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The Pillars of Modern American Environmental Law

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I. INTRODUCTION

January 1, 1970 marks the unofficial start of the Environmental Age. The National Environmental Policy Act (NEPA) became effective at 12:01 AM on January 1.¹ The Council on Environmental Quality (CEQ) and the Environmental Protection Agency (EPA) came into being in 1970 while the inaugural Earth Day was April 22, 1970.² The paradigm switched from resource exploitation to resource conservation. Several environmental protection statutes were enacted at this time.³

America's economy for roughly a decade and a half, from the onset of the Great Depression in 1929 through the end of World War II in 1945, stagnated. Economic expansion was stalled, unemployment soared, and consumer expenditures depressed. Peace unleashed a period of sustained economic growth and development. Pent-up demand was released like a pressure cooker. The United States emerged from the war, unlike the rest of the world, with a vibrant, undamaged industrial base, which could switch to consumer goods from war production.

Detroit built large, popular, gas-guzzling cars as conspicuous consumption became the norm. Consumers purchased homes, cars, and appliances.⁴ Higher education ballooned. Downtowns boomed. A college degree was almost a guarantee of meaningful employment. America built up its infrastructure: airports, highways, bridges, dams and channels, power plants, transmission lines, and pipelines. Congress enacted the National Interstate and Defense Highways Act of 1956.⁵ A frenzy ensued to build the roughly 41,000 miles of the interstate highway system; the creation of the nation's highways fueled the move to the booming suburbs. The dawn of the environmental era marked the end of highway building, especially through cities.

Progress was the credo. A country which could place a man on the moon was seemingly capable of anything, but apparently not protecting the environment. Emphasis was on the quantity of

¹ National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852.

² *Environmental History Timeline*, ENV'T HIST. TIMELINE, <http://environmentalhistory.org/20th-century/seventies-1970-79/> [http://perma.cc/W8WN-3EXM] (last visited Mar. 3, 2021).

³ Richard J. Lazarus, *The Greening of America and the Graying of United States Environmental Law*, 20 VA. ENV'T L.J. 75, 77–79 (2001).

⁴ Lizabeth Cohen, *A Consumers' Republic: The Politics of Mass Consumption in Postwar America*, 31 J. CONSUMER RSCH. 236, 237.

⁵ Federal-Aid Highway Act of 1956, Ch. 462, 70 Stat. 374 (codified as amended in scattered statutes in 23 U.S.C. and 26 U.S.C.).

life—not the quality of life.

The preceding seven decades represented the Conservation Era. The theme of the century old City Beautiful⁶ and Conservation Movements continued into the earlier 1960s with enactment of the National Historic Preservation Act,⁷ Wilderness Act,⁸ and the Wild and Scenic Rivers Act,⁹ all conservation measures.

The ethos of the Conservation Era was to preserve and conserve that which was there. The ethos of the Environmental Era is to both conserve and preserve, but more significantly to clean up, bring back, and restore.

The environment was lost in the quest for economic expansion. Four events alerted the public to the degradation of the environment. The first was Rachel Carson's epic *Silent Spring*,¹⁰ published in 1962, focusing national attention on the risks of toxic chemicals. The second was the Santa Barbara Oil Blowout of January 28, 1969.¹¹ The national coverage coupled with photos of oil covered sea birds was riveting.¹² The third was the growing smog problem, especially in Los Angeles.¹³ Finally was the Cuyahoga River catching on fire as it flowed through Cleveland on June 22, 1969.¹⁴

⁶ The City Beautiful Movement championed building parks, including pocket parks, in the nation's cities and other forms of beautifying the cities of the day. See WILLIAM WYCKOFF, *HOW TO READ THE AMERICAN WEST* 296–97 (2014). Frederick Law Olmstead designed many of the great gardens and open spaces of modern America. See JUSTIN MARTIN, *GENIUS OF PLACE: THE LIFE OF FREDERICK LAW OLNSTEAD* 1–2 (2011).

⁷ Act of Oct. 15, 1966, Pub. L. No. 89-665, 80 Stat. 915 (codified at 16 U.S.C. §§ 470x–470x-6; renumbered as scattered statutes in 54 U.S.C.).

⁸ Wilderness Act of 1964, Pub. L. No. 88-577, 78 Stat. 890 (codified as amended at 16 U.S.C. §§ 1131–1136).

⁹ Wild and Scenic Rivers Act of 1968, Pub. L. No. 90-542, 82 Stat. 906 (1968) (providing for a National Wild and Scenic Rivers System) (codified as amended at 16 U.S.C. §§ 1271–1287).

¹⁰ RACHEL CARSON, *SILENT SPRING* (1962). The impact of Rachel Carson is the focus of *American Experience: Rachel Carson* (PBS television broadcast Jan. 24, 2017).

¹¹ See Harry Trimborn, *Battle Shaping Up Over Offshore Oil*, L.A. TIMES, Feb. 2, 1969, at A1.

¹² The Santa Barbara Oil Blowout was a seminal moment in American environmental law. It led to enactment of the Coastal Zone Management Act of 1972, Pub. L. No. 92-583, 86 Stat. 1280 (1972) (codified at 16 U.S.C. §§ 1451–1666), and the Ports and Waterways Safety Act of 1972, Pub. L. No. 92-340, 86 Stat. 424 (1972) (codified at 33 U.S.C. §§ 1221–1236). *Union Oil Co. v. Oppen*, 501 F.2d 558 (9th Cir. 1974) was the only major case arising out of the blowout. It opened up civil liability in oil spill cases.

¹³ See Gene Sherman, *Where We Stand on Smog Problem, What's Been Done, What's Ahead*, L.A. TIMES, Jan. 8, 1961, at C1. I. I remember flying through Los Angeles International Airport around two o'clock in the afternoon in the mid-1970's and seeing what appeared to be a beautiful sunset. The orange glow was, of course, smog.

¹⁴ See *The Cities: The Price of Optimism*, TIME, Aug. 1, 1969, at 41. Check out Randy Newman's classic "Burn On." RANDY NEWMAN, *Burn On, on Sail Away* (Reprise Records 1972).

The vast majority of public environmental law is administrative law.¹⁵ Consequently, many of the landmark environmental cases involve administrative law issues. The threshold issues at the onset of the Environmental Era were standing, reviewability, and agency discretion—beginning with standing for access to the courts. The presumption was that the administrative agencies were charged with protecting and promoting the public interest so that their decisions should not be questioned by the public they were sworn to protect.

This Article analyzes the cases that form the foundation of modern American environmental law and protection. Professors J. B. Ruhl and Jim Salzman provide a valuable study of environmental law cases by surveying environmental professionals in 2001, 2009, and 2019 to select the top ten environmental cases. They found four constant cases in the top ten,¹⁶ while two others appear in the newer surveys.¹⁷

My approach is more subjective. It is based on five decades in environmental law looking at environmental protection from a historical perspective of the environmental, procedural, and substantive impacts and significance of the decisions. These cases are selected either for their legal significance or contributions to environmental improvement. Other professors and professionals could easily choose different cases because scores of significant environmental cases have been decided.¹⁸

II. THE PRECURSOR CASES

The Environmental Era did not suddenly pop up. Three infrastructure cases developing in the late 1960s continuing into the 1970s provided strong signals that the times “were a changing.”¹⁹

¹⁵ Private compensatory remedies are usually taught in a Toxic Torts course.

¹⁶ J. B. Ruhl & Jim Salzman, *American Idols*, ENV'T F., May–June 2019, at 40. The four perennial cases are *Chevron, U.S.A. v. Nat. Res. Def. Council, Inc.*, 467 U.S. 837 (1984), *Tenn. Valley Auth. v. Hill*, 437 U.S. 153 (1978), *Sierra Club v. Morton*, 405 U.S. 727 (1972), and *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402 (1971). *Id.* at 43. Professor Lazarus has also written on the history of environmental law. RICHARD J. LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* (2004).

¹⁷ Ruhl & Salzman, *supra* note 16, at 43. See *Massachusetts v. EPA*, 549 U.S. 497 (2007); see also *Lujan v. Defs. of Wildlife*, 504 U.S. 555 (1992).

¹⁸ I have not included any of the myriad of wetlands cases because no clear constitutional standards have yet arisen.

¹⁹ Cf. BOB DYLAN, *The Times They Are-a-Changin'*, on *THE TIMES THEY ARE-A-CHANGIN'* (Columbia Records 1964).

A. *Scenic Hudson Preservation Conference v. Federal Power Commission*²⁰

The East Coast suffered a massive electrical blackout on November 9, 1965. It was a cascading power failure up and down the East Coast and Ontario. The Great Northeast Blackout of 1965 resulted in over thirty million people losing power. The proposed solution was to have standby electrical sources that could immediately power up. One way to accomplish that goal was the construction of pumped storage facilities. Water would be pumped up to a hilltop reservoir during slack times, such as nighttime. It would then flow down during peak or emergency times.²¹ A 1,168-megawatt pumped storage facility was erected at Northfield Mountain in Massachusetts. A second one was planned in 1962 for Storm King Mountain on the Hudson River fifty miles north of New York City. Storm King was announced three years before the Blackout, but the promoters used the Blackout to justify the plant's construction. The intake and outflow sites were planned in the prime spawning grounds of the Atlantic striped bass.

The Federal Power Commission (FPC) issued a permit for the facility. The Second Circuit overturned the license for failure to consider alternatives, such as interconnects, gas turbines, nuclear power, underground transmission lines, or a combination of them.²² It criticized the agency for acting as an “umpire blandly calling balls and strikes” rather than affirmatively protecting the public interest.²³ The right of the public “must receive active and affirmative protection at the hands of the Commission.”²⁴ The D.C. Circuit recognized that standing can be based on “aesthetic, conservational, and recreational” injuries.²⁵

The FPC's decision on remand said:

Just as the mountain has swallowed the scar of the highway, the intrusive railroad structure and fills, 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.²⁶

²⁰ *Scenic Hudson Pres. Conf. v. Fed. Power Comm'n*, 354 F.2d 608 (2d Cir. 1965).

²¹ Pumped storage facilities are technically energy inefficient since pumped storage requires about two kilowatt hours of electricity in exchange for one kilowatt hour generated in the discharge. The value is in the timing.

²² *Scenic Hudson*, 354 F.2d at 621–23.

²³ *Id.* at 620.

²⁴ *Id.*

²⁵ *Id.* at 616. The court also extended standing to those whose activities and conduct show a “special interest” in the area. *Id.*

²⁶ *Consol. Edison Co. of N.Y., Inc.*, 44 F.P.C. 350, 384 (1970), *aff'd sub nom. Scenic*

The FPC's Chairman Nassikas stated "I'm a conservationist too," but recognized the agency's first mission is to encourage "an abundant supply of electric energy throughout the United States."²⁷

Extensive agency proceedings and litigation ensued. The proposal was dropped in 1980. The pump storage facility was never built.²⁸ Ironically, the Storm King Mountain proposal was announced on September 27, 1962—the same day Rachel Carson's *Silent Spring* was published.²⁹

A subsequent casualty of the Storm King litigation was the Westway Highway project. A section of Manhattan's Westside Highway collapsed. The proposal was to replace it by filling in 242 acres, of which 31 acres would be for interchange ramps, 110 acres for new development, and 93 for a recreational park. Half the new road would be underground. Westway was enjoined because of the failure to deal with the striped bass issue.³⁰

B. The Cross Florida Barge Canal³¹

The Cross Florida Barge Canal, like the Ford Edsel, seemed a good idea at the time. The dream of a canal linking the Gulf Coast to the Atlantic harkens back to the early days of the Spanish exploration of Florida. The onset of World War II accelerated the apparent need for the Canal.³² Congress authorized it in 1942. The Canal would cut through north central Florida from Jacksonville to the Gulf of Mexico—bifurcating the state. Construction began in 1964. Decisions remained to be made when NEPA came into effect on January 1, 1970. The canal was roughly "one-third complete and approximately \$74 million

Hudson Pres. Conf. v. Fed. Power Comm'n, 453 F.2d 463 (2d Cir. 1971). Simon & Garfunkel's *The Sound of Silence* "people hearing without listening" characterized the FPC decision. See SIMON & GARFUNKEL, *The Sound of Silence*, on WEDNESDAY MORNING, 3AM (Columbia Records 1964).

²⁷ Edward Cowan, *Power: To Use Or Not To Use*, N.Y. TIMES, July 2, 1972, at F12.

²⁸ The Storm King saga is the basis of ROBERT D. LIFSET, *POWER ON THE HUDSON: STORM KING MOUNTAIN AND THE EMERGENCE OF MODERN AMERICAN ENVIRONMENTALISM* (2014).

²⁹ *Id.* at 5–6.

³⁰ See *Action for Rational Transit v. W. Side Highway Project*, 536 F. Supp. 1225 (S.D.N.Y. 1982).

³¹ For a detailed history of the Cross Florida Canal, see STEVEN NOLL & DAVID TEGEDER, *DITCH OF DREAMS: THE CROSS FLORIDA BARGE CANAL AND THE STRUGGLE FOR FLORIDA'S FUTURE* (2009).

³² German U-Boats were torpedoing ships off the Florida coast after the United States entered World War II. See Ed Offley, *Germany Brought WWII to the Florida Coast in 1942*, LEDGER (June 23, 2019, 7:15 PM) <http://www.theledger.com/news/20190623/germany-brought-wwii-to-florida-coast-in-1942> [<http://perma.cc/PAD4-MXVL>].

had been spent on land acquisition and construction”³³ when a court issued an injunction. The project’s Rodman Dam was completed in 1968 on the Ocklawaha River. Thirteen thousand acres of partially cleared land in the Ocklawaha Valley were flooded. A total of 1,135 acres of large hardwood trees were left standing prior to the flooding to serve as fish habitat. The flooding was now progressively killing the trees.

The court followed the standard requirements for preliminary injunctive relief:

- (1) a substantial likelihood that plaintiff will prevail on the merits, (2) a substantial threat that plaintiff will suffer irreparable injury if the injunction is not granted, (3) that the threatened injury to plaintiff outweighs the threatened harm the injunction may do to defendant, and (4) that granting the preliminary injunction will not disserve the public interest.³⁴

The background to the opinion is the understanding that President Nixon was going to scuttle the canal, which he did three days later on January 19, 1971.³⁵

The court did not address an interesting issue in its short opinion. Preliminary relief is supposed to preserve the status quo pending the final trial on the merits.³⁶ The question is what is the status quo? Partially flooded trees? Draining the lake to preserve the trees? We know the answer; Rodman Dam still stands with the lake behind it.

Opposition to the canal was led by Marjorie Harris Carr. The cessation of construction left the state with a right of way up to a mile wide along the canal right of way. The path is named the Marjorie Harris Carr Cross Florida Greenway.

³³ GEOCACHING, *Marjorie Harris Carr Cross Florida Greenway* https://www.geocaching.com/geocache/GCN147_marjorie-harris-carr-cross-florida-greenway?guid=00b941a3-0676-40e4-9f75-0432db7a08c6 [http://perma.cc/5SCX-EM46] (last visited Mar. 7, 2021).

³⁴ Canal Auth. of State of Fla. v. Callaway, 489 F.2d 567, 570, 572 (5th Cir. 1974).

³⁵ *Stop Order from President Richard Nixon*, FLA. MEMORY, <http://www.floridamemory.com/onlineclassroom/primarysourcesets/water/documents/nixon/> [http://perma.cc/AKY8-V62G]. The canal was formally deauthorized in 1990. Cross Florida Barge Canal, 16 U.S.C. § 460tt (2020).

³⁶ *Callaway*, 489 F.2d at 576.

III. THE ADMINISTRATIVE FOUNDATIONS

A. Reviewability: *Citizens to Preserve Overton Park v. Volpe*³⁷

The third case involved both a freeway siting through an urban park and the reviewability of agency action. *Sierra Club v. Morton* decided the fundamental issue of standing to get into federal court.³⁸ *Citizens to Preserve Overton Park v. Volpe* lays out the parameters for deciding the standards for reviewing administrative decisions once in court.³⁹

The proposal was to build a six-lane highway through downtown Memphis slicing through Memphis' Overton Park.⁴⁰ The highway would sever the zoo from the park and destroy 26 acres of the 342 acre park.⁴¹ The proposed extension of I-40 would cut directly through Memphis instead of rerouting drivers around the existing bypass.⁴² The Federal Highway Administration (FHA) approved the route in 1966.⁴³

No formal findings of fact accompanied the approval.⁴⁴ Congress enacted the Federal Transportation Act—section 4(f) prohibited the construction through parkland unless no “feasible and prudent” alternative existed, and even then, only if all possible methods for reducing harm to the park were taken.⁴⁵

The plaintiffs alleged a violation of section 4(f) and the failure to provide formal findings.⁴⁶ The agency claimed it had discretion to approve the project.⁴⁷

The Supreme Court held an agency's discretion should be measured within the context of the relevant statutes.⁴⁸ The Administrative Procedures Act (APA) normally applies in laying out the standards of review.⁴⁹ A presumption of reviewability exists under the APA.⁵⁰ An agency's discretion is unreviewable only if “there is a statutory prohibition on review or where

³⁷ *Citizens to Pres. Overton Park, Inc. v. Volpe*, 401 U.S. 402, 406–07 (1971).

³⁸ *See* 405 U.S. 727 (1972).

³⁹ 401 U.S. 402, 406–07 (1971).

⁴⁰ *Id.* at 406.

⁴¹ *Id.*

⁴² *Id.*

⁴³ *Id.* at 407.

⁴⁴ *Id.* at 408.

⁴⁵ 23 U.S.C. § 138 (2020).

⁴⁶ *Citizens to Pres. Overton Park, Inc.*, 401 U.S. at 408–09.

⁴⁷ *Id.* at 409.

⁴⁸ *Id.* at 410.

⁴⁹ *Id.*

⁵⁰ *Id.*

‘agency action is committed to agency discretion by law.’⁵¹ The Supreme Court held this exception applies only when “statutes are drawn in such broad terms that in a given case there is no law to apply.”⁵²

Section 4(f) provides specific restrictions on the FHA’s discretion.⁵³ Therefore, there is law to be applied. The FHA failed to meet the 4(f) standards.⁵⁴

The Court also explained the various standards of review. For example, the substantial evidence test applies when the agency action is undertaken pursuant to a rulemaking provision of the APA or when the agency action is based on a public adjudicatory hearing.⁵⁵ An agency decision should be set aside if the action is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law or if the action failed to meet statutory, procedural, or constitutional requirements.”⁵⁶

The Court agreed no formal findings of fact were required,⁵⁷ but the Administrator had to provide justifications for the decision. Post hoc rationalizations should be critically reviewed.⁵⁸ The FHA subsequently amended its regulations to require formal findings of fact.

Overton Park had two major consequences. First, the Court substantially reined in agency’s “unreviewable” discretion. Second, the practical result of *Storm King Mountain*, *The Cross Florida Barge Canal*, and *Citizens to Preserve Overton Park* is that infrastructure is no longer sacrosanct. The environmental laws apply to infrastructure projects. These cases also represented the change in paradigms from the “master builder”⁵⁹ to the environmentalist.

⁵¹ *Citizens to Pres. Overton Park, Inc.*, 401 U.S. at 410 (citing 5 U.S.C. § 701).

⁵² *Id.* (citing S. Rep. No. 752, 79th Cong., 1st Sess., 26 (1945)).

⁵³ *Id.* at 411.

⁵⁴ *Id.* at 411–12.

⁵⁵ *Id.* at 414.

⁵⁶ *Id.* (internal quotations omitted).

⁵⁷ *Id.* at 409.

⁵⁸ *Id.* at 420. Post hoc rationalizations have traditionally been viewed as an “inadequate basis for review.” *Id.* at 419.

⁵⁹ Robert Moses is the penultimate master builder/master planner. He was in charge of planning and public works in both the city and state of New York. His legacy includes 13 bridges, 416 miles of parkways, 28,000 housing units, and 658 playgrounds in New York City. He turned tenements into public housing. His legacy includes the Triborough Bridge, Verrazano Narrows Bridge, Bronx-Whitestone Bridge, Throgs Neck Bridge, Brooklyn-Queens Expressway, Cross Bronx Expressway, Cross Bronx Expressway, Westside Highway, Van Wyck Expressway, Henry Hudson Parkway, Jones Beach, Lincoln Center, United Nations Headquarters, and Shea Stadium. See generally ROBERT A. CARO, *THE POWER BROKER: ROBERT MOSES AND THE FALL OF NEW YORK* (1974). Robert Moses was blocked when he tried to build the Lower Manhattan highway through Greenwich Village.

B. Standing: *Sierra Club v. Morton*⁶⁰

A threshold standard 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 APA 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.”⁶¹ An understanding existed prior to the environmental cases that standing entailed an economic injury. Professor Stone asked the question: “Should Trees Have Standing?”⁶²

The Supreme Court in *Sierra Club v. Morton*⁶³ opened up the doors to non-economic standing. The Sierra Club opposed development of a Disney ski resort in Mineral King National Forest nestled in the Sierra Nevada Mountains. 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.”⁶⁴ It therefore sought standing based on an interest in the problem without a particularized injury in fact.⁶⁵

The Court rejected this broad definition of injury for standing. However, the Court promulgated three critical holdings that opened up standing. First, the Court extended standing to aesthetic and environmental well-being.⁶⁶ The Court cited an earlier opinion, *Association of Data Processing Service Organizations, Inc. v. Camp*,⁶⁷ which stated an injured interest may reflect “‘aesthetic, conservational, and recreational’ as well

⁶⁰ See generally 405 U.S. 727 (1972).

⁶¹ 5 U.S.C. § 702 (2020).

⁶² Christopher D. Stone, *Should Trees Have Standing: Toward Legal Rights for Natural Objects*, 45 S. CALIF. L. REV. 450, 450 (1972).

⁶³ *Sierra Club*, 405 U.S. 727. Walt Disney supervised the pageantry at the 1960 Squaw Valley Winter Olympics in the Sierras, and decided he loved ski resorts. The Disney plan for the Mineral King Valley in Sequoia National Forest called for a \$35 million complex of motels, restaurants, swimming pools, parking lots, and other structures to accommodate up to 14,000 visitors. Ironically, development of the area was originally supported by the Sierra Club.

⁶⁴ *Sierra Club*, 405 U.S. at 734 n.8.

⁶⁵ The Sierra Club pushed the case as a test case, pushing the boundaries of standing. It could have amended its case to show particularized standing, as it quickly did after the Supreme Court decision.

⁶⁶ *Sierra Club*, 405 U.S. at 734.

⁶⁷ See generally 397 U.S. 150 (1970).

as economic values.”⁶⁸ Thus an economic injury was no longer a prerequisite for standing.

Second, standing can be extended to organizations in a representational capacity if an individual member satisfies the standing requirements.⁶⁹ Thus an environmental organization, NGO, or trade association can act on behalf of its members.⁷⁰ The practical significance is that these organizations often have the resources which individuals lack to litigate these problems.

Third, once standing is obtained, the claimant can assert the broader public interest and is not limited to the issue asserted for standing.⁷¹ The successful claimant thereby assumes the role of a private attorney general.⁷²

The answer to Professor Stone’s question and Justice Douglas’ concurring opinion is “Trees technically do not have standing.” However, we know from other cases that inanimate objects can be named a plaintiff as long as a named individual or organization has standing. Only one plaintiff need have standing. Standing may be pushed or stretched after *Sierra Club v. Morton*,⁷³ but the core remains.

The case helped fuel the growth of environmental and public interest organizations on both sides.⁷⁴ The Sierra Club effectively won the case on standing, and the underlying environmental dispute. Representative Phil Burton (D. Ca.) crafted a “park barrel” bill modeled after the traditional park barrel legislation with government projects for members of Congress.⁷⁵

⁶⁸ *Id.* at 154.

⁶⁹ *Sierra Club*, 405 U.S. at 739.

⁷⁰ *Id.*

⁷¹ *Id.* at 737.

⁷² *Id.*

⁷³ *See, e.g.,* *United States v. Students Challenging Regul. Agency Procs. (SCRAP)*, 412 U.S. 669, 687–88 (1973). An individual may have standing even if large numbers are similarly affected.

⁷⁴ 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), the 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. Friends of the Earth sprang off from the Sierra Club. The National Parks Association renamed itself the National Parks Conservation Association. On the opposite side of the spectrum are organizations such as the Pacific Legal Foundation and the Mountain States Legal Foundation.

⁷⁵ *See* Harold Gilliam, *Remembering Edgar Wayburn*, *SIERRA* (July–Aug. 2010),

Representative Burton invited Representatives to submit proposed additions to national parks, forests, marine sanctuaries, refuges, monuments, and seashores in their district.⁷⁶ He packaged them together in the Omnibus Parks Bill, signed by President Carter on November 10, 1978.⁷⁷ The Act transferred Mineral King to the National Park Service with a proviso banning downhill skiing in the area.⁷⁸

The Johnson Administration in 1967 stripped the Sierra Club of its tax exemption because of its campaign against two proposed dams that would partly flood the Grand Canyon.⁷⁹ The tag line in the *New York Times* and *Washington Post* was “Should we also flood the Sistine Chapel so tourists can float nearer the ceiling?”⁸⁰ The IRS action ironically boosted the Club by turning it into an environmental martyr, rather than crushing it.⁸¹

C. Standing and Climate Change: *Massachusetts v. Environmental Protection Agency*⁸²

The Supreme Court in a 1907 interstate pollution case held a state “in its capacity of quasi-sovereign” could sue for damages or abatement for interstate pollution.⁸³

A century after *Georgia v. Tennessee Copper Co.* and forty-five years after *Sierra Club v. Morton*, the Court issued two significant holdings in *Massachusetts v. Environmental Protection Agency*.⁸⁴ First, it extended standing to Massachusetts, which has special standing as a state because of its “quasi-sovereign” status.⁸⁵

The second holding has great importance in the current battle over climate change.⁸⁶ The Court held the EPA has jurisdiction under the Clean Air Act to regulate carbon dioxide

<http://www.sierraclub.org/sierra/201007/wayburn.aspx> [http://perma.cc/2987-UF9J] (discussing the “park barrel” bills).

⁷⁶ See STAFF OF SUBCOMM. ON NAT'L PARKS & INSULAR AFFS. OF THE H. COMM. ON INTERIOR & INSULAR AFFS., 95TH CONG., LEGISLATIVE HISTORY OF THE NATIONAL PARKS AND RECREATION ACT OF 1978 (1978) [http://perma.cc/JN2A-7YTB].

⁷⁷ National Parks and Recreation Act of 1978, Pub. L. No. 95-625, § 314, 92 Stat. 3467.

⁷⁸ *Id.*

⁷⁹ See Bob Turner, *Sacrifice of a Natural Wonder America's Most Regretted Environmental Mistake*, TEHIPITE TOPICS, Winter 2017, at 11 [http://perma.cc/7TWY-SWSS].

⁸⁰ *Id.*

⁸¹ The Sierra Club to this day eschews non-profit status.

⁸² See generally 549 U.S. 497 (2007).

⁸³ *Georgia v. Tenn. Copper Co.*, 206 U.S. 230, 236–37 (1907).

⁸⁴ See 549 U.S. 497.

⁸⁵ See *id.* at 520.

⁸⁶ See *id.* at 525.

and other greenhouse gasses from auto exhausts and thus stationary sources, which include power plants, if found to endanger public health.⁸⁷ EPA thereby has the authority to impose substantial controls on greenhouse gas emissions from fixed sources—a major cause of global warming.

D. The *Chevron* Doctrine: *Chevron, U.S.A. v. Natural Resources Defense Council*⁸⁸

Congress enacts statutes and creates agencies to implement the statutes.⁸⁹ The powers delegated to regulatory agencies are often extensive and the statutes vague.⁹⁰ Agencies thereby have to construe and apply the statutes through regulations and enforcement.⁹¹ Courts have traditionally deferred to the expertise of the agencies in interpreting the statute.⁹² A maxim of administrative law since the New Deal is that courts will defer to the discretion of administrative agencies, which possess the expertise which courts lack in the specific areas.⁹³

Congress required permits for point sources of air pollution, but did not define point sources.⁹⁴ The narrow issue was whether a source could be viewed as a facility in its entirety or by individual components within the plant.⁹⁵ The agency's initial definition included any significant change or addition to a plant or facility, viewed as a single "bubble."⁹⁶ The definition was changed in 1981 with a new administration to a plant or factory in its entirety, such that if reductions elsewhere in the source resulted in no overall increase in emissions, then the polluter could avoid a "new-source" review.⁹⁷

Chevron reformulated the doctrine with what is known as *Chevron* Deference.⁹⁸ First, the court should look to the intent of Congress: "If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress."⁹⁹ The starting

⁸⁷ *See id.* at 528.

⁸⁸ *See generally* 467 U.S. 837 (1984).

⁸⁹ *See id.* at 843, 845.

⁹⁰ *See id.* at 843.

⁹¹ *See id.* at 843–44.

⁹² *See id.* at 843.

⁹³ *See id.*

⁹⁴ *See id.* at 850–51.

⁹⁵ *See id.* at 851.

⁹⁶ *Id.*

⁹⁷ *See id.* at 853.

⁹⁸ *See generally id.*

⁹⁹ *Id.* at 842–44 (finding that the agency's interpretation does not have to be the only

point should be the plain words of the statute.¹⁰⁰

On the other hand, “if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency’s answer is based on a permissible construction of the statute.”¹⁰¹ Congress delegated authority to the agencies to fill gaps in the specific provisions of a statute.¹⁰² A court is not to substitute its own construction of the statute for that of the agency.¹⁰³

The *Chevron* holding became known as the *Chevron* two-step.¹⁰⁴ The first step is to determine if Congress “has directly spoken to the precise question at issue.”¹⁰⁵ Then, the next step is to determine whether the agency made a permissible interpretation of the statute.¹⁰⁶ Agencies routinely argue *Chevron* protects their decisions even as to the extent of their jurisdiction, and usually succeed.

The *Chevron* Doctrine has become controversial in recent years as agencies stretch to justify their decisions.¹⁰⁷ They basically argue pursuant to *Chevron* that courts cannot second-guess their decisions—essentially going back to the years of non-reviewability before *Citizens to Preserve Overton Park v. Volpe*.¹⁰⁸

IV. NEPA

The National Environmental Policy Act (NEPA), with its requirement of environmental impact statements on any major federal project significantly affecting the quality of the human environment, is one of America’s greatest contributions to the global environment.¹⁰⁹ *Vermont Yankee* is not the first Supreme Court NEPA decision.¹¹⁰ The Supreme Court’s earlier decision in

interpretation, but a reasonable construction).

¹⁰⁰ *See id.*

¹⁰¹ *Id.* at 843.

¹⁰² *See id.* at 843–44.

¹⁰³ *See id.* at 844.

¹⁰⁴ *See* Valerie C. Brannon & Jared P. Cole, CONG. RSCH. SERV., R44954, *CHEVRON DEFERENCE: A PRIMER*, at 1–2 (2002).

¹⁰⁵ *Id.* at 842.

¹⁰⁶ *See id.* at 843–44. For a humorous look at the *Chevron* two-step by law students at NYU, see also Lewie Briggs, *The Chevron Two Step*, YOUTUBE (May 4, 2014), <http://www.youtube.com/watch?v=uHKujqyktJc> [<http://perma.cc/6UT5-9ZJS>].

¹⁰⁷ *See, e.g.*, Eric Citron, *The Roots and Limits of Gorsuch’s Views on Chevron Deference*, SCOTUSBLOG (Mar. 17, 2017, 11:26 AM), <http://www.scotusblog.com/2017/03/roots-limits-gorsuchs-views-chevron-deference/> [<http://perma.cc/9SJD-UKDH>].

¹⁰⁸ *See Chevron*, 467 U.S. 837; see also *Citizens to Pres. Overton Park, Inc.*, 401 U.S. 402.

¹⁰⁹ The other is the creation of national parks.

¹¹⁰ 435 U.S. 519 (1978).

*Kleppe v. Sierra Club*¹¹¹ held:

1) An EIS is not required until an agency has issued a report or recommendation on a major federal action;

2) The court's role is to ensure the agency took "a hard look" at the environmental consequences of a proposal, but not to substitute its judgment for that of the agency on the environmental consequences of the proposal; and

3) The only procedural requirements are those set forth in the plain words of the statute.¹¹²

*Vermont Yankee*¹¹³ is a NEPA case involving two appeals by intervenors contesting the issuance of permits for the construction of nuclear power plants.¹¹⁴ The Vermont Yankee half of the case involved the handling of nuclear waste.¹¹⁵ The intervenors asserted that section 4 of the Administrative Procedure Act "merely establishes lower procedural bounds and that a court may routinely require more than the minimum when an agency's proposed rule addresses complex or technical factual issues or 'Issues of Great Public Import.'"¹¹⁶

The NRC's staff prepared a conclusory table to reflect the insignificant environmental effects of the fuel cycle.¹¹⁷ The crux of the agency's substantive decision is that "the environmental effects of the uranium fuel cycle have been shown to be relatively insignificant"¹¹⁸ The agency at the public hearing treated Dr. Frank Pittman, presenting the report, with great deference, whereas the intervenors were treated with open hostility.¹¹⁹

The D.C. Court of Appeals ordered the Atomic Energy Commission to adopt procedures for the intervenors.¹²⁰ The agency decided neither discovery nor cross examination would be

¹¹¹ See 427 U.S. 390 (1976).

¹¹² *Id.* at 410 n.21 (citing *Scenic Hudson Pres. Conf. v. Fed. Power Comm'n*, 453 F.2d 463, 481 (2d Cir. 1971) and *Nat. Res. Def. Council v. Morton*, 458 F.2d 827, 838 (D.C. Cir. 1972)).

¹¹³ See *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519 (1978).

¹¹⁴ *Id.*

¹¹⁵ See *id.* at 538-39 (stating that the plan would produce over 100 pounds annually of radioactive waste, some of which would have to be isolated for 600 to hundreds of thousands of years).

¹¹⁶ *Id.* at 545.

¹¹⁷ See *id.* at 530.

¹¹⁸ *Id.* at 545.

¹¹⁹ See generally *id.*

¹²⁰ See *Nat. Res. Def. Council v. U.S. Nuclear Regul. Comm'n*, 547 F.2d 633, 652-54 (D.C. Cir. 1976) (refraining from specifically requiring cross examination but implying it in the decision).

allowed.¹²¹ Documents were made available to the intervenors, who would be given a reasonable time to present their arguments.¹²²

The D.C. Court of Appeals was upset at the disparate treatment shown its staff versus the intervenors.¹²³ The court felt the agency's procedures were inadequate and ordered the case remanded, although it did not specify the procedures to be used on remand.¹²⁴

The intervenors' premise 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."¹²⁵

Judge Bazelon in his concurring opinion wrote:

Decisions 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.¹²⁶

The Court reaffirmed the Administrative Procedures Act: "Absent constitutional constraints or extremely compelling circumstances" the agencies are free to determine their own rules of procedure.¹²⁷ The Administrative Procedures Act sets the maximum procedural requirements.¹²⁸ Courts are not free to add to them.¹²⁹ Agencies can fashion their own rules of procedure but cannot be mandated by courts to do so.¹³⁰

The Court therefore reaffirmed NEPA is a procedural statute, an environmental full disclosure statute.¹³¹ The only procedural requirements of NEPA are those within the statute.¹³² The agency's duty is to take a hard look at the environmental consequences.¹³³ The role of the court is not to second guess the agency's decision on the merits.¹³⁴

¹²¹ *Id.* at 643.

¹²² *See id.*

¹²³ *Id.* at 652–53.

¹²⁴ *See id.* at 653–54.

¹²⁵ *Id.* at 652.

¹²⁶ *Id.* at 657.

¹²⁷ *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Defense Council, Inc.*, 435 U.S. 519, 543 (1978).

¹²⁸ *See id.* at 524.

¹²⁹ *See id.*

¹³⁰ *See id.* at 543–45.

¹³¹ *See id.* at 558.

¹³² *See Kleppe v. Sierra Club*, 427 U.S. 390, 405–06 (1976).

¹³³ *See id.* at 410 n.21.

¹³⁴ *See id.* at 407.

The federal government still has not developed a site for disposal of high-level nuclear waste generated by commercial nuclear power plants.

The other case, *Consumers Power*, involved the extent to which the AEC had to consider energy conservation in its impact statements.¹³⁵ The NRC's Licensing Board rejected energy conservation as beyond their "province."¹³⁶ The agency viewed energy conservation as a novel concept and thus shifted the burden to the intervenors to present "clear and reasonably specific energy conservation contentions."¹³⁷ The Court of Appeals held the NRC had to undertake a "preliminary investigation of the proffered alternative sufficient to reach a rational judgment" in deciding whether to further pursue it.¹³⁸ The Commission's role is not to act like an umpire calling balls and strikes.¹³⁹

The Supreme Court reversed, cautioning "[c]ommon sense also teaches us that the 'detailed statement of alternatives' cannot be found wanting simply because the agency failed to include every alternative device and thought conceivable by the mind of man."¹⁴⁰ The Court further held the "concept of alternatives must be bounded by some notion of feasibility" to avoid making the impact statement "an exercise in frivolous boilerplate."¹⁴¹ The role of the courts is not to second guess or substitute its judgment for that of the agency.¹⁴²

A long-standing split existed between the D.C. Circuit Court of Appeals and the Supreme Court on judicial review of nuclear energy.¹⁴³ The Court cautioned the lower courts that the desirability of nuclear energy is a legislative matter and not judicial:

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. . . . Time may prove wrong the decision to develop nuclear energy, but it is Congress or the States within their appropriate agencies which must eventually make that judgement.¹⁴⁴

¹³⁵ See *Aeschliman v. U.S. Nuclear Regul. Comm'n*, 547 F.2d 622 (D.C. Cir. 1976).

¹³⁶ *Id.* at 625.

¹³⁷ *Id.* at 626.

¹³⁸ *Id.* at 628.

¹³⁹ *Id.* at 627.

¹⁴⁰ *Vt. Yankee Nuclear Power Corp. v. Nat. Res. Def. Council, Inc.*, 435 U.S. 519, 551 (1978).

¹⁴¹ *Id.*

¹⁴² See *id.* at 555.

¹⁴³ See generally *Kleppe v. Sierra Club*, 427 U.S. 390; see also *Vermont Yankee*, 435 U.S. 519.

¹⁴⁴ *Id.* at 557-58.

The D.C. Circuit again overturned the NRC decision on remand because it felt the agency had not considered the long-term consequences of storing and handling the nuclear wastes.¹⁴⁵ The Supreme Court again reversed the court of appeals, reemphasizing that NEPA is a procedural statute.¹⁴⁶ The court's role is "simply to ensure that the agency has adequately considered and disclosed the environmental impact of its actions."¹⁴⁷ The standard of review is "arbitrary or capricious."¹⁴⁸

NEPA is one of America's great creations in environmental protection.¹⁴⁹ States and foreign countries have adopted their own versions of NEPA. NEPA, within the Supreme Court's constraints, plays a major role in informing the public on the environmental effects of federal action. It also serves as a method for opponents of a project to litigate and stall action on the adequacy of impact statements.¹⁵⁰

A major problem with NEPA is that it has become a tool of delay by project opponents.¹⁵¹ They seek relief contending a NEPA statement should have been prepared or, if prepared, is insufficient. Legal proceedings, and thus delay, ensues.

V. THE LIMITS OF TECHNOLOGY

Dupont's slogan for several decades was "Better Living Through Chemistry." Benjamin Braddock whispered in the Graduate: "One word: Plastics."¹⁵² Faith in science and technology permeated society into the 1960s. Rachel Carson's *Silent Spring* triggered a reexamination of the faith in technology. DDT, leaded gas, and *Reserve Mining* paved the way for government regulation of toxic risk. The problem is that regulatory agencies have to engage in risk analysis with incomplete knowledge of the risks, especially long-term risks. Judges and juries have to decide cases when the toxic risks are

¹⁴⁵ See *Nat. Res. Def. Council, Inc. v. U.S. Nuclear Regul. Comm'n*, 685 F.2d 459, 477–80 (D.C. Cir. 1982).

¹⁴⁶ *Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc.*, 462 U.S. 87, 97–98 (1983).

¹⁴⁷ *Id.* at 106–08.

¹⁴⁸ *Id.* at 98.

¹⁴⁹ The other is the creation of national parks with the creation of Yosemite National Park in 1872. Act of Mar. 1, 1872, ch. 24, § 1, 17 Stat. 32 (codified as amended at 16 U.S.C. §§ 21–40c).

¹⁵⁰ See generally Denis Binder, *Cutting the Nimbian Knot: A Primer*, 40 DEPAUL L. REV. 1009 (1991).

¹⁵¹ See generally *id.* at 1009.

¹⁵² *The Graduate One Word Plastics*, YOUTUBE (Sept. 30, 2015), <http://www.youtube.com/watch?v=eaCHH5D74Fs>.

not fully known or often unknown.

The D.C. Circuit in *Industrial Union Department, AFL-CIO v. Hodgson*¹⁵³ recognized:

[S]ome of the questions involved in the promulgation of these standards are on the frontiers of scientific knowledge, and consequently as to them 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 formulation 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.¹⁵⁴

Professor Rodgers in reviewing the disparate opinions in *Industrial Union Dep't. v. American Petroleum Inst.*¹⁵⁵ wrote the disagreements may reflect “the fact that we live in a time when values are in disarray. Institutions caught in the flux of technological and social change are in for a rough ride until and unless new grounds for consensus emerge.”¹⁵⁶

A. Dichlorodiphenyltrichloroethane (“DDT”)

DDT was the miracle pesticide coming out of World War II. The chemical, first synthesized in 1874, seemed the answer to many problems. It killed the insects which spread malaria, typhus, and dengue fever.¹⁵⁷ It was used to delouse the returning soldiers at the end of the war.¹⁵⁸ DDT was then widely applied to civilian uses after the war, such as controlling boll weevils in the South.¹⁵⁹

DDT is not known to be toxic to humans but is listed as a suspected carcinogen.¹⁶⁰ The soil half-life ranges from twenty-two

¹⁵³ 499 F.2d 467 (D.C. Cir. 1974).

¹⁵⁴ *Id.* at 474–75.

¹⁵⁵ 448 U.S. 607 (1980).

¹⁵⁶ William H. Rodgers, Jr., *Judicial Review of Risk Assessments: The Role of Decision Theory in Unscrambling the Benzene Decision*, 11 ENV'T L. 301, 302 (1981).

¹⁵⁷ *DDT Regulatory History: A Brief Survey (to 1975)*, EPA, <https://archive.epa.gov/epa/aboutepa/ddt-regulatory-history-brief-survey-1975.html> [<http://perma.cc/MB5B-RK33>] (Sept. 14, 2016).

¹⁵⁸ *The US Army Used DDT to De-louse Soldiers*, APPALACHIAN HIST. (July 27, 2018), <https://www.appalachianhistory.net/2018/07/army-used-ddt-for-de-lousing.html> [<http://perma.cc/3MSK-X7GB>].

¹⁵⁹ *DDT Regulatory History*, *supra* note 157.

¹⁶⁰ AM. CANCER SOC'Y, *Known and Probable Human Carcinogens*, <http://www.cancer.org/cancer/cancer-causes/general-info/known-and-probable-human-carcinogens.html> [<http://perma.cc/K4V5-HK92>].

days to thirty years in the environment.¹⁶¹ It is resistant to metabolism, which combined with its long half-life, allows DDT to build up in the food chain. Many insects developed resistance to DDT.¹⁶²

Rachel Carson, a preeminent biologist,¹⁶³ noticed the relationship between DDT and the decline of raptors by disrupting their reproductive cycle. The chemical resulted in the thinning of their eggshells, resulting in their collapse as the mothers were nesting on them. The populations of eagles, hawks, falcons, condors, ospreys, and pelicans dropped as a result.

She documented the problem and then published *Silent Spring*¹⁶⁴ in 1962—one of the classic books of environmental protection. *Silent Spring* quickly became a national sensation. It alerted the American public to the dangers of toxins, especially toxic chemicals.

The first major issue before the newly established EPA was the fate of DDT. The EPA delayed in responding to a request to rescind the registration of DDT.¹⁶⁵ Judge Bazelon penned his famous line on the onset of the environmental era:

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. . . .

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.¹⁶⁶

¹⁶¹ *DDT (General Fact Sheet)*, NAT’L PESTICIDE INFO. CTR., <http://npic.orst.edu/factsheets/ddtgen.pdf> [<http://perma.cc/CN7H-ECSH>] (last updated 1999).

¹⁶² *Id.*

¹⁶³ Her other books include *UNDER THE SEA-WIND* (1941), *THE SEA AROUND US* (1951), *THE EDGE OF THE SEA* (1955), and *THE SENSE OF WONDER* (1965). She also extensively published essays and short articles.

¹⁶⁴ CARSON, *supra* note 10 and accompanying text.

¹⁶⁵ See *Env’t Def. Fund, Inc. v. Ruckelshaus*, 439 F.2d 584 (D.C. Cir. 1971). The court viewed the silence on the request to suspend the DDT registration as a final decision, which was thereby reviewable. No adequate explanation supported the failure to act.

¹⁶⁶ *Id.* at 597–98.

The EPA banned DDT in 1972,¹⁶⁷ followed, of course, by litigation. The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) provides for the cancellation of misbranded pesticides.¹⁶⁸ Misbranding occurs if an insecticide “used as directed or in accordance with commonly recognized practice . . . shall be injurious to living man or other vertebrate animals.”¹⁶⁹

One claim against the EPA’s DDT ban was that the agency lacked substantial evidence in the record.¹⁷⁰ Seven months of testimony produced inconsistent evidence, a not unusual result.¹⁷¹ The court felt substantial evidence existed in the record to show the hazardous nature of DDT even if it was not proven beyond a reasonable doubt.¹⁷² The Administrator found “DDT is hazardous because of its inherent properties: its persistence, mobility, and lipid solubility.”¹⁷³ He concluded DDT posed “an unacceptable risk to man and his environment.”¹⁷⁴ Inconsistent evidence might have justified a contrary conclusion, but was insufficient to vitiate the Administrator’s decision.¹⁷⁵ The EPA followed up the DDT litigation by banning replacement pesticides.¹⁷⁶

Two cases, one involving leaded gas and the other asbestos, proceeded through the judiciary in parallel tracks, wrestling with the legislative standard of “endanger.”

B. Leaded Gas: *Ethyl Corp. v. Environmental Protection Agency*¹⁷⁷

Early gasoline caused a knocking problem in cars. Tetraethyllead was found to be an effective anti-knock additive to gasoline as well as increasing the octane level in gas. However, the lead was emitted in auto exhausts, posing a substantial public health threat,¹⁷⁸ especially to children.

¹⁶⁷ The EPA technically cancelled the registration of all pesticides containing DDT.

¹⁶⁸ 7 U.S.C. § 135(a)(5) (current version at 7 U.S.C. § 136).

¹⁶⁹ *Id.* § 135(z)(2)(g) (current version at 7 U.S.C. § 136).

¹⁷⁰ The other claim was a violation of NEPA. *Env’t Def. Fund, Inc. v. Env’t Prot. Agency*, 489 F.2d 1247, 1250 (D.C. Cir. 1973).

¹⁷¹ *Id.* at 1252.

¹⁷² *Id.*

¹⁷³ *Id.*

¹⁷⁴ *Id.*

¹⁷⁵ *Id.* at 1252–53.

¹⁷⁶ The EPA followed up the DDT litigation by subsequently suspending the registration of the aldrin and dieldrin pesticides. *Env’t Def. Fund, Inc. v. Env’t Prot. Agency*, 510 F.2d 1292 (D.C. Cir. 1975). *See also* *Env’t Def. Fund, Inc. v. Env’t Prot. Agency*, 465 F.2d 528 (D.C. Cir. 1972).

¹⁷⁷ 541 F.2d 1 (D.C. Cir. 1976).

¹⁷⁸ Lead at high exposure levels can be fatal, cause anemia, severe intestinal cramps, paralysis of nerves, and fatigue. Extensive litigation over lead paint and its risks to children has resulted. *See, e.g., State v. Lead Indus. Ass’n, Inc.*, 951 A.2d 428 (R.I. 2008).

The EPA promulgated a schedule for phasing out lead from gasoline. The Clean Air Act authorized the EPA to regulate gasoline additives that “endanger the public health or welfare,”¹⁷⁹ but did not define “endanger.” The EPA relied on theoretical, epidemiological, and clinical tests to establish the risks of lead in the atmosphere, especially near highways and homes with lead paint.¹⁸⁰

Judge J. Skelly Wright started the court’s decision with prescient words:

Man’s ability to alter his environment has developed far more rapidly than his ability to foresee with certainty the effects of his alterations. It is only recently that we have begun to appreciate the danger posed by unregulated modification of the world around us, and have created watchdog agencies whose task it is to warn us, and protect us, when technological ‘advances’ present dangers unappreciated—or unrevealed—by their supporters. Such agencies, unequipped with crystal balls and unable to read the future, are nonetheless charged with evaluating the effects of unprecedented environmental modifications, often made on a massive scale. Necessarily, they must deal with predictions and uncertainty, with developing evidence, with conflicting evidence, and, sometimes, with little or no evidence at all.¹⁸¹

The lead manufacturers argued for a “high quantum of factual proof, proof of actual harm rather than of a ‘significant risk of harm.’”¹⁸² They asserted the regulation has to be premised on “factual proof of actual harm.”¹⁸³

The court of appeals disagreed, looking to both case law and the dictionary.¹⁸⁴ The word “endanger” entails less than actual harm; “endanger” is a precautionary standard; “will endanger” presents a “significant risk of harm.”¹⁸⁵ It means harm is threatened.¹⁸⁶ The court followed the reasoning of *Reserve Mining* that “the magnitude of risk sufficient to justify regulation is inversely proportionate to the harm to be avoided.”¹⁸⁷ Danger can be decided by “assessment of risks as well as by proof of facts.”¹⁸⁸ The alternative approach, that of the lead manufacturers, would

179 541 F.2d at 7 (citing 42 U.S.C. § 1857f-6c(1)(A)).

180 *Id.* at 44.

181 *Id.* at 6.

182 *Id.* at 12.

183 *Id.*

184 *Id.* at 13.

185 *Id.*

186 *Id.*

187 *Id.* at 19 (citing *Rsrv. Mining Co. v. Env’t Prot. Agency*, 514 F.2d 492, 528–29 (8th Cir. 1975)).

188 *Id.* at 24.

mean the agencies would have to wait for actual harm, to be reactive rather than preventative.¹⁸⁹

The opinion further addresses the demand for a high degree of proof to justify a regulation, or ban:

Where a statute is precautionary in nature, the evidence difficult to come by, uncertain, or conflicting because it is on the frontiers of scientific knowledge, the regulations designed to protect the public health, and the decision that of an expert administrator, we will not demand rigorous step-by-step proof of cause and effect. Such proof may be impossible to obtain if the precautionary purpose of the statute is to be served.¹⁹⁰

Judge Wright reaffirmed the standard of judicial review, the yet to be named *Chevron* Doctrine, by following the earlier DDT case:

In the case at bar our task is made somewhat simpler than the agency's by adhering conscientiously to the proper scope of judicial review of administrative action, i.e., we as a court are confronted with a problem in administrative law, not in chemistry, biology, medicine, or ecology. It is the administrative agency which has been called upon to hear and evaluate testimony in all scientific fields relevant to its ultimate question of permission or prohibition of the sale and use of DDT. The EPA Administrator had an opportunity to make a careful study of the record of seven months of public hearings and the summaries of evidence prepared for him, heard oral argument, and now has arrived at a decision to ban most uses of DDT. It is his decision which we must review; we are not to make the same decision ourselves.¹⁹¹

C. *Reserve Mining* Cases

The Eighth Circuit asked: "[W]hat manner of judicial cognizance may be taken of the unknown[?]"¹⁹²

Two steel companies formed a subsidiary, Reserve Mining, to process Minnesota taconite into iron ore. Sixty-seven thousand tons daily of tailings were discharged into Lake Superior and the atmosphere.¹⁹³ *Reserve Mining* would normally be a pollution issue. No harm had yet been shown to public health and any

¹⁸⁹ *Id.* at 25.

¹⁹⁰ *Id.* at 28.

¹⁹¹ *Id.* at 37 n.77 (quoting *Env't Def. Fund, Inc. v. Env't Prot. Agency (Coahoma)*, 489 F.2d 1247, 1252 (D.C. Cir. 1973)).

¹⁹² *Rsrv. Mining Co. v. United States*, 498 F.2d 1073, 1084 (8th Cir. 1974).

¹⁹³ Thomas R. Huffman, *Exploring the Legacy of Reserve Mining: What Does the Longest Environmental Trial in History Tell Us About the Meaning of American Environmentalism?*, 12 J. POL'Y HIST. 339, 340-41 (2000).

health danger was not imminent.¹⁹⁴ However, asbestos was found in the air and water discharges, creating a toxic health risk.¹⁹⁵ The critical issue for the Court of Appeals was if an injunction should be issued in light of the uncertainties of the risk. The district court issued a preliminary injunction based on the public health risks of breathing and drinking asbestos fibers.¹⁹⁶

Reserve Mining is a pioneering case in using epidemiology, occupational health, and oncology.¹⁹⁷ By 1970 asbestos was a known carcinogen with a rising death toll from mesothelioma, lung cancer, and asbestosis. The known health risks were from inhaling asbestos, compounded by smoking. The evidence of an imminent health hazard was speculative and conjectural. Dr. Arnold Brown, a court appointed expert, opined “no adverse health consequences could be scientifically predicted on the basis of existing medical knowledge,”¹⁹⁸ but “the presence of a known, human carcinogen . . . is in my view cause for concern, and if there are means of removing that human carcinogen from the environment, that should then be done.”¹⁹⁹ Studies have established that airborne asbestos are a health risk, but the evidence is lacking on asbestos fibers entering the digestive tract.²⁰⁰ The extent to which the ingestion of asbestos fibers poses a health risk is unknown, but Dr. Brown testified the possibility of an increased risk of future cancer cannot be ignored.²⁰¹

The court balanced the public interests and issued an injunction, recognizing “[A] risk may be assessed from suspected, but not completely substantiated, relationship between facts, from trend among facts, from theoretical projections from imperfect data, or from probative preliminary data not yet certifiable as ‘fact.’”²⁰² The court recognized the threat did not require an immediate shutdown of the plant,²⁰³ affording Reserve Mining a reasonable opportunity and time to abate the pollution and threat to public health.²⁰⁴

194 *Rsrv. Mining Co. v. Env't Prot. Agency*, 514 F.2d 492, 500 (8th Cir. 1975).

195 *Id.* at 501.

196 *United States v. Rsrv. Mining Co.*, 380 F. Supp. 11 (D. Minn. 1974).

197 Huffman, *supra* note 193, at 347.

198 514 F.2d at 506.

199 *Id.* at 513.

200 *Id.* at 514.

201 *Id.* at 517.

202 *Id.* at 529 (quoting *Ethyl Corp. v. Env't Prot. Agency*, 541 F.2d 1, 28 (D.C. Cir. 1975)).

203 *Id.* at 507.

204 *Id.* at 537.

The court though in an earlier opinion recognized: “[W]e 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.”²⁰⁵

The dilemma for the court was that proof did not exist showing asbestos in water is harmful to humans:

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 adequate countervailing benefits.²⁰⁶

The court recognized the discharges into the air and water posed “a potential threat to the public health.”²⁰⁷ The court thereby held the discharges posed a danger to public health. It mandated filtration of drinking water for the affected communities.

The judges looked to the recent appellate decision in the lead gas case, quoting Judge Wright:

The meaning of “endanger” is, I hope, beyond dispute. Case law and dictionary definition agree that endanger means something less than actual harm. When one is endangered, harm is threatened; no actual injury need ever occur. . . . ‘Endanger,’ . . . is not a standard prone to factual proof alone. Danger is a risk, and so can only be decided by assessment of risks. [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 preliminary data not yet certifiable as ‘fact.’²⁰⁸

They further wrote Congress used the word “endangering” in a precautionary or preventative sense, and, therefore, evidence of

²⁰⁵ Rsr. Mining Co. v. United States, 498 F.2d 1073, 1084 (8th Cir. 1974).

²⁰⁶ 514 F.2d at 537. *See also* Bradley v. Am. Smelting & Refin. Co., 709 P.2d 782, 791 (Wash. 1985).

²⁰⁷ 514 F.2d at 500.

²⁰⁸ *Id.* at 529. The judges disposed of the air pollution claims by finding a violation of Minnesota’s air pollution rules, thereby constituting a public nuisance. *Id.* at 524. A significant side issue in *Reserve Mining* is that the appellate court removed District Judge Miles Lord from the case for overt bias against Reserve Mining and disregard of earlier holdings by the appellate court. Rsr. Mining Co. v. Lord, 529 F.2d 181, 185 (8th Cir. 1976). The court felt “Judge Lord seems to have shed the robe of the judge and to have assumed the mantle of the advocate.” *Id.* For a history of the irascible Judge Miles Lord, see ROBERTA WALBURN, MILES LORD: THE MAVERICK JUDGE WHO BROUGHT CORPORATE AMERICA TO JUSTICE (2017). For general discussions of *Reserve Mining*, see THOMAS F. BASTOW, “THIS VAST POLLUTION . . .” (1986), and FRANK D. SCHAUMBURG, JUDGMENT RESERVED: A LANDMARK ENVIRONMENTAL CASE (1976).

potential harm as well as actual harm comes within the purview of that term.”²⁰⁹

Reserve Mining proceeded in 1980 to dispose of the tailings on land ponds five miles from the lake.²¹⁰ Clarity has returned to Lake Superior.

The effect of these trifecta cases is that agencies can take a prophylactic approach to toxic risk analysis, short of a zero-tolerance standard.²¹¹ The word “endangering” is to be construed as “precautionary” or “preventative.”²¹² Actual proof of harm is not therefore a prerequisite for judicial action.

D. *Edwards v. New York Times* and the First Amendment

The DDT controversy also gave rise to a critical First Amendment decision on the right of the media to cover controversial issues. The debate over the fate of DDT was highly contentious.

The National Audubon Society (NAS) conducts an annual Christmas Bird Count, followed by publishing an annual report. Spotters, often referred to as “birders,” go out annually at the same location to count birds by species. The raptor count had been rising seemingly despite the growing presence of pesticides in the environment. The preface to the 1971 report explained the apparent discrepancy was because the annual count has more and better trained counters, resulting in a more accurate count. It continued: “Any time you hear a ‘scientist’ say the opposite, you are in the presence of someone who is being paid to lie, or is parroting something he knows little about.”²¹³ DDT supporters asserted a ban was “deliberately genocidal.”²¹⁴

The NAS provided five names to the *New York Times* reporter, who was able to contact three of the five. They denied the accusations with one calling it “almost libelous.”²¹⁵

The *Times* printed the story including the denials. The scientists sued for defamation. The Second Circuit upheld the *Times* on First Amendment grounds. The judges held the article was newsworthy. The court recognized the right of the media to

²⁰⁹ 514 F.2d at 528.

²¹⁰ Huffman, *supra* note 193, at 342.

²¹¹ See *Indus. Union Dep’t, AFL-CIO v. Am. Petrol. Inst.*, 448 U.S. 607 (1980) (essentially a zero-tolerance level for benzene in the workplace).

²¹² 514 F.2d at 528.

²¹³ *Edwards v. Nat’l Audubon Soc’y, Inc.*, 556 F.2d 113, 117 (2d Cir. 1977).

²¹⁴ *Id.* at 116.

²¹⁵ *Id.* at 117.

cover and report on controversies. The media has a privilege of neutral reportage.

Succinctly stated, when a responsible, prominent organization like the National Audubon Society makes serious charges against a public figure, the First Amendment protects the accurate and disinterested reporting of those charges, regardless of the reporter's private views regarding their validity.²¹⁶

The court further held that the denials by the named scientists did not constitute constitutional malice, the standard established in *New York Times v. Sullivan*.²¹⁷ The *Times* reported both the accusation and the denials.

The First Amendment protections extended to the media also protect project opponents. Developers were prone to bringing lawsuits against opponents, hoping to chill their opposition.²¹⁸ Professors Pring and Canan of the University of Denver Law School labeled these lawsuits "SLAPP" actions (Strategic Litigation Against Public Participants).²¹⁹

California and other states have enacted anti-SLAPP statutes to ban these lawsuits.²²⁰ In addition, if the public participants win the original SLAPP suit, they can then bring abuse of process and malicious prosecution suits against the original plaintiffs.

VI. THE ENDANGERED SPECIES ACT (ESA): *TENNESSEE VALLEY AUTHORITY V. HILL*²²¹

The Tellico Dam was ninety-five percent complete on the Little Tennessee River in Tennessee when a small, endangered species, the Snail Darter, was discovered downstream of the

²¹⁶ *Id.* at 120. The Audubon case and the privilege of neutral reporting is the subject of an article from the St. John's Law Review Symposium, Celebrating the Centennial of the Second Circuit Court of Appeals. Floyd Abrams, *The First Amendment in the Second Circuit: Reflections on Edwards v. National Audubon Society, Inc., the Past and the Future*, 65 ST. JOHN'S L. REV. 731 (1991).

²¹⁷ 556 F.2d at 120–21.

²¹⁸ See, e.g., Note, *Counterclaim and Countersuit Harassment of Private Environmental Plaintiffs: The Problem, Its Implications, and Proposed Solutions*, 74 MICH. L. REV. 106 (1975); *ExxonMobil Pipeline Co. v. Coleman*, 512 S.W.3d 895 (Tex. 2017) (determining application of the Texas Citizens Participation Act).

²¹⁹ Penelope Canan & George W. Pring, *Studying Strategic Lawsuits Against Public Participation: Mixing Quantitative and Qualitative Approaches*, 22 L. & SOC'Y REV. 385 (1988); GEORGE W. PRING & PENELOPE CANAN, *SLAPPS: GETTING SUED FOR SPEAKING OUT* (1996).

²²⁰ See, e.g., CAL. CIV. PROC. CODE §§ 425.16–425.17 (West 2020).

²²¹ 437 U.S. 153 (1978).

dam.²²² The dam's completion had been held up by NEPA litigation with the injunction about to be lifted.²²³

The ESA, like many of the federal environmental statutes, contains a citizen suit provision,²²⁴ which allows private citizens to sue to enforce environmental statutes.²²⁵ Section 7 of the statute provides:

Each Federal agency shall, in consultation with and with the assistance of the Secretary, 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 critical²²⁶

The statute thereby protects not only the species, but also its critical habitat. Destroying the critical habitat of a species can decimate a species indirectly rather than directly. Section 9 extends the Act's protections to private parties, prohibiting any person from taking any endangered or threatened species.²²⁷

Chief Justice Burger²²⁸ wrote the 6-3 decision upholding the ESA and the appellate court decision granting a permanent injunction against the dam.²²⁹ He wrote the ESA is "the most comprehensive legislation for the preservation of endangered species ever enacted by any nation[,]"²³⁰ and "[t]he plain intent of

²²² See ZYGMUNT J.B. PLATER, *THE SNAIL DARTER AND THE DAM: HOW PORK-BARREL POLITICS ENDANGERED A LITTLE FISH AND KILLED A RIVER 1* (2013) (providing context and a comprehensive history of the Tellico Dam saga as the lead attorney for the plaintiffs).

²²³ See *Env't Def. Fund v. Tenn. Valley Auth.*, 371 F. Supp. 1004, 1015 (E.D. Tenn. 1973), *aff'd* 492 F.2d 466, 468 (6th Cir. 1974).

²²⁴ 16 U.S.C.A. § 1540(g)(1) (West 2020).

²²⁵ For a discussion of citizen suits, see generally Adam Babich, *Citizen Suits: The Teeth in Public Participation*, 25 ENV'T L. REP. NEWS & ANALYSIS 10141, 10141 (1995); Jeffrey G. Miller & Brooke S. Dorner, *The Constitutionality of Citizen Suit Provisions in Federal Environmental Statutes*, 27 J. ENV'T L. & LITIG. 401, 401 (2012).

²²⁶ 16 U.S.C.A. § 1536(a)(2) (West 2020); see also 16 U.S.C.A. § 1532(6) (West 2020) ("The term 'endangered species' means any species which is in danger of extinction throughout all or a significant portion of its range other than a species of the Class Insecta determined by the Secretary to constitute a pest whose protection under the provisions of this chapter would present an overwhelming and overriding risk to man.").

²²⁷ See 16 U.S.C.A. § 1538(a)(1)(B) (West 2020); see also 16 U.S.C.A. § 1532(19) (West 2020) ("The term 'take' means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.").

²²⁸ The story is that the Chief Justice was opposed to the statute. However, he changed positions to write the strong, majority opinion when he realized the Court was going to uphold the statute, hoping to draw a legislative backled *Species Act Lessons Over 30 Years, and the Legacy of the Snail Darter, a Small Fish in a Pork Barrel*, 34 ENV'T L. 289, 304 n.35 (2004); PLATER, *supra* note 222, at 267.

²²⁹ See *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 193–95 (1978).

²³⁰ *Id.* at 180.

Congress in enacting this statute was to halt and reverse the trend toward species extinction, whatever the cost.”²³¹

The Chief Justice recognized:

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 *insure* that actions *authorized, funded, or carried out* by them do not *jeopardize* the continued existence” of an endangered species or “*result* in the destruction or modification of habitat of such species”²³²

He continued by asserting that the “language admits of no exception[.]”²³³ and “that Congress intended endangered species to be afforded the highest of priorities.”²³⁴ Chief Justice Burger further recognized that Congress placed an “incalculable” value on endangered species.²³⁵

The Supreme Court in *Tennessee Valley Authority* turned a sleeper statute into a great source of environmental protection. The ESA lacks the usual statutory license, permit, and variance provisions with one limited exception.²³⁶ Injunctive relief is almost automatic under the statute when endangered species are threatened on public or private lands.²³⁷ The usual equitable requirement of balancing the equities, including a cost-benefit analysis, is inapplicable because “Congress viewed the value of endangered species as ‘incalculable.’”²³⁸

Congress responded to the decision by creating the seven-member ESA Committee, commonly nicknamed the “God Committee” or “God Squad.”²³⁹ A majority of five members is necessary to exempt an action from the ESA.²⁴⁰ The God Committee unanimously reaffirmed the

²³¹ *Id.* at 184.

²³² *Id.* at 173.

²³³ *Id.*

²³⁴ *Id.* at 174.

²³⁵ *Id.* at 187.

²³⁶ See 16 U.S.C.A. § 1539(a)(1)(B) (West 2020) (codifying Congress’ 1982 amendment to the Endangered Species Act to allow a permit for a “taking otherwise prohibited . . . if such taking is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity”).

²³⁷ See *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 313–14 (1982).

²³⁸ See 437 U.S. at 187–88.

²³⁹ The God Committee consists of the Secretaries of Agriculture, Army, and Interior, the Administrators of the Environmental Protection Agency and National Oceanic and Atmospheric Agency, the Chair of the Council of Economic Advisors, and an elected official from the affected state. See 16 U.S.C.A. § 1536(e)(3) (West 2020).

²⁴⁰ See 16 U.S.C.A. § 1536(h)(1) (West 2020). The conditions specified in the statute are: i) no reasonable alternative to the agency’s action; ii) the benefits of the proposal

decision in favor of the Snail Darter, thereby standing against completion of the dam.²⁴¹

The Tennessee delegation in Congress subsequently attached a rider to a budget bill. The rider required the completion and operation of the dam, which opened on November 29, 1979.²⁴² The Snail Darter survived elsewhere, but the completion of the Tellico Dam effectively resulted in the end of the era of big dams.²⁴³ The ESA received a broad mandate from the Supreme Court.²⁴⁴

VII. THE PUBLIC TRUST DOCTRINE

The public trust doctrine harkens back to the Justinian Code: “By the law of nature these things are common to mankind—the air, running water, the sea, and consequently the shores of the sea.”²⁴⁵ The Justinian Code was a compilation of existing Roman legal principles. The public trust section reflects a preexisting history.²⁴⁶ Both civil law and common law jurisdictions recognize the public trust doctrine.

The Supreme Court in *Illinois Central Railroad Co. v. Illinois*²⁴⁷ recognized the public trust doctrine in U.S. law.²⁴⁸ The public trust doctrine then mostly fell into the background, although California recognized it over the years. In 1869, the Illinois legislature granted 1,000 acres of submerged lands of the Chicago waterfront, namely the bed of Lake Michigan, to the

clearly outweigh the benefits of any alternative course of action consistent with the conservation of species or its critical habitat; iii) the action is of the public interest and is of regional or national significance; and iv) neither the federal agency nor the external applicant made irreversible commitments of resources. 16 U.S.C.A. § 1536(h)(1)(A) (West 2020).

²⁴¹ See PLATER, *supra* note 222, at 5.

²⁴² See *id.* at 341.

²⁴³ See Dan Tarlock, *Hydro Law and the Future of Hydroelectric Power Generation in the United States*, 65 VAND. L. REV. 1723, 1763 n.196 (2012) (referring to the completion of the Seven Oaks Dam on the Santa Ana River as the major exception to provide flood protection in Orange, Riverside, and San Bernardino Counties in California in response to the river’s history of severe flooding).

²⁴⁴ But see J.B. Ruhl, *The Endangered Species Act’s Fall from Grace in the Supreme Court*, 36 HARV. ENV’T L. REV. 487, 490 (2012) (positing that the Supreme Court, in subsequent opinions, retreated somewhat from the lofty levels of *TVA v. Hill* by placing restrictions on standing and imposing additional conditions on recovery).

²⁴⁵ J. INST. 2.1.1.

²⁴⁶ One major situation giving rise to the doctrine dealt with villa owners and their costal estates. The villa owners sought to extend their properties into the seas with large fishponds, preventing local fishermen-citizens from fishing. See Bruce W. Frier, *The Roman Origins of the Public Trust Doctrine*, 32 J. ROMAN ARCHAEOLOGY 641, 643–44 (2019).

²⁴⁷ 146 U.S. 387 (1892).

²⁴⁸ See *id.* at 435–37.

Illinois Central Railroad.²⁴⁹ It revoked the grant just four years later.²⁵⁰ The Supreme Court held the state holds the lands in trust for the people for the purposes of the public trust.²⁵¹ Small grants can be made, but not an “abdication of the general control of the state over lands under the navigable waters.”²⁵²

Professor Joseph Sax published in 1970 his seminal article *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*,²⁵³ positing the public trust doctrine as a critical principle of environmental law. 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.”²⁵⁴

He looked at the suspicious path of the Illinois legislation that transferred the waterfront to the railroad, as well as similar transactions elsewhere in America,²⁵⁵ 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.”²⁵⁶

The traditional protections of the public trust doctrine are fishing, commerce, and navigation measured from the medium low water mark and the median high water mark (the wet sand area). The California Supreme Court extended the public trust doctrine to include changing public needs, such as the preservation of lands in their natural state, open space, and environments for food and habitat for birds and marine life.²⁵⁷

²⁴⁹ See *id.* at 448–54.

²⁵⁰ See *id.* at 449.

²⁵¹ See *id.* at 463–64.

²⁵² *Id.* at 452–53.

²⁵³ Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970). It is one of the classic environmental law articles.

²⁵⁴ David Aladjem, *The Public Trust Doctrine: New Frontiers for Sustainable Water Resources Management*, NAT'L RES. & ENV'T, Summer 2010, at 17 (citing to Sax, *supra* note 253).

²⁵⁵ See Sax, *supra* note 253, at 547. A different perspective on the Illinois Central transaction is in Joseph D. Kearney & Thomas W. Merrill, *The Origins of the American Public Trust Doctrine: What Really Happened in Illinois Central*, 71 U. CHI. L. REV. 799 (2004).

²⁵⁶ Sax, *supra* note 253, at 490.

²⁵⁷ See *Marks v. Whitney*, 491 P.2d 374, 380 (Cal. 1971); see also *Wilbour v. Gallagher*, 462 P.2d 232, 239 (Wash. 1969) (indicating public trust includes rights of fishing, boating, swimming, water skiing, and other related recreational uses).

The West was settled for resource exploitation, be it mining for gold, silver, and lead, farming, ranching, forestry, or fishing. Water development in the West was essential since much of the West, especially outside the coastal areas, is dry. The need was to utilize the West's scarce water resources. Water Law is a matter of state law. The western states, led by California²⁵⁸ and Colorado,²⁵⁹ adopted the prior appropriation system of water rights rather than the riparian system of England and the East.

California, a state of constant population growth since the days of the 49ers, was as culpable as elsewhere of destroying wetlands. For example, the San Francisco Bay shrunk by a third, in the century leading up to the creation of the San Francisco Bay Conservation and Development Commission.²⁶⁰ Corruption was widespread in the dispersal of public lands.²⁶¹

Americans leveled hills, drained, filled and channeled wetlands, bridged, tunneled, dammed, diverted rivers, clear cut the forests, mined the nation's lands in the first 260 years of the country's existence. California was no exception beginning with the Gold Miners of 1849, who used hydraulic mining to level hills in the search for gold.

The growing pueblo of Los Angeles developed its existing water supply, and then under the leadership of William Mulholland diverted the Owens River to the San Fernando Valley in 1913. Owens Valley was a rich agricultural area. The city surreptitiously bought up the water rights to the valley. In the debates leading up to the diversion, Mulholland said: "If you don't get the water, you won't need it."²⁶² He said when the gates were opened: "There it is, take it."²⁶³

The Owens Valley diversion epitomized the West's efforts to bring water to the people rather than the people to the water by

²⁵⁸ See *Irwin v. Phillips*, 5 Cal. 140, 11–15 (1855).

²⁵⁹ See *Yunker v. Nichols*, 1 Colo. 551, 553–54 (1872); *Coffin v. Left Hand Ditch Co.*, 6 Colo. 443, 446 (1882).

²⁶⁰ See S.F. BAY CONSERVATION & DEV. COMM'N, 2018 ANN. REP. 5 (2019), <http://bcdc.ca.gov/reports/2018AnnualReport.pdf> [<http://perma.cc/AU2J-43F2>]. About 35 miles of Bay habitat have been restored since creation of the BCD in 1965. *Id.* Both Oakland and San Francisco International Airports are on filled-in land of the Bay.

²⁶¹ Professor Sax postulates that much of the public trust litigation in the United States developed as a reaction to legislative largesse with the handling of the public domain. See Sax, *supra* note 253, at 490–91 n.62.

²⁶² DAVID HALBERSTAM, *THE POWERS THAT BE* 115 (2000).

²⁶³ Amy Pyle, *'There It Is. Take It ...' and for 75 Years, the City Has*, L.A. TIMES (Nov. 18, 1988), <http://www.latimes.com/archives/la-xpm-1988-11-18-me-614-story.html> [<http://perma.cc/2LY9-ECHW>].

reshaping the natural environment.²⁶⁴ Los Angeles took it, grew, and outgrew the Owens Valley water. It went another 90 miles up the Sierra Nevada Mountains to Mono Lake, diverting four of the five tributaries of Mono Lake into the Los Angeles Aqueduct.²⁶⁵

A classic example of the Mid-Nineteenth Century environmental disregard was the Los Angeles Department of Water Policy's proposed diversion of waters from Mono Lake to its existing Owens Valley diversion.²⁶⁶ California's Water Board decision said:

[I]t is indeed unfortunate that the City's proposed development will result in decreasing the aesthetic advantages of Mono Basin but there is apparently nothing that this office can do to prevent it False This office . . . has no alternative but to dismiss all protests based upon the possible lowering of the water level in Mono Lake and the effect that the diversion of water from these streams may have upon the aesthetic and recreational use of the Basin.²⁶⁷

The environmental consequences on the fertile Owens Valley were devastating; the Valley was often turned into a windblown, dusty desert. The environmental effects on Mono Lake were equally devastating. The Lake had shrunk by a third from its-pre-diversion level of 85 square miles to 60.3 square miles in 1979 while its surface level dropped 43 feet.²⁶⁸ The Lake has a high salt concentration which supports the brine shrimp population which feed nesting and migratory birds.²⁶⁹ The islands in the Lake provided the breeding grounds for 95% of the California Gull population.²⁷⁰ The lake's level continuously dropped, exposing the gull population on the disappearing islands to coyotes.²⁷¹

²⁶⁴ Another example is San Francisco's diversion of water from the Tuolumne River in the Sierra Nevada Mountains to supply water to San Francisco and other Bay Area communities.

²⁶⁵ The history of Los Angeles' struggles for water to serve a burgeoning population are well-documented. See LES STANDIFORD, *WATER TO THE ANGELS: WILLIAM MULHOLLAND, HIS MONUMENTAL AQUEDUCT, AND THE RISE OF LOS ANGELES* (1st ed. 2015); WILLIAM DEVERELL & TOM SITTON, *WATER AND LOS ANGELES: A TALE OF THREE RIVERS, 1900–1941* (2016); CATHERINE MULHOLLAND, *WILLIAM MULHOLLAND AND THE RISE OF LOS ANGELES* (2000). For a broader analysis of the dry West's struggles for water, see NORRIS HUNDLEY JR., *WATER AND THE WEST* (1975) and the classic MARC REISNER, *CADILLAC DESERT: THE AMERICAN WEST AND ITS DISAPPEARING WATER* (1993).

²⁶⁶ Professor Ryan has written extensively on the Mono Lake litigation. See Erin Ryan, *The Public Trust Doctrine, Private Water Allocation, and Mono Lake: The Historic Saga of "National Audubon Society v. Superior Court,"* 45 ENV'T L. 561 (2015).

²⁶⁷ *Nat'l Audubon Soc'y v. Super. Ct. of Alpine Cty.*, 658 P.2d 709, 714 (Cal. 1983) (citation omitted).

²⁶⁸ *See id.*

²⁶⁹ *Id.* at 715.

²⁷⁰ *Id.* at 716.

²⁷¹ *See id.*

The conflict between diversion and the public trust doctrine came to a head in the California Supreme Court decision in *National Audubon Society v. Superior Court*²⁷² echoing Professor Sax's thesis. 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.²⁷³

The California Supreme held the public trust doctrine protects navigable waters from harm caused by diversion of non-navigable tributaries.²⁷⁴ No vested right exists to the waters protected by the public trust.²⁷⁵

The result is that the state "retains continuing supervisory control over its navigable waters and the lands beneath those waters."²⁷⁶ The state can thereby reconsider prior decisions. The holding therefore is that some body of the state has to reconsider the allocation of the Mono Lake waters.²⁷⁷

The Mono Lake case changed both 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, and permit holders throughout the West. The California Water Resources Control Board in 1993 ordered minimum stream flows restored and imposed a minimum water level for Mono Lake.²⁷⁸ Los Angeles and the environmentalists reached a full agreement on the diversions in 2013.²⁷⁹

²⁷² See *id.* at 712.

²⁷³ *Id.* at 724. For a look back at the Mono Lake case, see Craig Anthony (Tony) Arnold, *Working Out an Environmental Ethic: Anniversary Lessons from Mono Lake*, 4 WYO. L. REV. 1 (2004).

²⁷⁴ See *Nat'l Audubon Soc'y*, 658 P.2d at 721.

²⁷⁵ See *id.* at 729.

²⁷⁶ *Id.* at 727.

²⁷⁷ See *id.* at 728–29.

²⁷⁸ See Louis Sahagun, *L.A., Conservationists Reach Agreement to Repair Mono Lake Damage*, L.A. TIMES (Aug. 23, 2013, 12:00 AM), <http://www.latimes.com/local/la-xpm-2013-aug-23-la-me-mono-20130824-story.html#:~:text=Ending%20decades%20of%20bitter%20disputes,World%20War%20II%20Dera%20aqueduct> [<http://perma.cc/EMQ9-3TDS>].

²⁷⁹ *Id.*

The Audubon case effectively opened and reopened water law in the West to instream flow protecting environmental values, habitat protection and fish flows.

The Justinian Code and the public trust doctrine became the basis of *Juliana v. United States*,²⁸⁰ which could result in revolutionary changes in United States environmental Law. Nineteen minors aged 8 to 19 filed suit in 2015 against the United States seeking injunctive relief against the federal government's contributions to global warming.²⁸¹ They advanced three different theories for relief: 1) a constitutional right exists to a clean, healthy environment; 2) just as the Justinian Code led to the public trust doctrine over water, so too should it create an atmospheric trust over the air;²⁸² and 3) the public trust doctrine applies to the federal government as well as state governments.²⁸³ The District Court granted relief on all three theories,²⁸⁴ but the Ninth Circuit Court of Appeals denied standing to the plaintiffs, thereby dismissing the case.²⁸⁵

VIII. MINING

A. Hydraulic Mining

Gold was discovered on January 24, 1848 at Sutter's Mill in California. A gold rush ensued with the 49ers coming from around the world. The early miners panned for gold—a laborious, inefficient method of gold mining.²⁸⁶

The miners soon discovered high pressure hoses could rip the soil off hills, being funneled into sluices where the gold would drop to the bottom. The environmental consequences of hydraulic mining were catastrophic. Trees were stripped off the hills to

²⁸⁰ 947 F.3d 1159 (9th Cir. 2020).

²⁸¹ See *Juliana v. United States*, 217 F. Supp. 3d 1224, 1233 (D. Or. 2016), *rev'd*, 947 F.3d 1159 (9th Cir. 2020).

²⁸² For a discussion of the Justinian Code's background of the Atmospheric Trust argument, see Erin Ryan, *From Mono Lake to the Atmospheric Trust: Navigating the Public and Private Interests in Public Trust Resource Commons*, 10 GEO. WASH. J. ENERGY & ENV'T L. 39 (2019); J.B. Ruhl & Thomas A.J. McGinn, *The Roman Public Trust Doctrine: What Was It, and Does It Support an Atmospheric Trust?*, 47 ECOLOGY L. Q. 117 (2020).

²⁸³ See *Juliana*, 217 F. Supp. at 1233.

²⁸⁴ *Id.* at 1250, 1253, 1259.

²⁸⁵ See *Juliana v. United States*, 947 F.3d 1159, 1174–75 (2020).

²⁸⁶ For a history of the gold mining techniques in California, see Snowy Range Reflections Staff, *Mining Techniques of the Sierra Nevada and Gold Country*, 2 J. SIERRA NEV. HIST. & BIOGRAPHY (2009), <https://www.sierracollege.edu/ejournals/jsnhb/v2n1/miningtechniques.html> [<http://perma.cc/55TA-WDD4>].

facilitate mining. Hills were leveled, rivers were narrowed, navigation was impaired, and farmland was buried. Flooding intensified as streams were blocked or clogged. Erosion was intensified. Fish populations declined.

Aggrieved farmers sued the largest hydraulic mining company.²⁸⁷ The federal judge issued an injunction after two years of considering the case, holding that the process constitutes a public and private nuisance.²⁸⁸ This early environmental victory, the first in the United States, is little known today.

B. Strip Mining (Surface Mining)²⁸⁹

Coal fueled the industrial revolution and continues to generate electricity and heat through much of the world despite the global commitment to reducing carbon emissions. Underground mining was historically the source of coal. The fuel is dirty and the consequences on Appalachia environmentally disastrous.²⁹⁰ Coal production started shifting to surface mining, also known as strip mining, about a half century ago.

Unreclaimed strip mining is an environmental disaster, leaving a moon-like landscape.²⁹¹ John Prine, a folk singer, wrote the song *Paradise* about a coal company's strip mine in Paradise, Kentucky.²⁹² In response, President Ford twice vetoed a surface mining reclamation act.²⁹³ President Carter finally signed the Surface Mining Control and Reclamation Act (SMCRA) in 1977.²⁹⁴ Severe restrictions are contained in the statute, including protection of alluvial valleys, permits, reclamation, and the power of the Secretary of the Interior to designate areas as

²⁸⁷ See *The Debris Case*. *Woodruff v. N. Bloomfield Gravel Mining Co.*, 16 F. 25, 26 (D. Cal. 1883).

²⁸⁸ See *id.* at 27–28.

²⁸⁹ Surface mining can be referred to as open cut mining or strip mining. I prefer to use “strip mining” because the practice strips the surface off the land.

²⁹⁰ See HENRY CAUDILL, *NIGHT COMES TO THE CUMBERLANDS* (1962).

²⁹¹ Thousands of miles of Appalachian streams are contaminated with acid waters. Water supplies are imperiled. Recreation and industrial uses are curtailed while vegetation and fish life imperiled. See Denis Binder, *A Novel Approach to Reasonable Regulation of Strip Mining*, 34 U. PITT. L. REV. 339, 343–45 (1973). For a discussion of the environmental impacts of strip mining in the western states, see Denis Binder, *Strip Mining, The West and the Nation*, 12 LAND & WATER L. REV. 1, 20–21 (1977).

²⁹² JOHN PRINE, *Paradise*, on JOHN PRINE (Atlantic Records 1971).

²⁹³ S. 425 received a pocket veto by President Ford. See 120 CONG. REC. 41996–97 (1974). H.R. 25 was vetoed the next year. See *Veto of the Surface Mining Control and Reclamation Act of 1975*, *Message from the President of the United States*, 94 CONG. H. NO. 94–160 (May 20, 1975).

²⁹⁴ Surface Mining and Control Reclamation Act of 1977, Pub. L. No. 95–87, 91 Stat. 445 (1977) (codified at 30 U.S.C. §§ 1201–1328).

unsuitable for surface mining, if the mining operation could adversely affect fragile or historical lands in a manner that could cause substantial damage to important historic, cultural, scientific, and aesthetic values to national systems.²⁹⁵ The land is to be restored to its “approximate original contour.”²⁹⁶

A coal miners association claimed the statute was unconstitutional for violating the tenth Amendment. The Supreme Court upheld the statute in *Hodel v. Virginia Surface Mining & Reclamation Association, Inc.*,²⁹⁷ under the Tenth Amendment as an example of cooperative federalism. The federal government defers primary enforcement to states if the states agree and meet the federal requirements.²⁹⁸ The result was a comprehensive state and national regulation of strip mining, substantially reducing the environmental degradation it caused. The statute covers mining, operations, cleanup and restoration.²⁹⁹ The Court also reiterated its past decisions holding that the Commerce Clause can displace states’ exercises of their police powers.³⁰⁰

SMCRA is an example of the statutory model of cooperative federalism, which is characteristic of several environmental statutes. The federal government is prepared to unilaterally regulate an environmental problem, but shares regulation and enforcement with states as long as they meet conditions prescribed by Congress. The states can do the primary regulation and enforcement, but the federal agency has oversight responsibilities.

The Court recognized a narrow test for judging the constitutionality of a federal regulatory program affecting interstate commerce. The test is simple: does a rational basis exist for the Congressional action?³⁰¹ The Commerce Clause is a grant of plenary power to Congress.³⁰²

The regulatory program had several abuses in practice, including outright violations.³⁰³ A statutory exception subject to substantial violation was the two-acre exception intended to

²⁹⁵ See 30 U.S.C.A. § 1265 (Westlaw through P.L. 116–252).

²⁹⁶ *Id.* at § 1265(b)(3).

²⁹⁷ 452 U.S. 264, 289 (1981).

²⁹⁸ See 30 U.S.C.A § 1253 (Westlaw through P.L. 116–252).

²⁹⁹ *Id.*

³⁰⁰ See *Hodel*, 452 U.S. at 292–93.

³⁰¹ *Id.* at 276.

³⁰² *Id.*

³⁰³ See Lily Whiteman, *Recent Efforts to Stop Abuse of SMCRA: Have They Gone Far Enough*, 20 ENV'T L. 167, 169–70 (1990).

protect small “mom and pop” operations. One ploy was the “string of pearls” scheme, whereby a series of parallel pits were mined on a seam.³⁰⁴ Congress abolished the two acre exception in 1987.³⁰⁵

A more recent problem is mountain top mining whereby coal miners chop off the top of mountains to mine the coal.³⁰⁶ Augers used to drill into hills; now they are demolished from the top.³⁰⁷ Mountain top mining devastates forests, fills stream with debris, and kills off native species.³⁰⁸

Only decades later did the country move away from fossil fuels, especially coal, for electricity production; this resulted in a substantial reduction in both surface and underground coal mining.

IX. INJUNCTIVE RELIEF

Equity developed in England when the strict common law rules could not provide relief to deserving plaintiffs. Injunctive relief is the primary, but not exclusive equitable remedy. The normal remedy under the Administrative Procedures Act is judicial review and reversal, but injunctions are an alternative remedy for ongoing operations.

Equity, which started out as a flexible remedy, has developed its own rules. The normal requirements for injunctive relief are 1) An inadequate remedy at law; 2) Irreparable injury to plaintiff if the injunction is denied; 3) Balancing of the equities; and 4) the public interest. Injunctive relief is discretionary.

The *Restatement (Second) of Torts* section 936 lists six factors to be considered in balancing the equities:

Sec. 936. Factors in Determining Appropriateness of Injunction.

1) The appropriateness of the remedy of injunction against a tort depends upon a comparative appraisal of all the factors in the case, including the following primary factors:

- a) the nature of the interest to be protected,
- b) the relative adequacy to the plaintiff of injunction and of other

³⁰⁴ *Id.* at 171–72.

³⁰⁵ See Act to Amend the Surface Mining Control and Reclamation Act of 1977, Pub. L. No. 100–34, § 201, 101 Stat. 300 (1987).

³⁰⁶ See e.g., John McQuaid, *Mining the Mountains*, SMITHSONIAN MAG. (Jan. 2009), <https://www.smithsonianmag.com/science-nature/mining-the-mountains-130454620/> [<http://perma.cc/9NVF-RD9W>].

³⁰⁷ *Id.*

³⁰⁸ *Id.*

remedies,

- c) any unreasonable delay by the plaintiff in bringing suit,
- d) any related misconduct on the part of plaintiff,
- e) the relative hardship likely to result to defendant if an injunction is granted and to the plaintiff if it is denied,
- f) the interests of third persons and of the public, and
- g) the practicability of framing and enforcing the order or judgment.³⁰⁹

The question arose regarding whether environmental laws preempted traditional equitable balancing, with the argument being that the strong public policy of environmental protection should control the balancing. For example, the Supreme Court in *TVA v. Hill* did not allow a balancing of the equities in enforcing the Endangered species Act.³¹⁰

For example, the Navy used Vieques Island off Puerto Rico for weapons training for decades.³¹¹ A lawsuit was filed alleging the Navy's ongoing shelling operations violated the Clean Water Act for discharging munitions into navigable waters without a permit.³¹² The district court found a violation of the CWA and required the Navy to seek a permit, but denied issuance on an injunctive.³¹³ The court of appeals reversed, reasoning the Clean Water Act removed equitable discretion,³¹⁴ thus requiring immediate injunctive relief for the violations.³¹⁵

The Supreme Court reversed the appellate tribunal,³¹⁶ holding that equitable discretion remained under the Clean Water Act. The traditional balancing of the equities remains, but with a specific caveat from the Court—courts of equity, in exercising their discretion, “should pay particular regard for the public consequences in employing the extraordinary remedy of injunction.”³¹⁷ The Court held that the basis for equitable relief is “irreparable injury and the inadequacy of legal remedies.”³¹⁸

³⁰⁹ RESTATEMENT (SECOND) OF TORTS § 936 (AM. L. INST. 1977). The injunction sections of the Restatement (3rd) of Torts have not been finalized at the time this article was written.

³¹⁰ *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 187–88 (1978).

³¹¹ *See Romero-Barcelo v. Brown*, 478 F. Supp. 646, 655 (D. P.R. 1979).

³¹² *See id.* at 663.

³¹³ *See id.* at 664, 708.

³¹⁴ *See Romero-Barcelo v. Brown*, 643 F. 2d 835, 861–62 (1st Cir. 1981).

³¹⁵ *See id.*

³¹⁶ *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 307 (1982).

³¹⁷ *Id.* at 312.

³¹⁸ *Id.*

The Court distinguished *TVA v. Hill* by noting the Endangered Species Act left no discretion.³¹⁹ Congress made it “abundantly clear that the balance has been struck in favor of affording endangered species the highest of priorities.”³²⁰

A quarter century later, the Court reaffirmed *Romer-Barcelo* in another Navy training program, this time sonar-training, emphasizing that any harm to the plaintiffs is offset by the public interest. The Court further recognized the public interest of national security. The Court saw “no basis for jeopardizing national security, as the present injunction does.”³²¹

The effect of *Weinberger* and its progeny is a reaffirmation of the basic equity premise that equitable relief is discretionary. The public interest remains a major factor in balancing the equities.

X. THE CONSTITUTIONAL DIMENSIONS

A. Commerce Clause: *City of Philadelphia v. New Jersey*³²²

The thirteen American colonies entered into the Articles of Confederation upon achieving independence from England in the Treaty of Paris. The Articles failed for several reasons, one of which was restrictions existed on commerce between the states. The Constitution replaced the Articles on March 4, 1789.

One of the major changes was to place Congress in control of commerce between the states, displacing the individual states. The Commerce Clause thereby became a major source of power for the federal government, as well as a restraint on the states (the “negative commerce clause”).

The federal government is a government of enumerated powers, not plenary powers. The Commerce Clause is the primary source of regulatory power.³²³ The Clause empowers Congress “to regulate commerce with foreign Nations, and among the several States, and with Indian Tribes.”³²⁴ The regulation of commerce pursuant to the Commerce Clause is limited to a sufficient nexus between the proscribed act and interstate

³¹⁹ *Id.* at 331.

³²⁰ *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 194 (1978).

³²¹ *Winter v. Nat'l Res. Def. Council, Inc.*, 555 U.S. 7, 32–33 (2008).

³²² 437 U.S. 617 (1978).

³²³ *Id.*

³²⁴ U.S. CONST. art. I, § 8.

commerce.³²⁵ Other sources of power are the property, spending, and taxation clauses.³²⁶

The Commerce Clause significantly serves not only as a grant of power to Congress, but also as a restriction on state powers.³²⁷ A primary goal of the Commerce Clause is to break down barriers to the free flow of commerce.³²⁸ State and local governments thereby lack the power to restrict the free flow of commerce between the states.³²⁹

The natural inclination of states and local governments is to obtain the benefits of commerce but place the burdens on others. *Philadelphia v. New Jersey*³³⁰ is a prime example of this reality. New Jersey was concerned about exhausting the capacity of its landfills.³³¹ It thereby banned the importation of out-of-state solid or liquid waste (trash) except when the waste had economic value.³³² New Jersey's statute was an act of economic protectionism.³³³

The Supreme Court threw out the New Jersey act as a restriction on the free flow of commerce.³³⁴ All items in interstate commerce, including trash, are entitled to protection under the Commerce Clause.³³⁵ The key is discrimination based on origin, even for trash. The purpose of protecting the state "may not be accomplished by discriminating against articles of commerce coming from outside the [s]tate unless there is some reason, apart from their origin, to treat them differently."³³⁶ The critical passage in the case is:

³²⁵ See, e.g., *United States v. Lopez*, 514 U.S. 549, 561 (1995); *United States v. Morrison*, 529 U.S. 598, 613 (2000).

³²⁶ A case that combines issues of the Commerce, Property, Spending, and Taxation Clauses is *New York v. United States*, 505 U.S. 144 (1992).

³²⁷ See 437 U.S. at 622–23.

³²⁸ See *id.* at 623.

³²⁹ *Id.*

³³⁰ *Id.* at 628.

³³¹ *Id.* at 625.

³³² New Jersey allowed the importation of garbage to be fed to swine, any separated waste material intended for a recycling or reclamation facility, municipal solid waste to be processed into secondary materials, and pesticides, hazardous waste, chemical waste, bulk liquid, and bulk semi-liquid to be treated, processed or recovered. *Id.* at 618–19, 619 n.2 (citing N.J. STAT. ANN. § 13-11-10 (West Supp. 1978)).

³³³ *Id.* at 628–29.

³³⁴ *Id.* at 629.

³³⁵ *Id.* at 622.

³³⁶ *Id.* at 626–27. Apparently New York and New Jersey trash are basically identical in content. *Id.* at 629. New Jersey was allowing New Jersey trash to be deposited in the state's landfill, but not New York trash. *Id.* New Jersey was thus discriminating based on the state of origin. *Id.*

[W]here simple economic protectionism is effected by state legislation, a virtually *per se* rule of invalidity has been erected. The clearest example of such legislation is a law that overtly blocks the flow of interstate commerce at a State's borders. But where other legislative objectives are credibly advanced and there is no patent discrimination against interstate trade, the Court has adopted a much more flexible approach, the general contours of which were outlined in *Pike v. Bruce Church, Inc . . .*.³³⁷

The Supreme Court further held a state had no right to give its residents a preferred right of access over access to natural resources within the state.³³⁸

Philadelphia v. New Jersey is the basis for striking down a number of restrictions on commerce, including reciprocity requirements,³³⁹ bans, taxation, preference with in-state products, such as electricity, anti-exportation clauses,³⁴⁰ bans on products transported through the state, and even voter approval requirements.³⁴¹

B. Spending Clause³⁴²

An alternative enumerated source of power for Congressional regulation is the Spending Clause: "The Congress shall have Power . . . to pay the Debts and provide for the common Defence and general Welfare of the United States . . ." ³⁴³ Congress can attach conditions to the receipt of federal funds.³⁴⁴ Congress thereby uses money as a means of inducing states to take actions they might otherwise oppose. For example, the Supreme Court held in *South Dakota v. Dole*³⁴⁵ Congress could condition the receipt of federal highway funds

³³⁷ *Id.* at 624 (citing *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970), which laid out these markers: "Where the statute regulates even-handedly to effectuate a legitimate local public interest, and its effects on interstate commerce are only incidental, it will be upheld unless the burden imposed on such commerce is clearly excessive in relation to the putative local benefits. If a legitimate local purpose is found, then the question becomes one of degree. And the extent of the burden that will be tolerated will of course depend on the nature of the local interest involved, and on whether it could be promoted as well with a lesser impact on interstate activities.")

³³⁸ *Id.* at 627.

³³⁹ See *Hardage v. Atkins*, 619 F.2d 871, 872–73 (10th Cir. 1980).

³⁴⁰ See *Sporhase v. Nebraska ex rel. Douglas*, 458 U.S. 941, 953, 960 (1982).

³⁴¹ See *Stablex Corp. v. Town of Hooksett*, 456 A.2d 94, 101 (N.H. 1982).

³⁴² A symposium on the Spending Clause can be found at *Spending Clause Symposium*, 4 CHAP. L. REV. 1 (2001), with articles by Professors Richard A. Epstein, John C. Eastman, Erwin Chemerinsky, Earl M. Maltz, Bradley A. Smith, Denis Binder, Celestine Richards McConville, and Lynn A. Baker.

³⁴³ U.S. CONST. art. I, § 8, cl. 1.

³⁴⁴ See *South Dakota v. Dole*, 483 U.S. 203, 211–12 (1987).

³⁴⁵ *Id.*

upon states raising the minimum drinking age to 21.³⁴⁶

Certain limitations apply though to government's power under the Spending Clause:

- 1) Spending must be in pursuit of the general welfare;
- 2) The intent to attach conditions must be articulated and unambiguous;
- 3) The conditions must be reasonably related to the articulated grant; and
- 4) The conditions cannot be barred by other Constitutional provisions.³⁴⁷

The Ninth Circuit opinion in *Nevada v. Skinner*³⁴⁸ provides an example of the Spending Clause in action. Gas was very inexpensive through the 1960's. Detroit's response was to build large, heavy gas guzzling vehicles. Two Arab oil embargoes in the 1970's shot up the price of gas and focused attention on energy conservation.³⁴⁹

A substantial way to conserve gas is to drive slower. Congress attached a maximum speed limit of 55 miles per hour (MPH) (the double nickel) to the receipt of federal highway funds.³⁵⁰ The 55 MPH was unpopular in the vast open space of the West. Nevada sued, claiming the potential loss of 95% of federal highway funds was so coercive as to deprive it of any choice in setting its speed limits.³⁵¹ The argument is that the state had no practical alternative but to comply because of the potential loss of 95% of its highway funding.³⁵² Nevada was looking to the words of the 1937 case of *Steward Machine Co. v. Davis*:³⁵³ "Our decisions have recognized that in some circumstances the financial inducement offered by Congress

³⁴⁶ The federal government provides 95% of the funding for interstate and primary road construction. *See id.*

³⁴⁷ *Nevada v. Skinner*, 884 F.2d 445, 447 (9th Cir. 1989), *cert. denied*, 493 U.S. 1070 (1990). The Supreme Court subsequently reaffirmed that a condition attached to the receipt of federal funds must bear "some relationship" to the funding's purpose. *New York v. United States*, 505 U.S. 144, 167 (1992).

³⁴⁸ 884 F.2d 445. Nevada played fast and loose with standing and the federal funding. The Nevada statute raised the speed limit to 70 MPH, but included a self-executing provision whereby the state's speed limit would be lowered to the national speed limit if federal officials threatened to cut off funding. *Id.* at 446.

³⁴⁹ *Id.* at 451.

³⁵⁰ *See id.* Congress during the Reagan Administration raised the national speed limit to 65 MPH.

³⁵¹ *See id.* Montana and Nevada lacked speed limits on sparsely populated rural areas prior to Congress' adoption of the 55 MPH national speed limit.

³⁵² *Id.* at 448.

³⁵³ 301 U.S. 548 (1937).

might be so coercive as to pass the point at which ‘pressure turns into compulsion.’”³⁵⁴

The appellate court held the difficulty of assessing a state’s financial capabilities made the coercion theory “highly suspect as a method for resolving disputes between federal and state governments.”³⁵⁵ Congress could have constitutionally imposed the national speed limit pursuant to the Commerce Clause. Hence it could not constitute unconstitutional coercion under the Spending Clause.³⁵⁶

C. Property Clause: *Kleppe v. New Mexico*³⁵⁷

The federal government owns 28% of the nation’s land,³⁵⁸ especially concentrated in the western states.³⁵⁹ The issue is if the federal government is a landowner subject to state or local regulation or if the federal government possesses independent sovereignty over its lands. 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”³⁶⁰

Wild horses and burros roam the West. Ranchers abhor them because they compete with cattle for fodder. New Mexico enacted a statute allowing the seizure of wild horses and burros, as was the history in the West. Congress enacted the Wild Free-Roaming Horses and Burros Act, which protected the animals both on federal lands and also if they roam onto private lands.³⁶¹

Burros wandered onto a rancher’s federal grazing lands.³⁶² He notified the New Mexico Livestock Board, which then rounded up and auctioned off nineteen burros.³⁶³ New Mexico argued the federal government only possessed power to control the animals if they were moving in interstate commerce or

³⁵⁴ *Skinner*, 884 F.2d 445, 447 (citing to *Steward Machine*, 301 U.S. at 590).

³⁵⁵ *Id.* at 448. The legal irony is that the mandatory maximum 55 MPH could easily have been upheld under the Commerce Clause.

³⁵⁶ *Id.* at 449.

³⁵⁷ 426 U.S. 529 (1976).

³⁵⁸ CONG. RSCH. SERV., R42346, FEDERAL LAND OWNERSHIP: OVERVIEW AND DATA 1 (2020).

³⁵⁹ 45.9% of the land in the contiguous eleven western states is owned by the federal government while 60.9% of Alaska’s land is federally owned. *Id.* at 19.

³⁶⁰ U.S. CONST. art. IV., § 3, cl. 2.

³⁶¹ Wild Free-Roaming Horses and Burros Act of 1971, Pub. L. No. 92-195, 85 Stat. 649 (1971) (codified at 16 U.S.C. §§ 1331–40). For a critique of the statute, see George Santini, Comment, *Good Intentions Gone “Estray”—The Wild, Free-Roaming Horse and Burro Act*, 16 LAND & WATER L. REV. 525 (1981).

³⁶² *Kleppe v. New Mexico*, 426 U.S. 529, 533 (1976).

³⁶³ *Id.* at 533–34.

damaging the federal lands.³⁶⁴ Otherwise, the federal government would have to obtain the state's consent.³⁶⁵

The Supreme Court in *Kleppe v. New Mexico*³⁶⁶ held Congress acts as both as a proprietor and as a legislature pursuant to the Property Clause.³⁶⁷ Congress has "complete power" over public property "entrusted to it."³⁶⁸ Significantly, state and local governments are precluded from regulating the federal lands absent Congressional consent.³⁶⁹

The effect of *Kleppe* is that Congress can determine the development or preservation of 28% of the nation's land. The federal government is an owner, operator, proprietor, lessor, licensor, and regulator. The expansive interpretation of the Property Clause allows the federal government not only to regulate things on the federal domain,³⁷⁰ but also activities passing through the federal domain.³⁷¹

The Court had previously held Congress has absolute power under the Property Clause for "particular public property entrusted to it."³⁷² The Supreme Court in *Kleppe* held the absolute power Congress has over public lands includes the power to regulate and protect the land's wildlife.³⁷³

The significance of *Kleppe* is that much of the (rural) west have different views of the public lands than the federal government. They view the federal government as an absentee landlord out of touch with the needs of the people. They want to develop, drill, mine, log, graze, consume the water, otherwise utilize the land, and tax the federal lands.³⁷⁴ The use of the nation's forests is an ongoing controversy. Should they be seen as a resource for logging or for recreation? A famous letter from Bernard DeVoto explains the dichotomy:

³⁶⁴ *Id.* The federal government arguably then only had the powers to make incidental rules regarding the use of federal property and to protect federal property. *Id.* at 536.

³⁶⁵ *Id.* at 541.

³⁶⁶ 426 U.S. 529 (1976).

³⁶⁷ *Id.* at 540.

³⁶⁸ *Id.*

³⁶⁹ *See id.*

³⁷⁰ Motor boats on rivers, snowmobiles in the national parks, or ATVs and motorcycles in the desert.

³⁷¹ *See* Nat'l Ass'n of Prop. Owners v. United States, 499 F. Supp. 1223 (D. Minn. 1980), *aff'd*, State of Minnesota v. Block, 660 F.2d 1240 (8th Cir. 1981) (including motor boats and snowmobiles in Boundary Waters Canoe Area Wilderness).

³⁷² United States v. City and County of San Francisco, 310 U.S. 16, 30 (1940).

³⁷³ *Kleppe*, 426 U.S. at 541.

³⁷⁴ *See, e.g.*, United States v. Nye County Nevada, 938 F.2d 1040, 1041 (9th Cir. 1991).

You are certainly right when you say that “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.³⁷⁵

This viewpoint periodically expressed itself in movements such as the Sagebrush Rebellion³⁷⁶ or the Catron County Supremacy Movement.³⁷⁷ These attempts to assert local control ran afoul of the Property Clause and *Kleppe v. New Mexico*.

Activities the federal government has regulated, restricted, and sometimes banned on federal lands include fishing,³⁷⁸ ATV's, motor boats,³⁷⁹ canoes,³⁸⁰ dog roaming, cattle grazing,³⁸¹ prairie dogs on federal lands,³⁸² beach bonfires,³⁸³ houseboats,³⁸⁴ snowmobiles,³⁸⁵ and pesticides.³⁸⁶

³⁷⁵ BERNARD DEVOTO, *Letter from Bernard DeVoto to the Editor of the Denver Post* (Aug. 1, 1950), in *THE LETTERS OF BERNARD DEVOTO* 362, 363 (Wallace Stegner ed., 1975).

³⁷⁶ The Sagebrush Rebellion from the late 1970's to the early 1980's unsuccessfully attempted to force the divestiture of federal lands. A district court rejected Nevada's claim that the Federal Land Policy and Management Act (FLPMA) violated Nevada's 10th Amendment and the Equal Footing Clause. *State of Nevada ex rel. State Bd. of Agric. v. United States*, 512 F. Supp. 166, 168 (D. Nev. 1981). In general, see *FEDERAL LAND OWNERSHIP*, *supra* note 358, at 19; A. Costandina Titus, *The Nevada "Sagebrush Rebellion" Act: A Question of Constitutionality*, 23 *ARIZ. L. REV.* 263, 263 (1981) and Richard D. Clayton, Note, *The Sagebrush Rebellion: Who Should Control the Public Lands?*, 1980 *UTAH L. REV.* 505, 509.

³⁷⁷ Some counties claimed the federal control of public land was unconstitutional, title belonged in the states, and the counties could thereby control land use on these lands. See Elizabeth M. Osenbaugh & Nancy K. Stoner, *The County Supremacy Movement*, 28 *URB. LAW.* 497, 497 (1996).

³⁷⁸ Commercial fishing in Golden Gate National Recreation Area. *San Francisco Herring Ass'n v. U.S. Dep't of the Interior*, 946 F.3d 564, 567–68 (9th Cir. 2019).

³⁷⁹ See *Friends of the Boundary Waters Wilderness v. Bosworth*, 437 F.3d 815, 820 (8th Cir. 2006). The federal government in the Boundary Waters Canoe Area Wilderness even applied its restrictions on motor boats and snowmobiles pursuant to the Property Clause to lands it did not own in the BWCAW. See *State of Minnesota v. Block*, 660 F.2d 1240, 1253 (8th Cir. 1981). The case of *Sturgeon v. Frost*, 136 S. Ct. 1061 (2016) may seem contrary, but it interpreted specific statutes applicable to Alaska.

³⁸⁰ See *Free Enter. Canoe Renters Ass'n of Mo. v. Watt*, 549 F. Supp. 252, 263 (E.D. Mo. 1982) (involving commercial renting of canoes within the boundaries of the Ozark National Scenic Riverways).

³⁸¹ See *Barton v. United States*, 609 F.2d 977, 979 (10th Cir. 1979).

³⁸² See *People for the Ethical Treatment of Prop. Owners v. U.S. Fish & Wildlife Serv.*, 852 F.3d 990, 994 n.4 (10th Cir. 2017).

³⁸³ See, e.g., *Ocean Beach Fire Program*, NPS.GOV (June 4, 2018), <https://www.nps.gov/goga/learn/management/obfireprogram.htm> [http://perma.cc/9T3X-RYBM] (including fore pots and a no-burn season from November 1–February 28/29). As teenagers and college students, we would go down to Ocean Beach, gather driftwood, and start a bonfire anywhere on the dry sand any day of the year.

³⁸⁴ See *Great Am. Houseboat Co. v. United States*, 780 F.2d 741, 745 (9th Cir. 1986) (involving houseboats on Lake Shasta).

D. The Takings Clause

The Fifth Amendment, which has been incorporated into the 14th Amendment and thus applicable to the states,³⁸⁷ provides: “No person shall . . . be deprived of . . . property, without due process of law; nor shall private property be taken for public use, without just compensation.”³⁸⁸ A taking is unconstitutional and thus subject to reasonable compensation, but a reasonable regulation pursuant to police power is constitutional.³⁸⁹ A dividing line between a taking and a reasonable regulation remains unsettled.

A judge, seven decades ago, recognized that attempting distinctions between a taking and a reasonable exercise of the police power enmeshes one in a “sophistic Miltonian Serbonian Bog.”³⁹⁰ In a classic article, Professor Dunham characterized the cases as a “crazy-quilt pattern.”³⁹¹

The Supreme Court has not drawn a bright line between a reasonable exercise of the police power and a taking, admitting it could not develop a fine line for distinguishing between the two.³⁹² As stated in *Penn Central Transportation Co. v. City of New York*: “[T]his Court, quite simply, has been unable to develop any ‘set formula’ for determining when ‘justice and fairness’ require that economic injuries caused by public action be compensated by the government, rather than remain disproportionately concentrated on a few persons.”³⁹³ Indeed,

³⁸⁵ See *e.g.*, *Fund for Animals v. Norton*, 390 F. Supp. 2d 12, 14 (D.D.C. 2005) (involving snowmobiles in Yellowstone and Grand Teton National Parks—one of roughly a score of cases involving Yellowstone and snowmobiles).

³⁸⁶ See *United States v. Moore*, 640 F. Supp. 164, 167 (S.D. W.Va. 1986) (spraying of pesticides to eliminate black flies within the New River Gorge National River).

³⁸⁷ See *Chicago, B. & Q. R. Co. v. City of Chicago*, 166 U.S. 226, 234 (1897).

³⁸⁸ U.S. CONST. amend. V.

³⁸⁹ A workable definition of the police power appears in the venerable case of *Lawton v. Steele*, 152 U.S. 133, 136 (1894):

The extent and limits of . . . the ‘police power’ have been a fruitful subject of discussion in the appellate courts of nearly every State in the Union. It is universally conceded to include everything essential to the public safety, health, and morals, and to justify the destruction or abatement, by summary proceedings, of whatever may be regarded as a public nuisance. . . . Beyond this . . . the state may interfere wherever the public interests demand it, and in this particular a large discretion is necessarily vested in the legislature to determine, not only what the interests of the public require, but what measures are necessary for the protection of such interests.

³⁹⁰ *Brazos River Auth. v. City of Graham*, 354 S.W.2d 99, 105 (Tex. 1961).

³⁹¹ Allison Dunham, *Griggs v. Allegheny County in Perspective: Thirty Years of Supreme Court Expropriation Law*, 1962 SUP. CT. REV. 63, 63.

³⁹² See *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104, 149–50 (1978).

³⁹³ *Id.* at 124.

“The question of what constitutes a ‘taking’ for purposes of the Fifth Amendment has proved to be a problem of considerable difficulty.”³⁹⁴

The Court has certainly fulfilled this expectation in a series of subsequent takings and wetlands cases. Decisions do not always resolve the issue at hand. Each new Supreme Court decision initially seems to clarify the issue, but often increases confusion, complexity, and exceptions to exceptions. Even clear statements of principles have exceptions.³⁹⁵ The reality is that no clear definition exists, thus, no clear rules exist.³⁹⁶

A common tool of land use planning is to require developers to “dedicate” land, facilities, or money to offset the community costs of the development. The costs could include infrastructure improvements, schools, police and fire stations, park and recreation facilities, and even land to be preserved as open space. The question arises if government goes too far in imposing conditions.

*Nollan v. California Coastal Commission*³⁹⁷ involved the California Coastal Commission conditioning a permit to tear down an existing building on a small beachfront lot upon dedication of a public access, lateral easement along the beach.³⁹⁸ The Supreme Court held the requirement was unconstitutional; an essential nexus must exist between the purported goal and the restriction/condition.³⁹⁹ The Coastal Commission argued the shoreline development would interfere with visual access to the beach, but the condition of lateral access was unrelated to this goal.⁴⁰⁰

Chief Justice Rehnquist wrote in *Dolan v. City of Tigard*,⁴⁰¹ “We see no reason why the Takings Clause of the Fifth Amendment, as much a part of the Bill of Rights as the First Amendment or Fourth Amendment, should be relegated to the

³⁹⁴ *Id.* at 123.

³⁹⁵ For exception, a physical invasion, no matter how slight, is usually a takings. *See* *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 441 (1982); *but cf.* *Preseault v. I.C.C.*, 494 U.S. 1, 17 (1990). *See also* *Amalgamated Food Emp. Union Local 590 v. Logan Valley Plaza, Inc.*, 391 U.S. 308, 325 (1968) (addressing the judicial roller coaster for shopping center owners); *Lloyd Corp., Ltd. v. Tanner*, 407 U.S. 551, 567–569 (1972); *Hudgens v. N.L.R.B.*, 424 U.S. 507, 508 (1976); *PruneYard Shopping Ctr. v. Robins*, 447 U.S. 74, 82–83 (1980).

³⁹⁶ One clear rule is that if the public trust doctrine applies, then no takings issue arises since the property owner is not deprived of a property right.

³⁹⁷ 483 U.S. 825 (1987).

³⁹⁸ *Id.* at 827–29.

³⁹⁹ *Id.* at 837.

⁴⁰⁰ *Id.* at 838.

⁴⁰¹ 512 U.S. 374 (1994).

status of a poor relation in these comparable circumstances.”⁴⁰²

Dolan, a plumbing and electric supply wholesaler in Tigard, Oregon, a town of 30,000, wished to expand his building from 9,700 square feet on 1.67 acres to 17,600 square feet and pave a 39-space parking lot.⁴⁰³ The lot backed up to Fanno Creek, a floodplain unusable for commercial development.⁴⁰⁴ The Municipal Plan for the Central Business District required 15% for open space and landscaping.⁴⁰⁵ The city demanded Dolan dedicate the floodplain and a 15’ strip above it for a pedestrian/bike path.⁴⁰⁶ The two dedications would equal 10% and count towards the 15% open space requirement.⁴⁰⁷

The Court recognized preventing flooding has a nexus to the dedication.⁴⁰⁸ An asphalt parking lot further increases runoff from an impervious surface. Thus, there was a nexus, a relationship, between the dedication and the purpose of the restrictions.⁴⁰⁹

However, the burden rested on the city to show the required dedication is related in both nature and extent to the impact of the proposed development. The city faced several factual problems in the case. First, the public greenway was unrelated to flood control.⁴¹⁰ Second, the city would deny the basic property rights of owners to exclude.⁴¹¹ The city didn’t meet its burden of proof of showing a reasonable relationship between the trail and the dedication.⁴¹²

Nollan held an essential nexus must exist between a condition the government is seeking to regulate and the measures implemented that affect public property. *Dolan* followed up by imposing a test of rough proportionality, which does not require precision.⁴¹³ The standard also needs individualized determination.⁴¹⁴ Some effort must be made to quantify the findings.⁴¹⁵

402 *Id.* at 392.

403 *See id.*

404 *Id.* at 379.

405 *Id.* at 380.

406 *Id.*

407 *Id.*

408 *Id.* at 383.

409 *Id.* at 386–87.

410 *Id.* at 393.

411 *Id.*

412 *Id.* at 395.

413 *Id.* at 391.

414 *Id.*

415 *Id.*

For example, the city said the dedications “could” offset, but that is not equivalent to “will” or “likely to.” The City had not shown the additional number of vehicle and bicycle trips, generated but the expansion, was reasonably related to the required dedication.

The Court held the government cannot require a person to give up a constitutional right in exchange for a discretionary benefit when the property sought has little or no benefit to the government.⁴¹⁶

XI. FEDERALISM: ILLINOIS V. CITY OF MILWAUKEE TRILOGY

Justice Holmes wrote in the 1907 interstate pollution case of *State of Georgia. v. Tennessee Copper Co.*:⁴¹⁷

It is a fair and reasonable demand on the part of a sovereign that the air over its territory should not be polluted on a great scale by sulphurous acid gas, that the forests on its mountains, be they better or worse, and whatever domestic destruction they have suffered, should not be further destroyed or threatened by the acts of persons beyond its control, that the crops and orchards on its hills should not be endangered from the same source.⁴¹⁸

The case became the basis for a federal common law of interstate pollution.

Environmental Law in the early years was a *Tabula Rasa*. Courts wrestled with fundamental questions, one of which was allocating jurisdiction between federal and state courts. Many contamination cases involve common law nuisance claims.

In *Illinois v. City of Milwaukee, Wis.*,⁴¹⁹ the Supreme Court not only held that federal law governs interstate water pollution, but also that federal common law could resolve the dispute. Justice Douglas wrote, “When we deal with air and water in their ambient or interstate aspects, there is a federal common law[.] . . .”⁴²⁰ The decision had the potential to open up the federal court houses to a flood of nuisance suits.

However, the Court held nine years later in *City of Milwaukee v. Illinois (Milwaukee II)* that federal common law is displaced when Congress speaks directly on the matter; then it

⁴¹⁶ *Id.* at 396.

⁴¹⁷ 206 U.S. 230 (1907).

⁴¹⁸ *Id.* at 238.

⁴¹⁹ 406 U.S. 91, 93 (1972). Illinois sued four Wisconsin cities and two sewerage commissions for discharging sewage in lake Michigan. *See also* *Ohio v. Wyandotte Chemicals Corp.*, 401 U.S. 493 (1971).

⁴²⁰ *See* *Illinois v. City of Milwaukee, Wis.*, 406 U.S. 91, 103 (1972).

occupies the field.⁴²¹ The opinion left open the question of whether state common law could apply.⁴²² The Court subsequently held the law of the source state would apply to an interstate water pollution case, but the case could be brought in the state where the harm occurred.⁴²³

The *City of Milwaukee* decision was the predecessor 30 years later to *American Electric Power Co., Inc. v. Connecticut*.⁴²⁴ Several states, New York City and three private land trusts sued the federal Tennessee Valley Authority and four private utilities for emitting carbon dioxide from their fossil fuel plants.⁴²⁵ Carbon dioxide is a greenhouse gas. The large atmospheric emissions of carbon dioxide contributed to global warming. Plaintiffs sought abatement.⁴²⁶ The Clean Air Act and EPA actions were sufficient under the *City of Milwaukee* rule to displace federal jurisdiction on a federal common law public nuisance theory. The door is left open under diversity jurisdiction for a private public nuisance lawsuit in federal court.⁴²⁷

The practical effect of the *Illinois v. Milwaukee* litigation is that the federal courts are closed to state common law or statutory pollution lawsuits absent a federal violation or complete diversity of citizenship.

XII. CONCLUSION

We never really know at the unveiling of a new discipline or revolution where it will lead. Will Environmental Law just be, as the 1978 appellants argued in *City of Philadelphia v. New Jersey*, “outwardly cloaked in the currently fashionable garb of environmental protection[?]”⁴²⁸ Or, would Environmental Law become a compelling, or even determinative, component of public policy? A half-century allows us a look-back to study its evolution.

The ethos has changed: Storm King Mountain, Tellico Dam, Overton Park and the Cross Florida Barge Canal mark the end of the post-World War II infrastructure era as well as 360 years of

⁴²¹ See *City of Milwaukee v. Illinois & Michigan*, 451 U.S. 304, 310–11 (1981).

⁴²² See *id.* at 340.

⁴²³ See *Int'l Paper Co. v. Ouellette*, 479 U.S. 481, 497 (1987).

⁴²⁴ 564 U.S. 410 (2011).

⁴²⁵ *Id.* at 415.

⁴²⁶ *Id.* at 424.

⁴²⁷ See *Juliana v. United States*, 947 F.3d 1159, 1165 (9th Cir. 2020) (pending in the federal courts including private common law nuisance and public trust claims in addition to constitutional claims).

⁴²⁸ 437 U.S. 617, 625–26 (1978).

America's emphasis on development to the transition to the Age of the Environment. The full realization of the change in paradigms wasn't immediately realized. These formative battles are, at best, footnotes and perhaps a few perfunctory citations, to today's students and young practitioners. My generation is fast disappearing from environmental law. I have tried over the past decade to paint a picture of the beginnings and thus its legacy.

America's environment has substantially improved over the past half century. The air and waters are cleaner.⁴²⁹ The Great Lakes are clean. The Rogue River is again naturally beautiful as it flows through Oregon. The Cuyahoga River no longer catches on fire as it flows through Cleveland. The western forests are still standing.

The fabric of environmental law developed in the early days. Many of the cases may seem prosaic, taken for granted,⁴³⁰ but were considered revolutionary at the time, such as with the more recent *Massachusetts v. EPA*. Today's litigation remains dependent on standing, reviewability, and administrative discretion.

Some early developments, such as NEPA and the Endangered Species Act, quickly grew from "sleeper statutes" into broad statutes cutting across the environmental spectrum. NEPA became a global model. The significance of cases, such as *Sierra Club v. Morton*, was quickly recognized. A few cases established both legal precedence and resolved environmental issues.

Environmental protection is an on-going challenge. Old problems may be resolved. New problems will always emerge. Pollution, even under permits, will contaminate the air and water. Recycling remains a practical issue because of economics.

Environmental Law is dynamic. It overlapped from the beginning Land Use Planning, Administrative Law, Constitutional Law, Energy Law, Property Law and Torts like Venn Diagrams. It is as amazing today as 50 years ago. It is always changing and expanding as the environmental problems evolve and new ones emerge, such as Climate Change, Environmental Justice, and plastics.

However, the pillars supporting Environmental Law remain solid. Even when an environmental problem, such as hydraulic mining, is seemingly resolved over a century ago, the legacy

⁴²⁹ As an asthmatic I could not have lived in Orange County during the 1960's or 1970's, but do so today as part of the greater Los Angeles Plain.

⁴³⁰ A look at the three Ruhl-Salzman environmental surveys discussed in footnotes 16-17 show a consistent movement to newer cases except for four cases from four to five decades ago.

continues as with the abandoned mines in Colorado. Air and water pollution, and toxic hazards will persist. The parameters of controlling them were established in the early days of the Environmental Era.

The answer to the first set of questions is oblivious. Environmental Law is a critical component of public policy decision making.

Environmental Law seems rock-hard today. Yet, the questions I ask today are: 1) Is Environmental Law now firmly engrained into critical public policy decisions; or 2) Has it reached its apogee?

The Environmental Age is entering its sixth decade. A reaction is highly foreseeable at some point. The Trump Administration has reversed several existing policies⁴³¹ and is seeking to revise the CEQ guidelines on NEPA statements.⁴³² These changes will run through a gauntlet of litigation with uncertain results.

I think of my 2013 conclusion in *Looking Back to the Future: The Curmudgeon's Guide to the Future of Environmental Law*: "The changes have been dramatic, but it is unwise to ignore the polices, statutes, and mores of the preceding 360 years as they continue to define much of our future, particularly in times of economic adversity and resource scarcities, such as energy. To the extent that environmental protection does not provide our basic needs, it may fail economic and political reality."⁴³³

⁴³¹ For a list of the changes, see Nadja Popovich, Livia Albeck-Ripka & Kendra Pierre-Louis, *The Trump Administration Is Reversing More Than 100 Environmental Rules. Here's the Full List*, N.Y. TIMES (Nov. 10, 2020), <http://www.nytimes.com/interactive/2020/climate/trump-environment-rollbacks.html?searchResultPosition=1> [<http://perma.cc/K5M6-CKSE>].

⁴³² A discussion of the proposed NEPA changes is found at: James M. McElfish, Jr., *What Did CEQ Do?*, ELI (Sept. 14, 2020), <http://www.eli.org/vibrant-environment-blog/what-did-ceq-do> [<http://perma.cc/5K8Z-F36U>].

⁴³³ Denis Binder, *Looking Back to the Future: The Curmudgeon's Guide to the Future of Environmental Law*, 46 AKRON L. REV. 993, 1016 (2013).