conﬂict and Contradiction in Environmental Law, 12 Envtl.l. L. 283 (1982). “We have met the enemy and he is us” is a famous line from the comic strip Pogo.
to ban disposable diapers in Vermont, an environmentally progressive state, failed when parents expressed their love for the “rip and wrap” disposable diapers rather than the traditional cloth diapers. Similarly, Maine banned in 1990 the aseptic juice packs because the aluminum layer was not biodegradable. The ban was repealed on September 1, 1994.

Otherwise stalwart environmentalists often face a dilemma with their young children — small cars with high gas mileage or convenience and safety with larger vehicles. They often drive Minivans and SUVs. To some extent the decision is easy. Detroit stopped building station wagons because they were then counted towards the gas mileage requirements for cars whereas minivans and SUV’s are counted in the much higher requirements for light trucks.

VIII: Global Climate Change

I would be remiss if I did not raise the major environmental issue of today — global climate change. The issue is not totally new. Chlorofluorocarbons (CFC’s) were banned in 1987 in the Montreal Protocol.360 Rio twenty years ago alerted the environmental community to the issues of climate change, but not to the extent of recent years. Rio in 1992 was followed by in 1997 by Kyoto, Montreal, and Copenhagen. Environmental law professors were highly present at Copenhagen, with many blogging from the conference.361

The oil shortages of the 1970’s led to an initial wave of energy conservation and alternatives — similar to recent years. Renewable energy in the forms of solar362 and wind were encouraged.363 The Wisconsin Supreme Court issued the pioneering opinion of Prah v. Marretti.364 Statutory rights to solar access for solar panels and solar clothes dryers followed365

360 The ban on cfc’s in aerial inhalants resulted in the reformulation of many inhalants, such as albuterol inhalers for asthmatics. As an asthmatic I can attest that the reformulated albuterol inhalers are not as effective as the cfc inhalers. See Laurie Tarkan, Rough Transition to a Asthma Inhaler, New York Times, May 13, 2008 at http://www.nytimes.com/2008/5/13/health/13 (visited on Aug. 21, 2011).
361 The rise of the internet has greatly facilitated the dissemination of information in the environmental community.
362 ARCO, the large oil company and its successor, BP, invested heavily into solar before abandoning it. Similarly, Exxon poured large sums into shale oil in Parachute and Rifle, Colorado before pulling out.
363 Other ideas at the time such as tidal power, shale oil, did not pan out.
364 321 N.W. 2d 182 (Wisc. 1972). The American common law rule did not recognize a right of access to the sun. Fontainebleau Hotel v. Forty-Five Twenty-Five, Inc., 114 So.2d 357 (Fla. Dist. Ct. App. 1959), cert. denied, 117 So.2d 842 (Fla. 1960). The Eden Roc Hotel on Miami Beach unsuccessfully brought suit to stop construction of a 14 story addition to the neighboring 8 story Fontainebleau Hotel. Having stayed at the Eden Roc I can attest that the real issue was not, as alleged, the shadows on the swimming pool, but the sheer ugliness of the Fontainebleau’s wall by the side of the Eden Roc’s pool.
365 See e.g. Colo. Rev. Stat. §38-32.5-101., Cal. Pub. Res. Code §§ 25980-25986, Cal. Civ. Code § 714. One of the most significant energy conservation steps many of use can take at home is to hook up a solar clothes dryer, i.e. a
an outdoor clothes line, since clothes dryers consume a large amount of energy. A joke at the time was that solar energy could never become viable unless either the oil companies could market it or the government tax it. As of now, the government provides subsidies to solar.
An extraordinary amount of the time, resources, and scholarship of the Environmental law faculty has been devoted over the past five years to issues of climate change. It has dominated much of the Environmental Law meetings of recent years, especially the AALS Section of Environmental Law and the NRTLI institutes. The annual AALS meetings have had presentations on climate change. The activity is reminiscent of the early days of Environmental Law 4 decades ago - an engaged faculty pioneering new approaches to a pressing environmental law problem. As with 40 years ago, statutes were not a restriction. Indeed, the Supreme Court in Massachusetts v. EPA opened the door for the EPA to impose substantial controls on greenhouse gas emissions.

The current Environmental Law faculty, charged by Global Climate Change, is as energized as those of 40 years ago. A sense of déjà vu exists in the Academy today.

Justice Blackmun in Sierra Club v. Morton referenced John Dunne’s famous quote: “No man is an island, intire of itself; every man is a piece of the Continent, a part of the maine; if a Clod bee washed away by the Sea, Europe is the lesse, as well as if a Mannor of thy friends or of thine own were, any man’s death diminishes me, because I am involved in Mankinde; And therefore never send to know for whom the bell tolls; it tolls for thee.” That is certainly true with global climate change.

IX: Conclusion

Much of the basic tenets we take for granted in Environmental Law today are of recent origins, often crafted in the 1970’s and early 1980’s. Citizen suits, broad concepts of standing, judicial reviewability were mostly settled through the collective efforts of legislators, judges, administrators, Presidents, lawyers, academicians, and public interest groups. Progress has not always been steady and some issues seem destined to be continuous. The path has not been long and winding, but always leading to a cleaner, diversified environment.

Some areas, such as risk and exposure to toxic substances, are perhaps unsolvable because of the variables of science, or the lack of scientific facts, fears, media attention, and the responses of politicians. Some development issue will reappear, especially at the local level, because as Professor Sax once wrote “Money can wait.”

366 Professor Michael Gerrard, a prolific scholar in environmental law before he joined the faculty of Columbia Law School, is the Director of Columbia’s Center for Climate Change law, which tracks climate change litigation, legislation, and regulations. See also, David Markell & J. B. Ruhl, An Empirical Survey of Climate Change Litigation in the United States, 40 ELR 10644 (2010) and Michael B. Gerrard, The Law of Clean energy: Efficiency and Renewable (2011).

Our resources, air, water, land, minerals, are limited, but the demands are infinite. How society allocates the resources is Environmental Law. The paradigm changed from resource exploitation to resource conservation, recreation, and restoration. The values of aesthetics, conservational, and recreational, the values of the environment, often trump those of the older master builder.

Environmental Law has empowered the citizen and fostered transparency, even prior to the internet. The Administrative Law of 1970 is no more. Environmental Law continues to test Constitution I Law.

Much of today’s Environmental Law was unforeseeable, especially almost the smog on the first Earth Day. Let us not forget that the roots remain as the foundation of today’s and tomorrow’s Environmental Law.