Time for a New Age of Enlightenment for U.S. Environmental Law and Policy: Where Do We Go From Here?

by Barry E. Hill

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Summary

The issue of environmental injustice has again come into sharp focus in the wake of the predominantly African-American community in Flint, Michigan, being exposed to lead-contaminated drinking water. To secure environmental justice for all individuals and communities, living in a clean, safe, and healthy environment in America should be considered a human right enforced by the adoption of an environmental rights amendment in the bill of rights sections of every state constitution and the federal Constitution. Such constitutional protections would significantly help individuals and communities to defend their human rights to safe drinking water and sanitation, clean air, clean land, and a stable climate—and would provide new legal mechanisms for the protection of those rights.

In 1967, the Reverend Dr. Martin Luther King Jr. secluded himself in a house on the Caribbean island of Jamaica to write what became his final book, *Where Do We Go From Here: Chaos or Community?*[1] Dr. King wrote this manuscript after the Civil Rights Act of 1964[2] was enacted into law. The Act ended segregation in public spaces and banned employment discrimination on the basis of race, color, religion, sex, or national origin, and is considered one of the crowning legislative achievements of the civil rights movement.

Additionally, Dr. King wrote this book after the Voting Rights Act[3] was enacted into law in 1965. This Act was intended to overcome legal barriers at the state and local levels that prevented blacks from exercising their right to vote as guaranteed under the Fifteenth Amendment to the U.S. Constitution. These laws came about only through brutal struggle.[4] In Jamaica, Dr. King reflected on the successes and failures of the civil rights movement that he led for so many years, and his thoughts and plans for the future of the movement.

Consequently, Dr. King expanded the thrust of the movement by demanding economic and human rights for poor Americans of diverse backgrounds. He sought, among other things, jobs, unemployment insurance, a fair minimum wage, and education for poor adults and children. Although he was assassinated on April 4, 1968, his thinking/planning culminated into the May 12-June 24, 1968, anti-poverty demonstrations (temporary settlement of tents and shacks called "Resurrection City" on the Mall) in Washington, D.C., aptly named the "Poor People's Campaign: A National Call for a Moral Revival." This effort set the stage for future social justice movements in this country.

Dr. King's deep reflections on the movement were part of the continuous development of the strategies for the civil rights movement's organized activities. He was not afraid of the civil rights movement going slowly: he was afraid only of the movement standing still.

Just as Dr. King devoted time for reflection on the civil rights movement, we in the environmental law and policy

1. Martin Luther King Jr., Where Do We Go From Here: Chaos or Community? (1968).
2. Pub. L. No. 88-352, 78 Stat. 241 (1964).
3. Pub. L. No. 89-110, 79 Stat. 437 (1965).
4. The other key civil rights legislation was the Fair Housing Act of 1968 (Pub. L. No. 90-284, 82 Stat. 73 (1968)), which was enacted into law on April 11, 1968—literally one week after Dr. King's assassination. It was enacted into law, according to President Lyndon Johnson, to honor Dr. King's legacy. The law prescribes penalties for certain acts of violence or intimidation, and for other purposes. Discrimination is outlawed in the renting, buying, and financing of homes based upon race, religion, national origin, or gender. Moreover, the law protects families with children and people with disabilities seeking housing.

community in the United States[5] need to take this opportunity *now* to devote time for reflection on the modern environmental movement. Indeed, the civil rights movement and the environmental movement were the two most powerful movements of the 20th century. Thought leaders for both movements should always be prepared to reexamine the concepts, approaches, and strategies, but not the basic principles.

As a result of the actions and decisions of the Donald Trump Administration over the past two years, this is arguably the appropriate time for deep reflection. Because of the Administration's concerted deregulatory assault on the environmental regulatory infrastructure, we need to review the past approach to environmental law and policy, examine the present dichotomy, and plan for the future of the legal and regulatory regimes governing pollution, water law, endangered species, toxic substances, environmental impact analyses, environmental risks, and so on. This is, most assuredly, time for a new age of enlightenment for environmental policy in the United States. We must ask ourselves that basic question: where do we go from here?

This Article argues that an individual citizen's self-executing private right to a clean, safe, and healthy environment in state constitutions and the federal constitution should be incorporated more into the environmental law and policy discourse. In other words, it argues for "environmental constitutionalism," which basically means that a constitutional provision (commonly referred to as a "green amendment") should be placed in the bill of rights sections of our state and federal constitutions so that citizens across this nation can defend their human right to clean water, clean air, and clean land.[6]

In addition to existing environmental laws and their implementing regulations, environmental constitutionalism should be seriously considered as a viable mechanism to address environmental and human health challenges. Those challenges include pollution, deforestation, biodiversity loss, ocean dead zones, melting polar icecaps, rising sea levels, explosive population growth, lack of access to safe and clean drinking water and sanitation,[7] and climate change.[8] Here, I focus on climate change.

This Article is organized as follows: Part I briefly examines the age of enlightenment for environmental policy and law in the United States over the past 100 years. Part II discusses major climate change litigation under the National Environmental Policy Act (NEPA) and the Clean Air Act (CAA)[9] and the limitations of those statutes in addressing climate change. Part III discusses the emerging concept of environmental constitutionalism and reviews the state constitutions of Pennsylvania and Montana that include green amendments, as well as major litigation in those states that interpreted and applied those amendments. Part IV examines how the concept of environmental constitutionalism may be more successful at addressing the adverse effects of global warming based upon current climate change litigation in the United States. Part V looks at the current example of contaminated drinking water in Flint, Michigan, and considers how environmental rights might apply there. Part VI offers a conclusion and proposes a new age of enlightenment for environmental law and policy in accordance with climate justice and environmental justice principles.

I. The Age of Enlightenment for Environmental Law and Policy

Arguably, the age of enlightenment for environmental law and policy for the modern environmental movement developed, generally speaking, through three stages over more than 100 years.

The first stage occurred early in the 20th century and was led by such notable individuals as the Scottish immigrant John Muir, founder of the Sierra Club and the "Father of National Parks,"[10] and the forester Aldo Leopold, the

5. For the sake of discussion, "the environmental law and policy community in the United States" includes, among others, affected communities; public interest attorneys; environmental business specialists; public policy advocates; law schools; law school clinics; scholars; academic institutions with environmental, natural resources, and public health studies departments; environmental law think-tanks; policymakers in federal, state, tribal, and local governments; industry lobbying organizations; Native American environmental law organizations; and public interest environmental entrepreneurs.

6. *See* David R. Boyd, David Suzuki Foundation, The Status of Constitutional Protection for the Environment in Other Nations (2013), *available at* https://davidsuzuki.org/wp-content/uploads/2013/11/status-constitutional-protection-environment-other-nations.pdf. The author reports that more than three-quarters of the world's national constitutions (149 out of 193) include explicit references to environmental rights and/or environmental responsibilities. This includes the majority of nations in Africa, Central and South America, Asia-Pacific, Europe, and the Middle East/Central Asia. The U.S. Constitution does not include an environmental rights provision. Prof. Mary Ellen Cusack has pointed out that in 1968 and 1970 there were attempts to amend the Constitution to include a provision of a right to a clean and healthy environment. Those efforts failed. *See* Mary Ellen Cusack, *Judicial Interpretation of State Constitutional Rights to a Healthful Environment*, 20 B.C. Envtl. Aff. L. Rev. 173, 174 (1993).

7. On July 18, 2010, the United Nations General Assembly in a historic vote declared that clean water was a fundamental human right. Resolution 64/292 stated that the United Nations "[r]ecognizes the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights." The measure passed with a vote of 122 in favor to none against, with 41 abstentions. The U.S. representative was concerned, however, with whether this human right was an enforceable right. The United States, consequently, abstained from voting in favor of the resolution.

8. *See*, *e.g.*, *7 Biggest Threats to the Environment—Why We Still Need Earth Day*, Inhabitat, Apr. 1, 2018, https://inhabitat.com/7-biggest-threats-to-the-environment-why-we-still-need-earth-day/.

9. 42 U.S.C. §§4321-4370h, ELR Stat. NEPA §§2-209; 42 U.S.C. §§7401-7671q, ELR Stat. CAA §§101-618.

10. Wikipedia, *John Muir*, https://en.wikipedia.org/wiki/John_Muir (last visited Mar. 4, 2019).

"Father of Wildlife Ecology,"[11] who advocated an appreciation and conservation of "things natural, wild, and free."[12] The primary focus of these early environmentalists was conservation of natural resources and protection of a pristine environment. Their efforts led to the establishment of the system of national parks,[13] the preservation of forests,[14] and the designation of wildlife refuges and recreation areas for the American people to enjoy for generations to come.

For example, in 1903, President Theodore Roosevelt, an ardent conservationist,[15] while looking over the expanse of the Grand Canyon, said:

> The Grand Canyon fills me with awe. It is beyond comparison—beyond description; absolutely unparalleled throughout the wide world . . . Let this great wonder of nature remain as it now is. Do nothing to mar its grandeur, sublimity and loveliness. You cannot improve on it. But what you can do is to keep it for your children, your children's children, and all who come after you, as the one great sight which every American should see.[16]

On February 26, 1919, President Woodrow Wilson designated the Grand Canyon as a national park.[17]

The second stage began in the 1960s and lasted for more than a decade, during which environmental activism took place largely on the legal front, and lawyers played the leading role. "[I]n response to rising public consciousness during the 1950s and 1960s of the perils of pollution and of the waste of natural resources," most of the modern environmental laws were enacted during the 1970s.[18] Environmental lawyers working in the U.S. Congress drafted a plethora of major environmental laws, and, in the executive branch, environmental lawyers enforced the new laws and developed implementing regulations.[19] Lawyers affiliated with newly established legal advocacy groups, such as the Natural Resources Defense Council, the Sierra Club Legal Defense Fund, and the Environmental Defense Fund, lobbied for the enactment of the major environmental laws and filed lawsuits to see that they were implemented. Think-tanks such as the Environmental Law Institute studied environmental laws and regulations, and approached environmental problems from a public policy perspective. During this period of heightened awareness of environmental issues, Presidents Richard M. Nixon, Gerald R. Ford, and Jimmy Carter—two Republicans and one Democrat—issued numerous Executive Orders that addressed a myriad of environment-related situations.[20]

In 1962, moreover, Rachel Carson's book *Silent Spring* was published. As a student of nature, her thought-provoking and inspiring book warned of the dangers to humans and nonhuman natural systems from the misuse of chemical pesticides such as dichlorodiphenyltrichloroethane (DDT). She basically asked the questions as to whether and why humans had the right (1) to control nature; (2) to decide who lives or dies; and (3) to poison or to destroy nonhuman life. In short, she questioned, in many respects, the scope and direction of contemporary science. On April 22, 1970, the first Earth Day was celebrated, where more than 20 million people across the nation attended festivities, and expressed their deep appreciation of Mother Earth.[21]

The third stage took root in the late 1970s and continues down to the present time. It has been led in large part by a different set of actors—community activists whose

11. The Aldo Leopold Foundation, *About Aldo Leopold*, https://www.aldoleopold.org/about/aldo-leopold/ (last visited Mar. 4, 2019).
12. Marybeth Lorbiecki, Things Natural, Wild, and Free (2011).
13. The "National Park Service Organic Act of 1916," 39 Stat. 535 (Aug. 25, 1916) (codified at 6 U.S.C. §§1-4), established the national park system, which is managed by the U.S. Department of the Interior in order "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations." H.R. 15522, 64th Cong. ch. 408 (1916).
14. *See* Surveying the Public Lands Act of June 4, 1897 (commonly known as the "Organic Administration Act of 1897") (30 Stat. 11, 35, ch. 2; 16 U.S.C. §551) (providing that the purpose of forest reservations is "to improve and protect the forest within the reservation," or for "securing favorable conditions of water flows, and to furnish a continuous supply of timber for the use and necessities of citizens of the United States").
15. President Theodore Roosevelt is often called "the conservation president" since he doubled the number of sites in the National Park system. *See* National Park Service, *Theodore Roosevelt and the National Park System,* https://www.nps.gov/thrb/learn/historyculture/trandthenpsystem.htm (last visited Mar. 5, 2019).
16. History, *Roosevelt Dedicates the Grand Canyon as a National Monument*, https://www.history.com/this-day-in-history/roosevelt-dedicates-the-grand-canyon-as-a-national-monument.
17. Andrew Glass, *Wilson Establishes Grand Canyon as a National Park, Feb. 26, 1919*, Politico, Feb. 25, 2017, https://www.politico.com/story/2017/02/wilson-establishes-grand-canyon-as-a-national-park-feb-26-1919-235306.
18. Richard J. Lazarus, *The Greening of America and the Graying of United States Environmental Law: Reflections on Environmental Law's First Three Decades in the United States*, 20 Va. Envtl. L.J. 75, 76-77 (2003).
19. *See* 1970 CAA Amendments, 42 U.S.C. §§7401-7671q; 1972 Coastal Zone Management Act, 16 U.S.C. §§1451-1464; 1972 Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§136-136y; 1972 Marine Mammal Protection Act, 16 U.S.C. §§1361-1421h; 1972 Federal Water Pollution Control Act, 33 U.S.C. §§1251-1387; 1973 Endangered Species Act, 16 U.S.C. §§1531, 1544; 1974 Forest and Rangeland Renewable Resources Planning Act, which was the precursor to the National Forest Management Act, 16 U.S.C. §§1600-1687; 1976 Resource Conservation and Recovery Act, 42 U.S.C. §§6901-6992k; 1976 Federal Land Policy and Management Act, 42 U.S.C. §§1701-1784; 1976 Toxic Substances Control Act, 15 U.S.C. §§2601-2692; 1977 Surface Mining Control and Reclamation Act, 30 U.S.C. §§1201-1328; 1977 Safe Drinking Water Act Amendments, 42 U.S.C. §§300f-300j-26.
20. *See* Exec. Order No. 11514, as amended, 3 C.F.R. 920 (1966-1970), Protection and Enhancement of Environmental Quality; Exec. Order No. 11593, 3 C.F.R. 559 (1971-1975), Protection and Enhancement of the Cultural Environment; Exec. Order No. 11644, as amended, 3 C.F.R. 666 (1971-1975), Use of Off-Road Vehicles on the Public Lands; Exec. Order No. 11735, as amended, 3 C.F.R. 791 (1971-1975), Assignment of Function Under Section 311 of the Federal Water Pollution Control Act; Exec. Order No. 11738, 3 C.F.R. 799 (1971-1975), Providing for Administration of the Clean Air Act and the Federal Water Pollution Control Act With Respect to Federal Contracts, Grants, or Loans; Exec. Order No. 11870, 3 C.F.R. 177 (1975), Animal Damage Control of Federal Lands; Exec. Order No. 11912, 3 C.F.R. 114 (1976), Delegation of Authorities Relating to Energy Policy and Conservation; Exec. Order No. 11987, 3 C.F.R. 116 (1977), Exotic Organisms; Exec. Order No. 11988, as amended, 3 C.F.R. 117 (1977), Floodplain Management; Exec. Order No. 11990, 3 C.F.R. 121 (1977), Protection of Wetlands, With Accompanying Statement; Exec. Order No. 12088, as amended, 3 C.F.R. 243 (1978) Federal Compliance With Pollution Control Standards.
21. *See* Jack Lewis, *The Spirit of the First Earth Day*, EPA J., Jan./Feb. 1990, *available at* https://archive.epa.gov/epa/aboutepa/spirit-first-earth-day.html.

primary focus is the protection of human health from the adverse effects of pollution in the air from gases and smoke, pollution in the water from chemicals and other substances produced by industry, and pollution in the soil from fertilizers and pesticides. Their efforts led, for example, to the enactment in 1980 of the Comprehensive Environmental Response, Compensation, and Liability Act[22]—commonly known as CERCLA or Superfund—which established a federal response program following the hazardous waste disaster at Love Canal, New York. CERCLA gives the U.S. Environmental Protection Agency (EPA) the statutory authority to seek out the parties responsible for the release of specific substances at severely polluted sites, and assure their financial cooperation in their cleanup.

We, in the environmental law and policy community in the United States, however, were lulled into a false sense of security prior to the Trump Administration. Since 1970, when Congress articulated the nation's environmental policy in NEPA, as discussed above, we steadily established, implemented, and enforced standards for protection of human health and the environment through extensive legislation and regulations. Federal environmental law in the United States was and still is entirely statutory. We never envisioned that this comprehensive environmental regulatory regime would have been upended in any significant way by a president of either party and his or her administration. But we were wrong, because we became complacent with the relative success of the age of enlightenment for environmental law and policy for the modern environmental movement that had developed through the three stages over more than 100 years.

The question I examine here is whether this comprehensive statutory and regulatory regime can effectively and efficiently address climate change—the most significant threat to the environment and human health in our lifetime.

II. Climate Change Litigation Under NEPA and the CAA

For the sake of illustration, this Article examines notable climate change litigation brought under NEPA and the CAA. As will be demonstrated, there are two recurring problems with climate change litigation brought under these statutes: (1) whether the plaintiffs have standing to bring the lawsuit; and (2) whether Congress and state legislatures, and the executive branches of government, are solely responsible for addressing the issue instead of the judiciary. This analysis of these statutes and their implementing regulations argues that a green amendment in state constitutions and in the U.S. Constitution can play a more central role in responding more effectively to the environmental and human health challenges of climate change.

22. 42 U.S.C. §§9601-9675, ELR Stat. CERCLA §§101-405.

A. NEPA Cases

NEPA has been called "the Magna Carta of environmental protection."[23] NEPA is the mandate for every federal agency regarding the protection of the environment and is, in many respects, the genesis of all modern federal environmental laws.[24]

The national environmental policy of the United States, as articulated by Congress in NEPA, is comprehensive and farsighted. NEPA mandates that for every proposed major federal action significantly affecting human health or the environment, government decisionmakers must consider "the environmental impact . . . any adverse environmental effects which cannot be avoided . . . , alternatives . . . , and any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented."[25]

In §101 of NEPA, Congress found that

a. . . . *it is the continuing policy of the Federal Government*, in cooperation with State and local governments, and other concerned public and private organizations, *to use all practicable means and measures*, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, *to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans*.

b. . . . *it is the continuing responsibility of the Federal Government to use all practicable means*, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—

1. fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;

23. Jonathan Z. Cannon, Environment in the Balance: The Green Movement and the Supreme Court 34 (2015).

24. 42 U.S.C. §§4321-4370d. According to EPA:

> The National Environmental Policy Act was one of the first laws ever written that establishes the broad national framework for protecting our environment. NEPA's basic policy is to assure that all branches of government give proper consideration to the environment prior to undertaking any major federal action which significantly affects the environment. NEPA requirements are invoked when airports, buildings, military complexes, highways, parkland purchases, and other such federal activities are proposed. *Environmental Assessments (EAs)* and *Environmental Impact Statements (EISs)*, which are assessments of the likelihood of impacts from alternative courses of action, are required from all federal agencies and are the most visible NEPA requirements.

U.S. EPA, Guide to Environmental Issues—Earth Day 25 Edition 75 (1995) (EPA 520/B-94-001).

25. 42 U.S.C. §§4321-4370d. *See also* Council on Environmental Quality, Environmental Justice: Guidance Under the National Environmental Quality Act (1997), *available at* https://www.epa.gov/sites/production/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf.

2. *assure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings*;
3. attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
4. preserve important historic, cultural and natural aspects of our national heritages, and maintain, wherever possible, an environment which supports diversity, and variety of individual choice;
5. achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
6. enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

[and]

c. . . . *each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment.*[26]

Arguably, Congress' eloquent "findings" language above strongly suggests that it was supporting the concept of individual citizen's environmental rights for all Americans. Congress' findings language clearly expressed the true intent of the legislature. However, first, this impassioned findings language does not survive the codification of the statute into implementing regulations.[27] Second, the U.S. Supreme Court decimated the significance of this language in the 1978 case *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*.[28] The Supreme Court stated that "NEPA does set forth significant substantive goals of the Nation, but its mandate to the agencies is essentially procedural."[29] Thus, although the poignant findings language was strong and unambiguous, no substantive environmental rights were established by Congress in NEPA. No party could sue on this findings language and prevail.

In order to determine indirectly whether there is a substantive environmental right when either the government or industry violates federal environmental laws, citizen suits can be brought by environmental groups. Ordinarily, enforcement of protective environmental laws is considered a function and responsibility of the government, whether federal or state governments through the EPA-delegated programs. But Congress has made citizen suits a part of every major environmental law such as NEPA, the CAA, and the Endangered Species Act (ESA) of 1973.[30] The environmental group, as a citizen plaintiff, however, must have standing to sue, and to have a court decide the merits of a case.

The first generally recognized climate change case was *Los Angeles v. National Highway Traffic Safety Administration*, which was brought in 1989 under NEPA to challenge the actions of the federal government.[31] In that case, the city of Los Angeles, the city of New York, and the state of California, as well as environmental groups, sought review of the National Highway Traffic Safety Administration's (NHTSA's) regulations regarding Corporate Average Fuel Economy (CAFE) standards for model years 1987-1988 and 1989 cars. The U.S. Court of Appeals for the District of Columbia (D.C.) Circuit held that, based upon their obligations under the CAA, the cities and state had standing to sue under NEPA on air pollution grounds, but that their challenge failed on the merits. Moreover, a divided appellate court held that the environmental groups (e.g., the Natural Resources Defense Council, the Center for Auto Safety, and Public Citizen) had standing to challenge the model-year 1989 standards on global warming grounds, but their petition was denied. The environmental groups had argued that NHTSA failed to issue an environmental impact statement (EIS) for model years 1987-1988 cars.

In another early NEPA climate change case involving an environmental group bringing an action against a federal agency for failing to issue an EIS, the District Court of the District of Columbia held that the environmental group lacked standing. In *Foundation on Economic Trends v. Watkins*, the group in 1992 sued the Secretary of Energy, the Secretary of the Interior, and the Secretary of Agriculture "in authorizing, carrying out, approving, funding, or participating in programs that contribute to the 'greenhouse effect' without discussing and evaluating the impacts of those contributions in environmental documentation, review, and decision-making in conformity with the requirements of the National Environmental Policy Act."[32] The group identified 26 government programs that they claimed did not contain adequate environmental documentation. In short, the environmental group argued that these three government agencies failed to consider how their operations contributed to the "greenhouse effect." The government agencies contended that the environmental group lacked standing, and the appellate court agreed with that argument.

The Supreme Court in *Lujan v. Defenders of Wildlife* set forth the requirements of standing in an ESA case in 1992.[33] The Supreme Court specified that (1) a citizen suit

26. 42 U.S.C. §4321 (emphasis added).
27. See the current NEPA implementing regulations of the president's Council on Environmental Quality (CEQ) at 40 C.F.R. pts. 1500-1508. CEQ oversees NEPA implementation, principally through issuing guidance and interpreting federal regulations that implement NEPA's procedural requirements. Nothing in the CEQ regulations suggest that Congress declared a substantive environmental right for all Americans.
28. 435 U.S. 519, 8 ELR 20288 (1978).
29. *Id.* at 558.
30. 16 U.S.C. §§1531-1544, ELR Stat. ESA §§2-18.
31. 912 F.2d 478, 21 ELR 20170 (D.C. Cir. 1990).
32. 731 F. Supp. 530, 20 ELR 20724 (D.D.C. 1990).
33. 504 U.S. 555, 22 ELR 20913 (1992).

plaintiff must have an injury-in-fact (which is "actual or imminent, not conjectured or hypothetical"); (2) there must be a causal connection between the alleged injury and the action complained of; and (3) it must be likely (not merely speculative) that the injury is redressable by a court's favorable decision. These are the three prongs required for standing. According to Prof. Jonathan Z. Cannon, in denying the environmental group's standing in *Lujan*, the Supreme Court "sent a message to environmentalists and other public interest advocates that it would be tougher in policing limits on judicial access than in the past."[34]

Thus, till this day, standing continues to be a major hurdle for plaintiffs who file lawsuits under NEPA in climate change cases because (1) they may fail to challenge any particular federal action to demonstrate how the action contributed to global warming; and (2) they may fail to show a sufficient likelihood of personal injury.

B. Clean Air Act Cases

The CAA, on the other hand, provided the legal authority for federal government programs designed to control air pollution on a national level. In 1955, Congress passed the Air Pollution Control Act,[35] which was the first piece of federal legislation pertaining to air pollution. The legislation was designed to provide research and technical assistance relating to air pollution control. With the CAA of 1963,[36] Congress established a federal program within the Public Health Service of the U.S. Department of Health and Human Services (HHS), which authorized techniques for monitoring and controlling air pollution. In 1965, with the Motor Vehicle Air Pollution Control Act,[37] Congress authorized the federal government to set required standards for controlling the emission of pollutants from certain automobiles, beginning with the 1968 models. Still further, in 1967, Congress amended the law by passing the Air Quality Act of 1967,[38] which enabled the federal government to increase its activities to investigate enforcing interstate air pollution transport, and, for the first time, to perform far-reaching ambient air monitoring studies and stationary source inspections. And well-known regulatory and enforcement amendments to the CAA were made in the 1970s and 1990s. In sum, a considerable amount of air pollution legislation and their implementing regulations developed by federal agencies manifested a comprehensive legal and regulatory infrastructure.

In spite of this comprehensive legal and regulatory infrastructure, however, the following CAA cases illustrate how difficult it is for plaintiffs (whether individual citizens, environmental groups, or even states) to prevail when there is no single climate change law enacted by Congress.

On September 20, 2005, in *Comer v. Murphy Oil USA*,[39] a putative class of Mississippi Gulf Coast residents and landowners sued oil and energy companies for allegedly contributing to global warming, resulting in rising sea levels and adding to Hurricane Katrina's ferocity, which, consequently, resulted in property being destroyed. After more than two years of extensive litigation, however, the district judge dismissed the case, concluding that the questions at the heart of the civil complaint were political and not justiciable under Article III of the U.S. Constitution, and that the plaintiffs lacked standing. The class action plaintiffs filed a timely appeal and a panel of the U.S. Court of Appeals for the Fifth Circuit reversed and remanded the case.

The oil and energy companies petitioned for a rehearing en banc and a bare quorum (nine of 16 judges) voted 6-3 to rehear the case. Their order vacated the panel's decision. Before the en banc court could conduct the rehearing, however, an additional judge recused herself, leaving only eight judges qualified to hear the case. The en banc court, therefore, lacked a quorum. The panel opinion could not be reinstated. This required the appeal to be dismissed by the clerk of the court.[40] The class action plaintiffs filed a petition with the Supreme Court, who in 2011 refused to hear the case. On May 14, 2013, the Fifth Circuit affirmed the district court's dismissal of the tort claims by the Mississippi Gulf Coast residents and property owners against the oil and energy companies because res judicata applied. The appellate court determined that the district court's judgment in the first case was on the merits as the lower court adjudicated the jurisdictional issues of standing and justiciability.[41]

In the case *Native Village of Kivalina v. ExxonMobil Corp.*,[42] Alaska Natives in a remote village filed a lawsuit against the energy industry for its role in coastal erosion linked to climate change. The plaintiffs (the governing body of an Inupiat Eskimo village) alleged, under a federal claim of nuisance, that the defendants contributed to global warming that caused erosion and destruction, which would require them to relocate the 400 residents of the village at a cost from $95 to $400 million. The defendants filed a motion to dismiss for lack of subject matter jurisdiction.

In September 2009, a judge of the Northern District of California granted the defendants' motion to dismiss. The court determined that the plaintiffs could not demonstrate, because of the undifferentiated nature of greenhouse gas emissions, that any of the energy industry defendants caused the alleged injuries based upon "the contribution theory." Thus, the plaintiffs did not have Article III standing. Moreover, the court determined that it did not have subject matter jurisdiction since the plaintiffs were asking the judiciary to resolve a political question rather than a

34. Cannon, *supra* note 23, at 29-30.
35. Pub. L. No. 84-159, 69 Stat. 322 (1955).
36. Pub. L. No. 88-206, 77 Stat. 392-401 (1963).
37. Pub. L. No. 89-272, 79 Stat. 992 (1965).
38. Pub. L. No. 90-148, 81 Stat. 485 (1967).
39. 585 F.3d 855, 39 ELR 20237 (5th Cir. 2009).
40. Comer v. Murphy Oil USA, 607 F.3d 1049, 40 ELR 20147 (5th Cir. 2010).
41. Comer v. Murphy Oil USA, 718 F.3d 460, 43 ELR 20109 (5th Cir. 2013).
42. 663 F. Supp. 2d 863, 39 ELR 20236 (N.D. Cal. 2009).

legal question. The U.S. Court of Appeals for the Ninth Circuit affirmed the decision of the district court judge, and held that the CAA, and the EPA action that the statute authorized, displaced the plaintiffs' common-law claims.[43] In May 2013, the Supreme Court refused to hear the case.

In July 2004, eight states (California, Connecticut, Iowa, New Jersey, New York, Rhode Island, Vermont, and Wisconsin) and the city of New York sued American Electric Power Company, Inc. and other power companies that owned and operated fossil fuel-fired power plants because of their contributions to the public nuisance of global warming. The plaintiffs wanted each of the defendants to reduce their carbon dioxide emissions. The Southern District of New York judge granted the power corporations' motion to dismiss, holding that the claims presented a nonjusticiable question under the political question doctrine.[44] The Second Circuit Court of Appeals determined that the fact that current air pollution statutes did not provide plaintiffs with the remedy they sought did not mean that they could not bring an action and had to wait for the political branches to craft a comprehensive global solution to global warming.[45]

On June 20, 2011, the Supreme Court determined, however, in *American Electric Power Co. v. Connecticut*, that the plaintiffs needed to raise their grievances about greenhouse gas emissions with EPA, not individual power companies.[46] The Supreme Court expressly stated:

> Indeed, this prescribed order of decisionmaking—the first decider under the [Clean Air] Act is the expert administrative agency, the second, federal judges—is yet another reason to resist setting emissions standards by judicial decree under federal tort law. The appropriate amount of regulation in any particular greenhouse gas-producing sector cannot be prescribed in a vacuum. As with other questions of national or international policy, informed assessment of competing interests is required. Along with the environmental benefit potentially achievable, our Nation's energy needs and the possibility of economic disruption must weigh in the balance.
>
> The Clean Air Act entrusts such complex balancing to EPA in the first instance, in combination with state regulators. . . . The expert agency is surely better equipped to do the job than individual district judges issuing ad hoc, case-by-case injunctions. Federal judges lack the scientific, economic, and technological resources an agency can utilize in coping with issues of this order.[47]

In sum, with this decision, the Supreme Court recognized the paramount role that EPA has played with respect to addressing greenhouse gas emissions in this country since 1970 when EPA was established as the agency responsible for consolidating federal government activities related to enforcement, standard-setting, monitoring, and research for the prevention and abatement of air pollution. The Supreme Court concluded that the climate change issue should be addressed by Congress and federal agencies, not by individual federal judges.

In *Massachusetts v. Environmental Protection Agency*, the Supreme Court determined in 2007 that EPA must regulate carbon dioxide and other greenhouse gases as pollutants to address climate change.[48] Writing for the majority, Justice John Paul Stevens concluded:

> When a State enters the Union, it surrenders certain sovereign prerogatives. Massachusetts cannot invade Rhode Island to force reductions in greenhouse gas emissions, it cannot negotiate an emissions treaty with China or India, and in some circumstances the exercise of its police power to reduce in-state motor vehicle emissions might well be preempted. . . . These sovereign powers are now lodged in the Federal Government, and Congress has ordered EPA to protect Massachusetts (among others) by prescribing standards applicable to the "emission of any air pollutant from any class or classes of new motor vehicle engines, which in [the Administrator's] judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare."[49]

The Supreme Court went on to state that executive branch "authority does not extend to the refusal to execute domestic laws,"[50] and ordered the George W. Bush Administration to promulgate regulations limiting greenhouse gas emissions, as required by the CAA.

C. *The Endangerment Finding and Consequences of Climate Change*

Consequently, in the 2009 "Final Endangerment Finding for Greenhouse Gases Under Section 202(a) of the Clean Air Act," then-EPA Administrator Lisa Jackson in the Barack Obama Administration determined that, based upon an exhaustive review of the scientific literature, carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride in the atmosphere threatened the public health and welfare of future generations.[51] Human health, she stated, would be endangered via heat waves; smoke from increased wildfires; worsening smog; extreme weather events; spread of diseases; water-borne illnesses; and food insecurity. Administrator Jackson determined that climate change was real, and that the U.S. Global Change Research Program, the National Academy of Sciences, and the United Nations Intergovern-

43. Native Vill. of Kivalina v. ExxonMobil Corp., 696 F.3d 849, 42 ELR 20195 (9th Cir. 2012).
44. Connecticut v. American Elec. Power Co., 406 F. Supp. 2d 265, 35 ELR 20186 (S.D.N.Y. 2005).
45. Connecticut v. American Elec. Power Co., 582 F.3d 309, 39 ELR 20215 (2d Cir. 2009).
46. 564 U.S. 410, 41 ELR 20210 (2011).
47. *Id.* at 427.
48. 549 U.S. 497, 37 ELR 20075 (2007).
49. *Id.* at 519.
50. *Id.* at 534.
51. U.S. EPA, *Endangerment and Cause or Contribute Findings for Greenhouse Gases Under the Section 202(a) of the Clean Air Act*, https://www.epa.gov/ghgemissions/endangerment-and-cause-or-contribute-findings-greenhouse-gases-under-section-202a-clean (last updated July 11, 2017).

mental Panel on Climate Change had each independently concluded that the warming of the climate system in recent decades was "unequivocal." Most of us in the environmental law and policy community believed that this was timely climate change policy based upon sound science.

On December 12, 2015, President Obama assured the international community that the United States was an unquestioned leader in the effort to address global warming/climate change. He signed the Paris Climate Agreement, which was a landmark agreement that manifested a common cause to bring all nations together to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced financial support to assist developing countries to do so.[52]

On June 1, 2017, however, President Trump announced plans to withdraw the United States from the Paris Climate Agreement, a move that many in the environmental law and policy community believed would weaken a key international measure aimed at fighting global warming, and isolate the nation on an issue of importance to allies across the world.

President Trump's decision should not have been a surprise to anyone. Before, during, and after his presidential campaign, President Trump has been a climate change denier. One of the first things that he did when he assumed office was to strip the phrase "climate change" from the White House website, and to repeatedly attack the science of global warming. And over the past two years, in addition to a determined deregulatory agenda to scale back or wholly eliminate federal climate change mitigation and adaptation measures, the Trump Administration embarked on a range of activities within the executive branch to weaken the nation's efforts to address the potential impacts of climate change on human health and the environment within communities, particularly minority and/or low-income communities.[53]

For example, in March 2009, during the Obama Administration, the Centers for Disease Control and Prevention (CDC) of HHS formally established its Climate and Health Program. The mission of the Climate and Heath Program was to help state and city public health departments prepare for the specific health impacts of climate change that their communities would face by (1) leading efforts to identify populations vulnerable to climate change; (2) preventing and adapting to current and anticipated health impacts; and (3) ensuring that systems were in place to detect and respond to current and emerging health threats.[54] This $10-million-per-year federal program was established because there was widespread scientific and public health consensus that climate change impacts (e.g., air pollution, heat waves, heavy precipitation events, flooding, droughts, sea-level rise, etc.) would undoubtedly adversely affect public health.

With respect to leading efforts to identify populations vulnerable to climate change, in early 2018, the Climate and Health Program released a report, *Adaptation in Action, Part II*, which was a collection of updated success stories from the public health departments of Illinois, Maryland, New York, North Carolina, Rhode Island, and Wisconsin.[55] These grant recipient states concluded that climate change was predicted to increase health disparities, and that one contributor to health disparities was environmental risks that disproportionately threatened certain populations, such as children, pregnant women, the elderly, low-income communities, impoverished people with chronic health conditions, those with mobility or cognitive limitations, the underserved, and some minority communities.

More specifically, these grant recipient states concluded that people living in low-income communities had fewer resources and, as a result, were more vulnerable to negative health impacts of extreme heat, poor air quality, vector-borne diseases, and other climate change effects. In addition, these communities were likely to have limited adaptive capacity due to the inability to afford or to use air-conditioning and window screens that cooled the air and prevented mosquitoes from entering the home. These populations, moreover, may not have had access to or the means to seek proper care or treatment following an extreme weather event.

Finally, these grant recipient states concluded that extreme heat or high allergy days inequitably impacted communities of color, where there was a greater prevalence of chronic diseases associated with sensitivity to heat and air quality, such as asthma, cardiovascular disease, and diabetes. Those diseases, coupled with the burden of racism and discrimination, added a multiple of stressors for the population. For example, the states acknowledged that redlining practices to restrict access to housing and services on the basis of race or ethnicity had resulted in communities overpopulated with people of color in areas that were less desirable and more climate-vulnerable, such as flood zones and urban heat islands. This uneven burden of climate change was, by definition, climate injustice.

To further add, the Climate and Health Program was an important contributor to the November 2018 report *National Climate Assessment*, the landmark government report that detailed new health hazards related to rising greenhouse gas emissions.[56] This report greatly angered

52. United Nations Climate Change, *What Is the Paris Agreement?*, https://unfccc.int/process-and-meetings/the-paris-agreement/what-is-the-paris-agreement (last visited Feb. 18, 2019).

53. *See* Columbia Law School Sabin Center for Climate Change Law, *Climate Deregulation Tracker*, http://columbiaclimatelaw.com/resources/climate-deregulation-tracker/ (last visited Feb. 18, 2019).

54. CDC, *Climate and Health*, https://www.cdc.gov/climateandhealth/default.htm (last reviewed Nov. 1, 2018).

55. American Public Health Association, Adaptation in Action, Part II (2018), *available at* https://www.apha.org/-/media/files/pdf/topics/climate/adaptation_in_action_part_2.ashx?la=en&hash=87A791182153A590EE7C5C97AE94EEC2691EFD6E.

56. U.S. Global Change Research Program, Fourth National Climate Assessment (2018), *available at* https://nca2018.globalchange.gov/downloads/NCA4_2018_FullReport.pdf. The Global Change Research Program was established by presidential initiative in 1989 and mandated by Congress in the Global Change Act of 1990, Tit. 1, 104 Stat. 3097, 15 U.S.C. §§2921-2938. The Research Program is mandated to develop and coor-

President Trump based upon reports by the national media. In December 2018, acting on the direction of the Trump Administration's political appointees, the CDC quietly folded the Climate and Health Program into a branch that studies asthma and expunged the phrase "climate change" from the name of the newly consolidated office. The longtime director of the office was reassigned to the CDC's waterborne diseases unit.[57]

The fact that people who live, work, and play in America's most polluted environments are commonly people of color and the poor is not new information to Trump's EPA. On February 22, 2018, the *American Journal of Public Health* published a study by EPA's National Center for Public Health of the Office of Research and Development entitled *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status*.[58] EPA's own scientists found that "those in poverty had a 1.35 times higher burden than did the overall population, and people of color had 1.28 times higher burden. Black people, specifically, had 1.54 times higher burden than did the overall population." In other words, black people have a 54% greater chance of being exposed to particulate emissions, which can aggravate rates of asthma and heart disease, and can lead to lower life expectancies than non-Hispanic white people. With respect to black youth, EPA's scientists in the Abstract specifically stated:

> Black children and children living below the poverty line experience even higher rates of asthma (13.4% and 11.1%, respectively). In addition, black children are 4 times more likely to be admitted to the hospital for asthma, and have a death rate 10 times that of non-Hispanic white children. Previous research has shown that stationary sources of air pollution are found in higher concentrations near socially disadvantaged populations—specifically low income communities and communities of color. Race and poverty are intertwined in America, with 34% of Black children living in poverty compared to 19% of children overall. A deeper examination of disproportionate pollutant exposures across racial versus socioeconomic lines can better inform policies to address health disparities.[59]

In sum, EPA's scientists supported, through their analysis, the fact that "environmental racism" continues to exist in this country, and that the health of certain populations is more adversely impacted as compared to the health of non-Hispanic white communities as a result of climate change.[60] EPA's scientists concluded that:

> Disparities in pollution exposure from PM [particulate matter] emissions were more pronounced for Black populations (regardless of wealth) than those living in poverty. Thus, it is insufficient to consider only socioeconomic status when working to decrease burdens caused by PM. Emission disparities resulting from structural racism exist on a national level and at the state and county levels in most instances.[61]

So, what environmental rights, if any, do children, pregnant women, the elderly, low-income communities, impoverished people with chronic health conditions, those with mobility or cognitive limitations, the underserved, and some minority communities have to protect themselves from the adverse effects of climate change on their health? What environmental rights, if any, do they have to fight against climate injustice? Is there a human right to clean air, clean land, and clean water that is enforceable? Are the CAA and NEPA and their implementing regulations effective tools, particularly since the Trump Administration is in the midst of deregulating climate change-related regulations?

Or is there an entirely different legal argument or regime that these minority and/or low-income populations could use to address their legitimate human health and environmental concerns, and that would also address the troubling issues of standing and the distinct roles of the executive, legislative, and judicial branches of government? The answer may be "yes."

III. Environmental Constitutionalism

In their 2016 book *Environmental Constitutionalism*, environmental and constitutional law professors James R. May and Erin Daly demonstrated that this fairly new concept could protect local and global environmental conditions by invoking national and subnational constitutional laws. Articles by various authors in the book they edited explained that, as constitution drafters in all legal traditions commit to environmental stewardship, protection, and sustainability, courts could be increasingly called upon to vindicate environmental rights in both their substantive

dinate "a comprehensive and integrated United States research program which will assist the Nation and the world to understand, assess, predict, and respond to human-induced and natural processes of global change." In November 2018, the Research Program released the latest assessment after a two-year study. Thirteen federal agencies found that human-caused emissions of greenhouse gases were negatively impacting the environment and human health. Almost immediately, President Trump said, "I don't believe it."

57. Lisa Friedman & Sheila Kaplan, *Climate Team, and Its Boss, Just Got Harder to Find at Top Health Agency*, N.Y. Times, Dec. 20, 2018, https://www.nytimes.com/2018/12/20/climate/cdc-climate-change.html.
58. Ihab Mikati et al., *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status*, 108 Am. J. Pub. Health 480 (2018), *available at* https://cehn.org/our-work/latest-research/disparities-in-distribution-of-particulate-matter-emission-sources/.
59. *Id.*
60. The term "environmental racism" was brought to national attention in 1987 by Rev. Benjamin F. Chavis, who at the time was executive director of the Commission for Racial Justice of the United Church of Christ. He defined it as "racial discrimination in environmental policymaking, in the enforcement of regulations and laws, and the targeting of communities of color for toxic waste disposal and siting of polluting industries." *See* Robert D. Bullard, *Grassroots Flowering*, 16 Amicus J. 32, 32 (1994). Prof. Robert Bullard has written: "*Environmental racism* refers to any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color. Environmental racism combines with public policies and industry practices to provide *benefits* for whites while shifting industry *costs* to people of color." *See* Robert D. Bullard, Dumping in Dixie: Race, Class, and Environmental Quality 98 (1994).
61. Mikati et al., *supra* note 58.

and procedural aspects.[62] In many respects, environmental constitutionalism is a confluence of environmental law, constitutional law, environmental justice,[63] and the protection of the human right to a clean, safe, and healthy environment for all.

According to environmental activist Maya van Rossum, our legislative-based environmental protection infrastructure has failed to protect human health and the environment in this country, and therefore we must radically rethink our approach. She argues that existing environmental laws do not ban pollution or development since permits are, in effect, licenses to pollute. In her 2017 book, *The Green Amendment: Securing Our Right to a Healthy Environment*, she wrote that "[i]ndustries are perfectly able to pollute the air and water not in spite of, but because of the Clean Air Act and the Clean Water Act—they simply need the right permits to do so."[64] She went on to state that "[l]egislative environmentalism has had its day, and the environment is still on the brink of catastrophe—we need a new way forward."[65]

Ms. van Rossum believes that adding a green amendment to state constitutions and our federal constitution would ensure that government at all levels would be required to protect our environmental rights to clean air, clean land, and clean water. Thus, the goal of environmental constitutionalism is to ensure that our constitutional right to a clean, safe, and healthy environment as citizens of this nation is protected by the government. This right to a clean, safe, and healthy environment is on par with the other rights that we hold as sacrosanct, such as the right to freedom of speech, the right to freedom of the press, and the right to freedom to practice religion. In sum, she advocates that there should be a specific right to a clean, safe, and healthy environment set forth in the bill of rights sections of state constitutions and the federal constitution. It should not be part of the "penumbra" of rights that are derived by implication from other rights explicitly protected in the Bill of Rights, such as the "penumbral rights of privacy and repose" enunciated by the Supreme Court in *Griswold v. Connecticut*[66] or the right of same-sex couples to marry in *Obergefell v. Hodges*.[67]

Ms. van Rossum has categorically stated:

> Constitutional provisions to ensure a healthy environment comprise the linchpin of a new environmentalism. Unlike its alternatives, this brand of environmentalism doesn't rely on government, environmental organizations, or wealthy green benefactors to affect change. It draws on an authority more powerful than corporations, laws, and governments. *This authority is the inalienable, indefeasible, inherent rights we all possess as residents of the earth.* Constitutional environmental amendments are our greatest hope for protecting the people of Manchester, the sturgeon, the people who are here today, and their future descendants. As I've experienced firsthand, constitutional environmental rights and protections afford all of us concerned about our environment, our health, our safety, our children, the quality of our lives, our economy, and our jobs newfound leverage against ineffectual or corrupt lawmakers and inadequate laws. Let's turn our attention now to constitutional rights—what this new weapon is and how it has evolved over time.[68]

Currently, states with environmental rights amendments in their constitutions are Hawaii, Illinois, Massachusetts, Montana, New York, Pennsylvania, and Rhode Island.[69] The environmental right set forth in these amendments is an enforceable human right to a clean, safe, and healthy environment for all.

A. *Pennsylvania*

For example, in 1971, the state constitution of the Commonwealth of Pennsylvania was amended by Article 1, Section 27, which reads as follows:

> The people have a right to clean air, pure water, and the preservation of the natural, scenic, historic and esthetic values of the environment. Pennsylvania's public natural resources are the common property of all the people, including generations yet to come. As trustee of these resources, the Commonwealth shall conserve and maintain them for the benefit of all the people.[70]

62. Environmental Constitutionalism: Volume 1 (James R. May & Erin Daly eds., 2016).
63. EPA defines "environmental justice" as follows:
> Environmental justice is the *fair treatment* and *meaningful involvement* of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies. *Fair treatment* means that no group of people, including racial, ethnic, or socioeconomic groups should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state and local and tribal environmental programs and policies. *Meaningful involvement* means that: (1) potentially affected community residents have an appropriate opportunity to participate in decisions about a proposed activity that will affect their environment and/or their health; (2) the public's contribution can influence the regulatory agency's decision; (3) the concerns of all participants involved will be considered in the decision-making process; and (4) the decision-makers seek out and facilitate the involvement of those potentially affected.

U.S. EPA, Toolkit for Assessing Potential Allegations of Environmental Injustice (2004) (EPA 300-R-04-002) (emphasis added), *available at* https://www.epa.gov/sites/production/files/2015-04/documents/toolkitej.pdf.

The Agency has embraced the term as the goal to be achieved for all communities. A special concern of EPA is the adverse impacts on the health of community residents who have been environmentally overburdened and who are, consequently, exposed disproportionately to environmental harms and risks in comparison to other communities.

64. Maya van Rossum, The Green Amendment: Securing Our Right to a Healthy Environment 42 (2017).
65. *Id.* at 15.
66. 381 U.S. 479, 485 (1965).
67. 135 S. Ct. 2584 (2015).
68. van Rossum, *supra* note 64, at 43-44.
69. Haw. Const. art. XI, §9; Ill. Const. art. XI, §§1, 2; Mass. Const. amend. art. XLIX; Mont. Const. art. II, §3; N.Y. Const. art. XIV, §§4, 5; Pa. Const. art. I, §27; R.I. Const. art. I, §17.
70. Pa. Const. art. I, §27. *See* John C. Dernbach & Edmund J. Sonnenberg, *A Legislative History of Article 1, Section 27 of the Constitution of the Commonwealth of Pennsylvania*, Widener Law School Legal Studies Research

After almost 50 years on the books, the issue of standing and the distinct roles of the legislative, executive, and judicial branches of the Commonwealth were clearly delineated in the seminal case *Robinson Township v. Commonwealth*.[71] The Supreme Court of Pennsylvania, according to Prof. John Dernbach who has written extensively about the provision, played a significant role in breathing life into the meaning of Pennsylvania's Environmental Rights Amendment, and the breath of its reach.[72]

The human health and environmental problems related to hydraulic fracturing (fracking) in Pennsylvania illustrated the power of the Commonwealth's Environmental Rights Amendment. Fracking is the process of forcing water and chemicals, at very high pressure, into shale rock deposits deep in the ground. Fracking releases natural gas and oil that is trapped in the shale rock. In Pennsylvania, oil and gas companies had been drilling feverishly for natural gas and oil from the Marcellus Shale formations for more than a decade. In 2012, the state legislature enacted into law Act 13, which overhauled the Commonwealth's oil and gas regulations to take advantage of the drilling boom.

Among other features, Act 13 had a notification requirement. According to the regulations, if you were a state resident who had a private water well, you did not have to be notified of a toxic spill at an industry site that may affect your drinking water. The Pennsylvania Department of Environmental Protection only had to notify public water users. Residents using private water wells had to rely on industry to tell them if there was a spill.

In 2013, in the *Robinson Township* case, numerous municipalities were outraged by the speed and environmental impact of natural gas development of the nearby Marcellus Shale formation. The political subdivisions were concerned that Act 13 not only impacted the individual citizen's environmental rights provision in the state constitution, but also impacted their duty to protect the environment. Ms. van Rossum, as the Delaware Riverkeeper, was one of the citizen plaintiffs in this lawsuit challenging the constitutionality of Act 13.[73] The political subdivisions and the citizens successfully sued the state to overturn key portions of Act 13, which were found to be inconsistent with Pennsylvania's constitutionally protected individual citizen's environmental rights provision.

The Pennsylvania Supreme Court determined that Act 13's notification requirement was unconstitutional since there were more than three million residents who relied on private wells for their drinking water, and many of them lived in rural areas of the state where oil and gas drilling took place. With respect to the individual citizen's Environmental Rights Amendment, the court succinctly stated:

> The right to "clean air" and "pure water" sets plain conditions by which government must abide. We recognize that, as a practical matter, air and water quality have relative rather than absolute attributes . . . Courts are equipped and obliged to weigh parties' competing evidence and arguments, and to issue reasoned decisions regarding constitutional compliance by the other branches of government. The benchmark for decision is the express purpose of the Environmental Rights Amendment to be a bulwark against actual or likely degradation of, *inter alia*, our air and water quality.[74]

In sum, the Pennsylvania Supreme Court vindicated the individual citizen's Environmental Rights Amendment.[75] Previously, the Environmental Rights Amendment played a relatively minor role for almost 50 years with respect to the state and local governments' environmental decisionmaking processes. But as a result of this decision, lower courts and appellate courts throughout the Commonwealth must now be prepared to enforce the individual citizen's Environmental Rights Amendment. In addition to having to determine whether proposed state and local actions are in compliance with state and federal environmental laws and regulations, Pennsylvania courts will also have to determine whether those entities have complied with the individual citizens' environmental rights provision.

This is environmental constitutionalism at work since Pennsylvania residents can seek to ensure that their right to a clean, safe, and healthy environment is given the highest level of legal protection in the Commonwealth.[76] Again, the Pennsylvania Supreme Court determined that, "Courts are equipped and obliged to weigh parties' competing evidence and arguments, and to issue reasoned decisions regarding constitutional compliance by the other branches of government." The Pennsylvania Supreme Court's description of the role of the courts is entirely consistent with the fundamental principles of the separation of powers, and checks and balances of American government, guaranteed by the Constitution, whereby each branch of the government (executive, legislative, and judicial) has some measure of influence over the other branches and may choose to block decisions or procedures of the other branches.

Paper Series No. 14-18 (2014), *available at* http://www.delawareriverkeeper.org/sites/default/files/Documents/Legislative_History_of%20Section_27_of_PA_Const.pdf.

71. 623 Pa. 564, 43 ELR 20276 (Pa. 2013).
72. *See* John C. Dernbach & Marc Prokopchak, *Recognition of Environmental Rights for Pennsylvania Citizens: A Tribute to Chief Justice Castille*, Widener Law School Legal Studies Research Paper Series No. 15-10 (2014), *available at* https://johndernbach.com/wp-content/uploads/2017/07/Dernbach-Prokopchak-335.pdf.
73. The Pennsylvania Supreme Court eventually determined in its opinion that Ms. van Rossum, as the Delaware Riverkeeper, did not have standing since her activities did not rise to the level of a substantial, immediate, and direct interest sufficient to confer standing. She failed to plead any direct and immediate interest, claim, or harm.
74. *Robinson Township*, 623 Pa. at 649.
75. *See* John C. Dernbach, Robinson Township v. Commonwealth of Pennsylvania*: Examination and Implications*, 67 Rutgers U. L. Rev. 1169 (2015).
76. *See* John C. Dernbach & Robert B. McKinstry Jr., *Applying the Pennsylvania Environmental Rights Amendment Meaningfully to Climate Disruption*, Widener University Commonwealth Law School Legal Studies Research Paper Series No. 18-06 (2018); *see also* John C. Dernbach, *Taking the Pennsylvania Constitution Seriously When It Protects the Environment: Part I—An Interpretative Framework for Article I, Section 27*, 103 Dick. L. Rev. 693 (1999).

B. Montana

Much like in Pennsylvania, in Montana two landmark state supreme court decisions have paved the way for a broader understanding of environmental rights. Since March 22, 1972, Article II, Section 3 of Montana's Constitution reads as follows:

> All persons are born free and have certain inalienable rights. They include the right to a clean and healthy environment and the right of pursuing life's basic necessities, enjoying and defending their lives and liberties, acquiring, possessing and protecting property, and seeking their safety, health and happiness in all lawful ways. In enjoying these rights, all persons recognize corresponding responsibilities.[77]

Further, Article IX—Environment and Natural Resources of Montana's Constitution reads as follows:

> Section 1. Protection and improvement. (1) The state and each person shall maintain and improve a clean and healthy environment in Montana for present and future generations.(2) The legislature shall provide for the administration and enforcement of this duty.(3) The legislature shall provide adequate remedies for the protection of the environment life support system from degradation and provide adequate remedies to prevent unreasonable depletion and degradation of natural resources.[78]

Thus, Article II, Section 3 affirms the right to a clean and healthy environment as an inalienable right among all persons. And Article IX further safeguards inhabitants' rights to a protected and improved environment.[79]

In the 1999 Montana Supreme Court case *Montana Environmental Information Center v. Department of Environmental Quality*, plaintiff environmental groups (Montana Environmental Information Center and Women's Voices for the Earth) appealed the decision of the trial court, which held that, absent a finding of actual injury, the state statute was not unconstitutional as applied by the state environmental regulatory agency.[80] In accordance with an exemption in state environmental law, the Department of Environmental Quality had declined to perform a review of mining activities near the Blackfoot and Landers Fork Rivers, leading to a dangerous buildup of arsenic levels in the water. The environmental groups were concerned that, based upon the state's actions, polluted waters would therefore have been allowed to surge into the Blackfoot River and neighboring watersheds. The environmental activists argued that the environmental statute violated the fundamental right to a clean and healthy environment guaranteed by the state constitution.

The Montana Supreme Court determined that to the extent that the environmental statute excluded activities from nondegradation review without regard to the nature or the volume of the substances being discharged, it violated a fundamental state constitutional right providing for a clean and healthy environment. The Montana Supreme Court's ruling ultimately determined that blanket exemptions are unconstitutional unless the state can show a compelling governmental interest for granting such exemptions. In its unanimous ruling, the court categorically stated:

> We conclude, based on the eloquent record of the Montana Constitutional Convention that to give effect to the rights guaranteed by Article II, Section 3 and Article IX, Section 1 of the Montana Constitution they must be read together and consideration given to all the provisions of Article IX, Section 1 as well as the preamble to the Montana Constitution. In doing so, we conclude that the delegates' intention was to provide language and protections which are both anticipatory and preventative. The delegates did not intend to merely prohibit that degree of environmental degradation which can be conclusively linked to ill health or physical endangerment. *Our constitution does not require that dead fish float on the surface of our state's rivers and streams before its farsighted environmental protections can be invoked*. The delegates repeatedly emphasized that the rights provided for in subparagraph (1) of Article IX, Section 1 was linked to the legislature's obligation in subparagraph (3) to provide remedies for degradation of the environmental life support system and to prevent unreasonable degradation of natural resources.[81]

In sum, the environmental groups had standing and they did not have to wait until degradation was underway to initiate a lawsuit. The Supreme Court empowered them to prevent environmental problems before they occurred based upon the right to a clean and healthy environment guaranteed by the Montana Constitution.[82]

Two years later, the Montana Supreme Court extended this logic to include limitations on the activities of private actors by ruling, in *Cape-France Enterprises v. Estate of Peed*, that a private landowner could not drill a well on their own land if it would cause significant environmental degradation.[83] The Montana Supreme Court determined that "[i]n light of these two provisions of Montana's Constitution, it would be unlawful for Cape-France, a private business entity, to drill a well on its property in the face of substantial evidence that doing so may cause significant degradation of uncontaminated aquifers and pose serious public health risks."[84]

Pennsylvania (as well as Montana) can serve and has served as a model for environmental constitutionalism across the United States. In fact, the New Jersey

77. Mont. Const. art. II, §3.
78. *Id*. art. IX.
79. Tammy Wyatt-Shaw, *The Doctrine of Self-Execution and the Environmental Provisions of the Montana State Constitution: "They Mean Something,"* 15 Pub. Land L. Rev. 219 (1994).
80. 1999 MT 248 (Mont. 1999).
81. *Id*. at 277 (emphasis added).
82. *See* Deborah Beaumont Schmidt & Robert J. Thompson, *The Montana Constitution and the Right to a Clean and Healthful Environment*, 51 Mont. L. Rev. 411 (1990).
83. 2001 MT 139 (Mont. 2001).
84. *Id*. at 233.

Legislature is considering identical concurrent resolutions (A.C.R. 85 and S.C.R. 134) that would embed an environmental rights amendment in the state constitution—modeled on Article 1, Section 27 of the Pennsylvania Constitution. The proposed Environmental Rights Amendment reads as follows:

a. Every person has a right to a clean and healthy environment, including pure water, clean air, and ecologically healthy habitats, and to the preservation of the natural, scenic, historic, and esthetic qualities of the environment. The State shall not infringe upon these rights, by action or inaction.

b. The State's public natural resources, among them its waters, air, flora, fauna, climate, and public lands, are the common property of all the people, including both present and future generations. The State shall serve as trustee of these resources, and shall conserve and maintain them for the benefit of all people.

c. This paragraph and the rights stated herein are: (1) self-executing, and (2) shall be in addition to any rights conferred by the public trust doctrine or common law.[85]

The process in New Jersey for adopting a constitutional amendment requires either a three-fifths majority in the Senate and Assembly, or a majority vote in each house in two consecutive years followed by a citizen referendum in which New Jersey residents must approve the amendment by a majority vote. It remains to be seen whether New Jersey will have an environmental rights provision inserted into the state's constitution by March 1, 2020. This is how democracy works: the citizens of New Jersey would express their will through a vote in a referendum to amend the state constitution. The phrase "consent of the governed" is in the U.S. Declaration of Independence. This means that government gets all of its powers from the people. The people run the government which is of, by, for, and about the people. This, unquestionably, is more than simply providing another private right-of-action.

C. Public Trust

It should be noted that the actual and proposed individual citizen's environmental rights amendments of Pennsylvania and New Jersey, respectively, have the following features in common: (1) an individual right to pure water, clean air, and the preservation of the natural scenic, historic, and esthetic values of the environment; and (2) that public natural resources are the common property of all the people, including future generations, and the state is the trustee of those resources, which requires the state to maintain them for the benefit of all the people.

The Commonwealth's responsibility as a trustee was examined by the Supreme Court of Pennsylvania in *Pennsylvania Environmental Defense Foundation v. Commonwealth*.[86] In that case, an environmental advocacy group sued the commonwealth, challenging the constitutionality of statutory enactments relating to funds generated from the leasing of state forest and park lands for oil and gas exploration. The group argued that the statutes were facially unconstitutional because they violated the Environmental Rights Amendment of the state constitution since state parks and forests, including the oil and gas minerals contained therein, were part of the corpus of the commonwealth's environmental public trust, and, therefore, the state must manage them according to the plain language of Section 27. The group argued that Section 27 imposes a fiduciary duty consistent with Pennsylvania trust law, and, thus, this language controlled how the state may dispose of any proceeds generated from the sale or leasing of its public natural resources.

The Pennsylvania Supreme Court held that the Commonwealth's duty as a trustee was governed by the Environmental Rights Amendment and, therefore, the disposition of natural gas revenues generated from the leasing of state forests and park lands was subject to the plain meaning of the provision. The legislation that transferred monies received from gas leasing of state forests and park lands into the general fund, where it could be spent for purposes other than conservation and the maintenance of public natural resources, was facially unconstitutional.

The question that is posed then is whether an environmental rights amendment in a state constitution similar to Pennsylvania's would allow the state, as a trustee, to address the adverse impacts of climate change caused by industry as a result of greenhouse gas emissions in that state.

IV. Environmental Constitutionalism and Global Warming

The central thesis of this Article is that environmental constitutionalism may be a more viable mechanism at this point for securing clean air, clean water, and clean land for all in the United States. If there is a self-executing individual citizen's environmental rights amendment in a state constitution that recognizes an explicit right to a clean, safe, and healthy environment that is inalienable and on par with the right to free speech, freedom of religion, the right to bear arms, and due process, there is a strong presumption that the courts will uphold that right. Moreover, if there is such a right in a state constitution, it would clearly indicate that the state legislature and the executive branch have acted, and that the voters have also agreed with the actions of their elected representatives.

Further, if there is a self-executing individual environmental rights amendment in a state constitution, this clearly indicates that individual citizens have standing if

85. S. Con. Res. 134, 218th Leg. (N.J. 2018), *available at* https://www.njleg.state.nj.us/bills/BillView.asp?BillNumber=SCR134.

86. 161 A.3d 911, 47 ELR 20081 (Pa. 2017).

they were injured or could suffer injury, and, thus, they do not have to rely solely on legislative environmentalism. This part discusses cases where this approach is being considered by federal and state courts to address the issue of climate change.

Climate change is the most important environmental issue facing humans, who, based upon climate science, have released vast amounts of carbon dioxide and other greenhouse gases into the atmosphere. According to EPA's 2009 endangerment finding (EF) discussed earlier in this Article, these emissions have threatened the public health and the welfare of present and future generations. In December 2018, researchers in the journal *Science*[87] assessed the scientific evidence that emerged since the finding was released in 2009 pertaining to six greenhouse gases, and found that this new evidence increased support for EPA's conclusion that these gases posed a danger to public health and welfare. The researchers determined that newly available evidence about a wide range of observed and projected impacts (1) strengthened the association between risk of some of those impacts and anthropogenic climate change; (2) indicated that some impacts or combinations of impacts have the potential to be more severe than previously understood; and (3) identified substantial risk of additional impacts through processes and pathways not considered in the finding.

Specifically, with respect to the potential public health problems caused by climate change, the researchers stated:

> Since the EF, numerous scientific reports, reviews, and assessments have strengthened our understanding of the global health threats posed by climate change. New evidence validates and deepens understanding of threats, including increased exposure to extreme heat, reduced air quality, more frequent and/or intense natural hazards, and increased exposure to infectious diseases and aeroallergens. New evidence also highlights additional health-related threats not discussed in the EF, including reduced nutritional security, impacts on mental health, and increased risk of population displacement and conflict.
>
> Extreme heat is the most direct health impact. With future warming, >200 U.S. cities face increased risk of aggregated premature mortality. In addition, extreme heat is linked to rising incidence of sleep loss, kidney stones, low birth weight, violence, and suicide.
>
> New studies also strengthen evidence for health impacts via increased exposure to ozone and other air pollutants, including smoke from forest fires. Likewise, evidence for links among climate change, extreme weather, and climate-related disasters is growing rapidly. These events often lead to physical trauma, reduced air quality, infectious disease outbreaks, interruption of health service delivery, undernutrition, and both acute and chronic mental health impacts.
>
> Changes in temperature, precipitation, and soil moisture are also altering habitats, life cycles, and feeding behaviors of vectors for most vector-borne diseases, with recent research documenting changes in exposure to malaria, dengue, West Nile virus, and Lyme disease, among others. Recent work also reinforces the evidence that increased outbreaks of water-borne and food-borne illness are likely to follow increasing temperatures and extreme precipitation. Likewise, recent research reinforces the conclusion that rising temperatures and carbon dioxide (CO_2) levels will increase pollen production and lengthen the pollen season for many allergenic plants, leading to increased allergic respiratory disease.
>
> One area of new understanding, not covered in the EF, is threats to global nutrition. Staple crops grown at 550 ppm [parts per million] CO_2 have lower amounts of zinc, iron, and protein than the same cultivars grown at ambient CO_2. These nutrient losses could push hundreds of millions of people into deficiencies of zinc, protein, and iron, in addition to aggravating existing deficiencies in over one billion people. These impacts on nutritional quality exacerbate the impacts of climate change on agricultural yield. . . . Together, these effects underscore a significant headwind in assuring access to nutritious diets for the global population.
>
> Mental health impacts represent another area of new understanding. In particular, increased exposure to climate and weather disasters is associated with post-traumatic stress, anxiety, depression, and suicide.
>
> Finally, climate change is increasingly understood to function as a threat magnifier, raising the risk of population displacement and armed conflict . . . , which can also amplify risks to human health.[88]

In sum, this report indicated that, without question, we in the United States (and elsewhere in the world) are increasingly moving toward irreparable adverse health impacts unless action is taken now by either the courts, or Congress, or the executive branch.

A. Urgenda

This realization took on new meaning with the precedent-setting lawsuit, *Urgenda Foundation v. Kingdom of the Netherlands*, brought by 900 Dutch citizens against the Netherlands government,[89] represented by the Dutch

87. Philip B. Duffy et al., *Strengthened Scientific Support for the Endangerment Finding for Atmospheric Greenhouse Gases*, Science, Feb. 8, 2019, *available at* http://science.sciencemag.org/content/363/6427/eaat5982.

88. *Id.* (citations omitted).

89. RB-Den Haag [Hague District Court] 24 June 2015, ECLI:NL:RBDHA:2015:7196 (Stichting Urgenda/Nederlanden) [Urgenda Found. v. Netherlands], http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2015/20150624_2015-HAZA-C0900456689_decision-1.pdf.

environmental group the Urgenda Foundation. On June 24, 2015, the citizens prevailed, when the Hague District Court ordered the government to cut greenhouse gas emissions nationwide by at least 25% by 2020 (compared to 1990s levels). The Dutch government was forced to take concrete measures against climate change. This case laid the foundation for similar lawsuits around the world, all relating to a national government's obligations to mitigate climate change, and grounded in part on rights-based theories rather than through reference to environmental statutory requirements.

The Dutch court stated: "The State must do more to avert the imminent danger caused by climate change, also in view of its duty of care to protect and improve the living environment." The Dutch government appealed the decision. On October 9, 2018, the Hague Court of Appeal upheld the judgment of the lower court, and declared that judgment to be "provisionally enforceable."[90] The Court of Appeal, while citing Article 21 of the Dutch Constitution,[91] determined that the Dutch government had a duty under Article 2 and Article 8 of the European Convention on Human Rights to protect the right to life, as well as the right to private life, family life, home, and correspondence, respectively, from the real threat of climate change. Most importantly, the appellate court rejected the government's argument that the Hague District Court's decision constituted "an order to create legislation."

B. Juliana

In the United States, Our Children's Trust, an Oregon-based nonprofit litigation organization,[92] has continued to improve upon this rights-based litigation strategy with its climate youth lawsuits in Oregon federal district court, and in similar climate youth litigation in Alaska, Colorado, Florida, Maine, Massachusetts, New Mexico, North Carolina, Oregon, and Washington. Our Children's Trust's lawsuits seek "climate justice," the term used for framing global warming as an ethical and political issue, rather than one that is purely environmental in nature.[93] This is done by relating the effects of climate change to concepts of justice, particularly environmental justice and social justice.[94] Our Children's Trust climate change lawsuits focus on the U.S. Constitution and state constitutions.

Our Children's Trust represents a diverse group of 21 young people—between the ages of 8 and 19—from across the United States, who are currently challenging in federal district court in Oregon the Trump Administration policies on climate change and climate science in a landmark lawsuit, *Juliana v. United States*.[95] This lawsuit has been called by many in the U.S. environmental law and policy community the most important environmental case of the century. As far as the Trump Administration is concerned, this is a case that the government must win, since the chief of the U.S. Department of Justice (DOJ) Environment and Natural Resources Division—the top political appointee—is slated to argue the government's appeal in June or July 2019.[96] This is "a relatively rare task for a division leader."[97]

In August 2015, 21 young people filed a complaint against the Obama Administration asserting that, in causing climate change, the federal government violated the youngest generation's constitutional rights to life, liberty, and property in violation of the Due Process Clause of the Fifth Amendment. The complaint alleged that the federal government was violating the youth's constitutional rights by promoting the development and use of fossil fuels. The

90. Hof-Den Haag [Hague Court of Appeal] 9 Oct. 2018, ECLI:NL:GHDHA:2018:2610(Nederlanden/StichtingUrgenda) [Netherlands v. Urgenda Found.], http://blogs2.law.columbia.edu/climate-change-litigation/wp-content/uploads/sites/16/non-us-case-documents/2018/20181009_2015-HAZA-C0900456689_decision.pdf.

91. Article 21 states: "It shall be the concern of the authorities to keep the country habitable and to protect and improve the environment." This article imposes a duty on the Dutch government to ensure the habitability of the land, and the protection and improvement of the environment with appropriate environmental laws. There is no express right to a clean and healthy environment in the Dutch Constitution.

92. Our Children's Trust, *Our Mission*, https://www.ourchildrenstrust.org/mission-statement (last visited Feb. 18, 2019). The mission of Our Children's Trust is as follows:

> Our Children's Trust elevates the voice of youth to secure the legal right to a stable climate and healthy atmosphere for the benefit of all present and future generations. Through our programs, youth participate in advocacy, public education and civic engagement to ensure the viability of all natural systems in accordance with science.
>
> Our mission is to protect earth's atmosphere and natural systems for present and future generations. We lead a game-changing legal campaign seeking systemic, science-based emissions reductions and climate recovery policy at all levels of government. We give young people, those with most at stake in the climate crisis, a voice to favorably impact their futures.

93. Mary Robinson Foundation states:

> Climate justice links human rights and development to achieve a human-centered approach, safeguarding the rights of the most vulnerable people and sharing the burdens and benefits of climate change and its impacts. Climate justice is informed by science, responds to science and acknowledges the need for equitable stewardship of the world's resources.

The Mary Robinson Foundation developed its "Principles of Climate Justice," which are (1) respect and protect human rights; (2) support the right of development; (3) share benefits and burdens equitably; (4) ensure that decisions on climate change are participatory, transparent, and accountable; (5) highlight gender equality and equity; (6) harness the transformative power of education for climate stewardship; and (7) use effective partnerships to secure climate justice. Mary Robinson Foundation, Principles of Climate Justice (2015), https://www.mrfcj.org/wp-content/uploads/2015/09/Principles-of-Climate-Justice.pdf.

94. *See* University of Colorado Boulder Environmental Center, *Climate Justice*, which states:

> Climate change is fundamentally an issue of human rights and environmental justice that connects the local to the global. With rising temperatures, human lives—particularly in people of color, low-income, and indigenous communities—are affected by compromised health, financial burdens, and social and cultural disruptions. Those who are most affected and have the fewest resources to adapt to climate change are also the least responsible for the greenhouse gas emissions—both globally and within the United States.

https://www.colorado.edu/ecenter/energyclimate-justice/general-energy-climate-info/climate-change/climate-justice (last visited Feb. 18, 2019).

95. No. 6:15-cv-01517-TC, 46 ELR 20175 (D. Or. Nov. 10, 2016).

96. Ellen M. Gilmer, *Admin's Top Environmental Lawyer to Argue Kids' Climate Case*, Climatewire, Jan. 23, 2019, https://www.eenews.net/climatewire/stories/1060118135.

97. *Id.*

climate youth plaintiffs argued that the federal government had known for decades that fossil fuel emissions were destroying the climate system and failed to restrict those emissions and continued to authorize fossil fuel projects that amplify the danger and foreclose the opportunity to stabilize the climate system. The climate youth plaintiffs sought a court order requiring the president to implement immediately a national plan to decrease atmospheric concentrations of carbon dioxide to a safe level: 350 ppm by 2100, which is based upon sound climate science.

Moreover, the climate youth plaintiffs argued that the federal government failed to protect and conserve the nation's public trust resources, including the atmosphere. This argument originates from the "atmospheric trust litigation" approach developed by Prof. Mary Christina Wood of the University of Oregon's Environmental and Natural Resources Law Center. According to Professor Wood, "It's kind of a straightforward exercise to apply the public trust to the atmosphere. The government is a trustee and has to protect it for the benefit of present and future generations."[98] In order to prevail at trial, the climate youth plaintiffs will need to show that (1) the federal government's actions created the danger to the plaintiffs; (2) the federal government knew its actions caused the danger; and (3) the federal government, with deliberate indifference, failed to act to prevent the alleged harm.

It may be helpful to the reader to observe and appreciate the myriad procedural twists and turns surrounding this case. The Trump Administration has been especially aggressive in seeking to ensure that this case not proceed to trial.

In November 2015, the U.S. government filed its motion to dismiss because the climate youth plaintiffs (1) lacked standing since they alleged a generalized grievance, not a particularized grievance, and that no future generations had suffered any injury-in-fact; and (2) failed to state a claim under the Constitution since there was no constitutional right to be free from carbon dioxide emissions. The U.S. government also argued that the federal district court lacked jurisdiction over the public trust doctrine, which arises under state law, not federal law.

In April 2016, U.S. Magistrate Judge Thomas Coffin decided in favor of the 21 climate youth plaintiffs. Magistrate Coffin characterized the case as an "unprecedented lawsuit" addressing "government action and inaction" resulting "in carbon pollution of the atmosphere, climate destabilization, and ocean acidification." In ruling that the case should proceed, Magistrate Coffin wrote:

> The debate about climate change and its impact has been before various political bodies for some time now. Plaintiffs give this debate justiciability by asserting harms that befall or will befall them personally and to a greater extent than older segments of society. It may be that eventually the alleged harms, assuming the correctness of plaintiffs' analysis of the impacts of global climate change, will befall all of us. But the intractability of the debates before Congress and state legislatures and the alleged valuing of short term economic interest despite the cost to human life, necessitates a need for the courts to evaluate the constitutional parameters of the action or inaction taken by the government. This is especially true when such harms have an alleged disparate impact on a discrete class of society.[99]

In November 2016, District Judge Ann Aiken upheld Magistrate Coffin's recommendation with the issuance of a historic opinion and order denying the motion to dismiss. Judge Aiken wrote:

> This is no ordinary lawsuit . . . This lawsuit is not about proving that climate change is happening or that human activity is driving it. For the purposes of this motion, those facts are undisputed. The questions before the Court are whether defendants are responsible for some of the harm caused by climate change, whether plaintiffs may challenge defendants' climate change policy in court, and whether this Court can direct defendants to change their policy without running afoul of the separation of powers doctrine.[100]

District Judge Aiken went on to state:

> Exercising my "reasoned judgment," I have no doubt that the right to a climate system capable of sustaining human life is fundamental to a free and ordered society . . . Federal courts too often have been cautious and overly deferential in the arena of environmental law, and the world has suffered for it. As Judge [Alfred] Goodwin recently wrote,
>
> > "The current state of affairs . . . reveals a wholesale failure of the legal system to protect humanity from the collapse of finite natural resources by the uncontrolled pursuit of short-term profits. . . . [T]he modern judiciary has enfeebled itself to the point that law enforcement can rarely be accomplished by taking environmental predators to court. . . .

98. Understanding the climate youth plaintiffs' arguments in this case requires a brief primer on the ancient public trust doctrine, which has been in existence since the Roman Empire ruled the world. In the Institutes of Justinian, the Roman Emperor Justinian first articulated the idea of the public trust when he stated: "By the law of nature these things are common to mankind—the air, running water, the sea and consequently the shores of the sea." In its early form, the public trust doctrine sought to protect the public's right to access certain resources, particularly navigable bodies of water. The English later incorporated the public trust doctrine into their legal system, and, in 1215, the doctrine emerged as part of the Magna Carta, which, among other things, specifically condemned interference with public access to navigable waters, and prevented the king from giving favored noblemen exclusive rights to hunt or fish in certain areas. Although the king was understood to own the land, he had an obligation to protect it for use by the public. Still later, the public trust doctrine became a part of U.S. common law. And, in 1983, in the seminal case *National Audubon Society v. Department of Water & Power of the City of Los Angeles*, 33 Cal. 3d 419 (Cal. 1983), the California Supreme Court ruled that "[t]he public trust is an affirmation of the duty of the state to protect the people's common heritage of streams, lakes, marshlands and tidelands."

99. Order and Findings & Recommendation, Juliana v. United States, No. 6:15-cv-01517-TC (Apr. 8, 2016), at 8.

100. Order and Opinion, Juliana v. United States, No. 6:15-cv-01517-TC (D. Or. Nov. 10, 2016), at 3-4.

> The third branch can, and should, take another long and careful look at the barriers to litigation created by modern doctrines of subject-matter jurisdiction and deference to the legislative and administrative branches of government. . . ."[101]

With respect to the climate youth plaintiffs' public trust argument, Judge Aiken determined that (1) the atmosphere was a public trust asset; (2) the federal government had a public trust obligation; (3) the federal government's public trust obligation was not displaced by federal environmental statutes; and (4) the climate youth plaintiffs had a private right-of-action to enforce the federal government's public trust obligation.

In February 2017, President Trump was named a defendant and the federal government immediately took aggressive action in the litigation. Among other things, the Trump Administration filed a motion seeking expedited appeal of Judge Aiken's opinion and order to the Ninth Circuit. In June 2017, the Trump Administration filed a writ of mandamus petition with the Ninth Circuit seeking an extraordinarily rare review of Judge Aiken's opinion and order.

In March 2018, a unanimous three-judge panel of the Ninth Circuit rejected the Trump Administration's "drastic and extraordinary" petition for a writ of mandamus. The appellate court ruled that the case could proceed toward trial, and that the Trump Administration had not satisfied the factors necessary for an extraordinary writ of mandamus. Chief Judge Sidney R. Thomas wrote that the federal government's request to halt the litigation was "entirely premature," and that "the government's concerns would be better addressed through the ordinary course of litigation."

The Trump Administration, surprisingly, filed a second petition for a writ of mandamus to dismiss the case altogether, or, in the alternative, to stay all discovery and trial. In July 2018, in a per curiam decision, Chief Judge Thomas wrote that "[n]o new circumstances justify the second petition to grant mandamus relief," and that "[t]he merits of the case can be resolved by the district court or in a future appeal." Thus, the second petition for a writ of mandamus was denied by a unanimous decision of the three-judge panel. In short, it appeared to many in the environmental law and policy community that the Trump Administration could not evade a constitutional climate change trial.

The 50-day trial was slated to start on October 29, 2018. However, the climate youth lawsuit was stayed by the Supreme Court. On October 19, Chief Justice John Roberts issued an order that stopped the case until the climate youth plaintiffs responded to a DOJ motion to dismiss because the government argued that the complaint was overly broad, and that climate policy should not be decided by the judiciary. DOJ asked for a rare writ of mandamus to stop the proceedings and argued, based upon the lack of traceability, that: (1) the plaintiffs failed to trace their alleged injuries directly to the federal government's actions; (2) the plaintiffs ignored the role that third parties have played in causing such alleged injuries; and (3) the plaintiffs improperly aggregated vaguely defined categories of federal governmental actions and inactions.

On October 22, the climate youth plaintiffs responded to the Trump Administration's application for a stay. Among other things, the climate youth plaintiffs argued that contrary to the assertions of the Trump Administration, the trial would not intrude on the ability of the executive branch to carry out its functions and that there would be no confidential information disclosed at the trial. Moreover, they pointed out that the projected 50-day length of the trial and its costs were not enough to show irreparable harm to the government for purposes of a stay. Additionally, the climate youth plaintiffs argued that this was not an environmental case per se: instead, it was, in actuality, a civil rights case. The case was not about the federal government's failure to act on the climate; instead, the kids asserted that it was through its affirmative decisions that the federal government created a national energy system that caused climate change that deprived them of their constitutional rights to life, liberty, and property. Finally, and perhaps most importantly, the climate youth plaintiffs argued that the case did not hinge on a newly recognized unenumerated fundamental constitutional right to a clean, safe, and healthy environment and that DOJ purposely misstated the essence of their case.

On November 2, 2018, Chief Justice Roberts issued an order lifting the stay and denied without prejudice the Trump Administration's petition for a writ of mandamus. Consequently, DOJ filed a motion for a temporary stay of the trial and another petition for a writ of mandamus with the Ninth Circuit. On November 8, the appellate court issued an order giving the youth plaintiffs 15 days to file a response to the government's petition. The Ninth Circuit also provided the opportunity for District Court Judge Aiken to address the petition for mandamus. Moreover, the youth plaintiffs and the Trump Administration were ordered to file a joint report on the status of discovery and any relevant pretrial matters.

On November 21, 2018, Judge Aiken certified the case for interlocutory appeal and stayed the case. On December 26, 2018, the Ninth Circuit granted interlocutory appeal and, in a unanimous decision, denied another request for a writ of mandamus. On January 7, 2019, the Ninth Circuit granted the climate youth plaintiffs' motion to expedite briefing. Oral argument is expected to take place in June or July 2019 before the Ninth Circuit.

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101. *Id.* at 32, 52. A clear example of a court deferring to the other branches in a youth climate change case occurred with the recent case *Clean Air Council v. United States*, No. 2:17-cv-04977, 49 ELR 20028 (Feb. 19, 2019). District Court Judge Paul Diamond of the U.S. District Court for the Eastern District of Pennsylvania dismissed the complaint of the environmental group and two children saying that he had "neither the authority nor the inclination" because he lacked jurisdiction to hear their claims because it could violate the U.S. Constitution's separation-of-powers principle by putting the court in charge of executive branch policy. Judge Diamond rejected their claims that they had a fundamental right to a "life-sustaining climate system."

From a procedural point of view, this is "no ordinary case." The U.S. government believes that this lawsuit is a judicial usurpation of power. The Trump Administration has filed, thus far, five petitions for a writ of mandamus with the Ninth Circuit, and two petitions with the Supreme Court. But the legal requirements of mandamus will typically not be granted if adequate relief can be obtained by some other means, such as an appeal.

If and when *Juliana* proceeds to trial, the climate youth plaintiffs will be faced with the dual problems of standing and the role of the federal courts in addressing the climate change issue. There is no federal climate change legislation. There is no environmental rights amendment in the Constitution. There is no reference, either explicit or implicit, to the environment. The Constitution includes no explicit statement of a right to a clean and healthy environment. The Constitution is "pre-ecological."[102] This case may eventually be heard by the Supreme Court because it is pushing the boundaries of constitutional law and environmental law. Indeed, the issue of climate change may be changing the law in the United States.

C. State Constitutional Cases

Our Children's Trust is also pushing the boundaries of constitutional law and environmental law on the state level. In Florida, in April 2018, Our Children's Trust spearheaded the climate youth litigation *Reynolds v. Florida*.[103] In that lawsuit, a diverse group of eight young Floridians, ages 19 and younger, filed suit against the state of Florida and the governor for the "Defendants' deliberate indifference to the fundamental rights to a stable climate system" in violation of Florida common law and Article I, Sections 1, 2, and 9; Article II, Sections 5, 7(a), and 8; and Article X, Sections 11 and 16 of the Florida Constitution. The climate youth plaintiffs specifically argued:

> All of Florida's public trust resources, including without limitation, the atmosphere (air), submerged state sovereignty lands, lakes, rivers, beaches, water (both surface and subsurface), forests, and wild flora and fauna (individually, a "Public Trust Resource," and collectively, "Public Trust Resources"), are essential for life, liberty, pursuit of happiness, and property, including human habitation and personal and economic health, safety, and wellbeing.[104]

In July 2018, Florida filed a motion to dismiss, arguing that (1) the state of Florida and its agencies are not proper parties, and are immune from the lawsuit; (2) the court does not have the authority to hear the plaintiffs' substantive due process claims, and the court's enforcement of the plaintiffs' constitutional rights would constitute an interference into the state's executive and legislative branches since climate change is a political question; and (3) the court does not have the authority to hear the plaintiffs' public trust doctrine claims. On September 17, the climate youth plaintiffs filed their response. The case is pending.[105]

In Alaska, in October 2017, 16 youth plaintiffs, ages 5 to 20, filed a lawsuit, *Sinnok v. State*, in state court against the state of Alaska, the governor, and state agencies alleging that the defendants had violated "their inalienable and fundamental rights to life, liberty, property, equal protection, public trust resources, and a stable climate system that sustains human life and liberty."[106] In that case, the youth plaintiffs, represented by Our Children's Trust, argued that in implementing its "Climate and Energy Policy," which authorized and facilitated activities producing greenhouse gas emissions and failed to implement climate mitigation standards, the defendants failed "to enforce sections 1, 7, and 21 of Article I of the Alaska Constitution and Article VIII of the Alaska Constitution."

Moreover, the youth plaintiffs specifically argued that, with respect to the public trust:

> All of Alaska's Public Trust resources, including, without limitation, waters (surface, subsurface, and atmospheric), fish, and wildlife, air (atmospheric), the climate system, the sea and the shores of the sea, submerged and submersible lands, beaches, forests, and tundra (each individually a "Public Trust Resource," and collectively "Public Trust Resources"), and correlative public uses to such resources, including, without limitation, public access, fishing, and navigation, are essential for Youth Plaintiffs' rights to life, liberty, and property.[107]

The youth plaintiffs asked the court to remedy the violations of their constitutional rights by ordering the state to prepare a plan to reduce Alaska's emissions in line with a science-based prescription to stabilize the climate system.

Alaska filed a motion to dismiss in December 2017, arguing that (1) the plaintiffs' injunctive relief claims should be dismissed because climate change policy determinations must be made by the executive or legislative branches of government; (2) the plaintiffs' declaratory relief claims should be dismissed because the courts do not have the authority to grant the proposed remedies; and (3) Department of Environmental Conservation Commissioner Larry Hartig's four-page written denial of their proposed regulations to create a stable climate system and counter climate change complied with Alaska's Administrative Procedure Act, and that his denial of their proposed changes to the Climate and Energy Policy was not arbitrary. In October 2018, Superior Court Judge Gregory Miller granted the state's motion to dismiss. In November 2018, the climate youth plaintiffs filed a notice of appeal with the Alaska Supreme Court. The case is pending.[108]

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102. Cannon, *supra* note 23, at 29.
103. No. 18-CA-000819 (Fla. Cir. Ct. filed Apr. 16, 2018), *available at* http://climatecasechart.com/case/reynolds-v-florida/.
104. *Id.* at ¶ 4.
105. *See* Our Children's Trust, *Florida,* https://www.ourchildrenstrust.org/florida (last visited Mar. 3, 2019).
106. No. 3AN-17-09910 C1 (Alaska Super. Ct. Oct. 30, 2018), *available at* http://climatecasechart.com/case/sinnok-v-alaska/.
107. *Id.* at ¶ 4.
108. *See* Our Children's Trust, *Alaska,* https://www.ourchildrenstrust.org/Alaska (last visited Mar. 3, 2019).

These climate youth plaintiffs' lawsuits in Florida, Alaska, and other states mirror, in many respects, the legal arguments in the Oregon federal district court climate youth case. In the three lawsuits, the climate youth plaintiffs argued that a government, whether federal or state, elected by and for the people has a duty to protect the public trust, which includes the atmosphere, for present and future generations. But if the executive and legislative branches of government fail to exercise that public trust duty because of climate change policy decisions, the judicial branch must intervene to reduce and mitigate the adverse effects of climate change.

Imagine for a moment what would have happened if Florida and Alaska each had clear self-executing individual environmental rights amendments in their state constitutions similar to Pennsylvania's and Montana's Environmental Rights Amendments. The issue of standing may not be a potentially insurmountable legal question. And the role of the judiciary in a climate change lawsuit may not be such a major legal question.

Imagine for a moment what would have happened in the *Juliana* case if there was a clear self-executing individual environmental rights amendment in the Bill of Rights of the U.S. Constitution. Would the issue of climate change be more effectively and efficiently addressed by EPA even if there was no specific federal climate change statute? Would the issue of standing be a potentially insurmountable issue? Would the role of the judiciary in a climate change lawsuit be such a major legal question as it was in the *American Electric Power Co.* case?

V. Environmental Injustice in Flint, Michigan

This Article argues that if there were a self-executing individual environmental rights provision in the bill of rights sections of state and federal constitutions, this would indicate that we, as citizens of this nation, have a right to a clean, safe, and healthy environment. This right would be indefeasible and inalienable because it was placed in the state constitutions' bill of rights section through the democratic process. The Hawaii provision, for example, says that, "Each person has the right to a clean and healthful environment."[109] This right, consequently, belongs to Hawaiians as citizens based solely upon state constitutional law, and would be inviolable. If this right was challenged by governmental action or by industry, any Hawaiian citizen could go to state court to defend that right just as he or she would defend the right to free speech, freedom of the press, freedom of assembly, freedom of worship and religious belief, and so on. The Illinois provision, for example, states, "Each person may enforce this right against any party, governmental or private."[110] Once constitutionalized, environmental rights are positively correlated with human rights outcomes. Thus, arguably, this right would be tantamount to a recognized human right such as the human right to clean water and sanitation.

A question that arises is: how would the residents of Flint, Michigan, have fared if there was a self-executing individual environmental rights provision in the bill of rights section of Michigan's Constitution?

In many respects, Flint is currently the poster child for environmental injustice in the United States. This predominantly African-American city is struggling with the decisions made by state and local government agencies. Class action lawsuits have been filed against Michigan's Department of Environmental Quality since, according to the complaint, the department "made the final decision that created, increased and prolonged the hazards, threats and dangers that arose by [the] replacing of safe drinking, washing and bathing water with a highly corrosive alternative."

First, it is important to understand the adverse impacts to human health as a result of the lack of access to clean and safe drinking water and sanitation. Access to these has been recognized as a critical link to human health throughout the passage of time. For example, Marcus Vitruvius Pollio, a famous Roman architect and engineer, recognized this relationship as far back as the 1st century B.C. In his influential and compelling treatise *The Ten Books on Architecture*,[111] Vitruvius categorically stated:

> For it is obvious that nothing in the world is so necessary for use as water, seeing that any living creature, can, if deprived of grain or fruit or meat or fish, or any one of them, support life by using other foodstuffs; but without water no animal nor any proper food can be produced, kept in good condition, or prepared. Consequently, we must take great care and pains in searching for springs and selecting them, keeping in view the health of mankind.
>
> Springs should be tested and proved in advance in the following ways. If they run free and open, inspect and observe the physique of the people who dwell in the vicinity before beginning to conduct the water, and if their frames are strong, their complexion fresh, legs sound, and eyes clear, the springs deserve complete approval . . .
>
> And if green vegetables cook quickly when put into a vessel of such water and set over a fire, it will be a proof that the water is good and wholesome. Likewise if the water in the spring is itself limpid and clear, if there is no growth of moss or reeds where it spreads and flows, and if its bed is not polluted by filth of any sort but has a clean appearance, these signs indicate that the water is light and wholesome in the highest degree.[112]

Thus, Vitruvius, more than 2,000 years ago, was providing specific instructions on the selection of springs to provide Roman homes with clean and safe drinking water, and he linked directly the physical well-being and health

109. Haw. Const. art. X, §9.
110. Ill. Const. art. XI, §2.
111. Vitruvius, The Ten Books on Architecture (Morris Hicky Morgan trans., 1914).
112. *Id.* at 241-42.

of humans with the water that they used on a daily basis to survive and prosper. His discussion of the importance of having clean and safe drinking water was most telling when he simply concluded by implication: "look at the physique of the people who used the water and if they look healthy, the drinking water was clean and should be used." Conversely, if the humans did not look healthy, do not use the water. These are incredibly simple and effective instructions. Thus, if a population does not have clean and safe drinking water, its health will invariably be threatened.

Vitruvius also specifically recognized the adverse effects to human health as a result of lead ingestion. He provided specific instructions on using clay pipes instead of lead pipes to provide Roman houses with clean and safe drinking water. He wrote:

> Clay pipes for conducting water have the following advantages. In the first place, in construction: if anything happens to them, anybody can repair the damage. Secondly, water from clay pipes is much more wholesome than that which is conducted through lead pipes, because lead is found to be harmful for the reason that white lead is derived from it, and this is said to be harmful to the human system. Hence, if what is produced from it is harmful, no doubt the thing itself is not wholesome.
>
> This we can exemplify from plumbers, since in them the natural colour of the body is replaced by a deep pallor. For when lead is smelted in casting, the fumes from it settle upon members, and day after day burn out and take away all the virtues of the blood from their limbs. Hence, water ought by no means to be conducted in lead pipes, if we want to have it wholesome.[113]

Thus, more than 2,000 years ago, Vitruvius realized that lead was highly toxic, and, therefore, poisonous because it interfered with some of the body's basic functions. Without the benefit of modern medical technology, he was able to observe the adverse health effects of lead ingestion.

Lead can adversely affect the health of anyone, but children under age six face special hazards because their brains and nervous systems are still developing. It is important to note that even exposure to low levels of lead can permanently affect children. In low levels, it is generally accepted among the scientific community and public health professionals that lead can cause:

- Nervous system and kidney damage
- Learning disabilities, attention deficit disorder, and decreased intelligence
- Speech, language, and behavior problems
- Poor muscle coordination
- Decreased muscle and bone growth
- Hearing damage

Although children are especially susceptible to lead exposure, lead can also be dangerous to adults. In adults, high lead levels can cause:

- Increased chance of illness during pregnancy
- Harm to the fetus, including brain damage or death
- Fertility problems (in men and women)
- High blood pressure
- Digestive problems
- Nerve disorders
- Memory and concentration problems
- Muscle and joint pain[114]

The residents—the children and the adults—of Flint, Michigan, have been exposed disproportionately to the environmental harms and risks of lead ingestion because of decisions made by the state and local governments.

According to an October 2016, EPA Office of Inspector General (OIG) management alert entitled *Drinking Water Contamination in Flint, Michigan, Demonstrates a Need to Clarify EPA Authority to Issue Emergency Orders to Protect the Public*[115];

> Inadequate drinking water treatment exposed many of the nearly 100,000 residents who were customers of the city of Flint community water system to lead. Flint switched from purchasing treated water from Detroit Water and Sewerage to sourcing and treating its water supply from the Flint River in April 2014. Treated water from Detroit Water and Sewerage included a corrosion-inhibiting additive, which lined pipes and connections to minimize the level of lead leaching into drinking water. Flint's treatment of the new drinking water source did not include a process for reducing the corrosion of lead-containing pipes and connections, which allowed lead to begin leaching into drinking water.
>
> After the source switch, residents began reporting to the EPA that there were color and odor problems with the water. In February 2015, the public health risk escalated as indications of lead were identified in the drinking water supply. In April 2015, the EPA discovered that the necessary corrosion control had not been added in the community water system since the source switch. In August and September 2015, private researchers identified numerous homes with lead contamination, and also identified an increase in the blood lead levels of children living in Flint.

113. *Id.* at 246-47.

114. *See* Agency for Toxic Substances and Disease Registry Course, Lead Toxicity: What Are Possible Health Effects From Lead Exposure?, https://www.atsdr.cdc.gov/csem/lead/docs/CSEM-Lead_toxicity_508.pdf.

115. OIG, U.S. EPA, Drinking Water Contamination in Flint, Michigan, Demonstrates a Need to Clarify EPA Authority to Issue Emergency Orders to Protect the Public, Report No. 17-P-0004 (2016), *available at* https://www.epa.gov/sites/production/files/2016-10/documents/_epaoig_20161020-17-p-0004.pdf.

> High levels of *lead* may cause liver or kidney damage. Long-term lead exposure in adults can lead to nervous system problems and reproductive, brain and kidney damage, and can ultimately cause death. Children under the age of 6 are especially vulnerable to lead poisoning, which can severely affect mental and physical development.
>
> In October 2015, Flint switched back to purchasing treated water from Detroit Water and Sewerage. In January 2016, the EPA Administrator directed the headquarters' Office of Enforcement and Compliance Assurance (OECA) to issue an emergency administrative order under Section 1431 of the [Safe Drinking Water Act (SDWA). This order required the city to, among other things: continue to add corrosion inhibitors; demonstrate it has the technical, managerial and financial capacity to operate the system presently and before it switches to a new water source; and sample water quality and make data publicly available.[116]

In July 2018, the OIG issued its final report, *Management Weaknesses Delayed Response to Flint Water Crisis*, to EPA management. The OIG recommended that EPA should strengthen its oversight of state drinking water programs to improve the efficiency and effectiveness of the Agency's response to drinking water contamination emergencies. The OIG recommended that EPA headquarters and EPA Region 5 use lessons learned from Flint to improve its oversight of SDWA compliance.[117] That was the extent of the OIG's recommendations to EPA management. Since Michigan had an EPA-delegated drinking water program, the Agency was, for the most part, absolved of any real responsibility to the Flint residents.

However, if Michigan had an environmental rights amendment in the state constitution similar to the Hawaii provision that said that each person has the right to a clean and healthy environment, and the Illinois provision that said that each person may enforce this right against any party, governmental or private, then Flint residents would easily have had standing to file a citizen suit against the state since, in accordance with *Lujan*, (1) there was injury-in-fact; (2) there was a causal connection between the alleged injury and the action complained of; and (3) it was likely (not merely speculative) that the injury could be redressed by a favorable court decision.

If Michigan had an environmental rights amendment in the state constitution, the Flint community would have been treated differently by state officials. For example, in February 2015, Howard Croft, director of Flint's Department of Public Works, issued a citywide memorandum to the residents. The memorandum was a series of answers to a number of questions that were "provided to all interested persons, and [was] intended to provide transparent, detailed, and updated information that is pertinent to the City of Flint's water system." In response to the specific question as to whether the tap water was safe to drink, Director Croft unequivocally stated: "Yes, as safe as it possibly can be. However, if a person has a compromised immune system then he/she should consult with her/his physician first. It is also safe to bath [sic] and brush your teeth."[118]

Flint resident LeeAnne Walters did not believe Director Croft's assertions regarding the safety of the water. As the stay-at-home mother of four, she demanded that the city test her tap water after experiencing months of her children's health problems such as breaking out in bumps and rashes, and their hair falling out for no apparent reason. A city official tested her water and found levels of lead more than 20 times greater than the maximum concentration allowed by federal law. The city responded by merely providing her with an ordinary garden water hose that would allow her to get water from her next-door neighbor's house. Consequently, she contacted EPA Region 5's water division to complain. Miguel A. Del Toral, regulations manager, Ground Water and Drinking Water Branch, responded. By contacting Mr. Del Toral, LeeAnne Walters unwittingly instigated a chain of outside investigations.

In June 2015, Mr. Del Toral wrote a memorandum to his immediate supervisor, Thomas Poy. The internal EPA memorandum stated: "When the City of Flint switched to Flint River as their water source on April 30, 2014, the orthophosphate treatment for lead and copper control was not continued. In effect, the City of Flint stopped providing treatment used to mitigate lead and copper levels in the water."[119]

Mr. Del Toral introduced Ms. Walters to Prof. Marc Edwards, the Charles P. Lunsford Professor of Civil and Environmental Engineering at Virginia Tech. As an expert in lead corrosion, he instructed her to collect new water samples from her house without pre-flushing the pipes. In those water samples, Professor Edwards found the lead concentrations of 13,200 parts per billion was more than twice the level EPA classifies as hazardous waste. He argued that the city of Flint should respond immediately to the lead problem.

Curt Guyette, an investigative reporter with Detroit's *Metro Times*, is largely credited with bringing the Flint water crisis to the attention of the public and to other environmental journalists. The full extent of his work was captured in a November 2015 *Columbia Journalism Review* article, "How an Investigative Journalist Helped Prove a City Was Being Poisoned With Its Own

116. *Id*. at 1-2.

117. OIG, U.S. EPA, Management Weaknesses Delayed Response to Flint Water Crisis, Report No. 18-P-0221 (2018), *available at* https://www.epa.gov/sites/production/files/2018-07/documents/_epaoig_20180719-18-p-0221.pdf.

118. City of Flint, Michigan, City of Flint Water System Update With Questions and Answers (2015), *available at* https://www.cityofflint.com/wp-content/uploads/Water-Sysytem-FAQ-Update-2-16-151.pdf.

119. Memorandum from Miguel A. Del Toral, Regulations Manager, Ground Water and Drinking Water Branch, U.S. EPA, to Thomas Poy, Chief, Ground Water and Drinking Water Branch, U.S. EPA, on High Lead Levels in Flint Michigan—Interim Report (June 24, 2015), *available at* http://flintwaterstudy.org/wp-content/uploads/2015/11/Miguels-Memo.pdf.

Water."[120] Mr. Guyette worked with Professor Edwards and demonstrated that Flint's testing of the water delivered artificially low results, and that the tests of the water by Virginia Tech researchers indicated conclusively that Flint water was contaminated with lead. Finally, a pediatrician, Dr. Mona Hanna-Attisha of Flint's Hurley Medical Center, released to the public data showing that the percentage of Flint children with lead poisoning had nearly doubled since the city switched to Flint River water, and nearly tripled among children in "high risk" areas.[121] The *Detroit Free Press* reported the results of Dr. Hanna-Attisha's work.

In January 2016, President Obama declared a federal emergency in Flint, freeing up $5 million in federal aid to help the community immediately. However, President Obama denied Michigan Gov. Rick Snyder's request for a disaster declaration. A November 2018 *People's Tribune* article captured succinctly the human rights situation in Flint:

> In a workshop titled, "Flint to the World: Water Is a Human Right," Nakiya [Wakes] told a heart-rending story that she said is one of many in Flint. The water left her two children with high levels of lead, "and their lives changed forever." Beyond this, she had two miscarriages. In both cases she was carrying twins. "Twice I felt the lives inside me end because someone else decided that Flint residents had no right to clean, safe and affordable water, so we drank what we had, which turned out to be deadly. . . So when people argue that access to clean, safe, affordable water is not a human right, I ask them, what right do you have to take away one of the most basic survival requirements from someone else? Who are you to decide who gets to live or die?"[122]

The point of this recitation of the facts is that communities similar to Flint across this nation are seeking environmental justice. Derrick Z. Jackson, a *Boston Globe* essayist, provides a comprehensive review of the local and national media's role in bringing the Flint story to the public. His brilliant 2017 essay, "Environmental Justice? Unjust Coverage of the Flint Water Crisis," examined not only the contributions of the above-mentioned individuals, but also how grassroots community folk demanded action from federal, state, and local government agencies to address the Flint water crisis in a more urgent manner.[123]

Rep. Dan Kildee (D-Mich.), who represents Flint, has said, "Drinking water is a fundamental human right. It's something that's necessary to sustain human life, and so it's hard to think of a more important priority for every level of government."[124] Clean and safe drinking water and sanitation should be a human right in Flint, in Michigan, and in the United States.[125] Poisoned water is a clear reminder that, in most states of this country, there is no recognition of a citizen's right to safe and clean drinking water and sanitation.

VI. Conclusion

In conclusion, it is incumbent on the environmental law and policy community to engage in a new age of enlightenment, just as Dr. King reflected on the successes and the failures of the civil rights movement in 1967. The community must lead a concerted effort to amend state constitutions with self-executing individual citizen's environmental rights language if environmental justice is to be secured for all communities. Otherwise, environmentally overburdened communities like Flint will continue to be exposed disproportionately to environmental harms and risks as compared to other communities.

An environmental rights amendment is essentially an additional tool in the proverbial toolbox that can be utilized to ensure environmental justice for all by not only affected individuals and communities, but also by federal, state, and local environmental regulatory agencies in their decisionmaking processes. These agencies are both the necessary protectors of the environment and human health and, at the same time, are the regulatory authorities facilitating and permitting pollution. Environmental rights amendments serve as constitutional constraints that limit the government's authority not only to protect against, but also to regulate pollution and other threats to the environment and public health.

120. Anna Clark, *How an Investigative Journalist Helped Prove a City Was Being Poisoned With Its Own Water*, Colum. Journalism Rev., Nov. 3, 2015, https://www.cjr.org/united_states_project/flint_water_lead_curt_guyette_aclu_michigan.php.

121. *See* Mona Hanna-Attisha, *Elevated Blood Lead Levels in Children Associated With the Flint Drinking Water Crisis: A Spatial Analysis of Risk and Public Health Response*, 106 Am. J. Pub. Health 283 (2016), *available at* https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4985856/.

122. Bob Lee, *Flint to the World: Water Is a Human Right*, People's Trib., http://www.peoplestribune.org/latest-news/2018/11/07/flint-water-is-a-human-right/ (last visited Feb. 18, 2019).

123. *See* Derrick Z. Jackson, *Environmental Justice? Unjust Coverage of the Flint Water Crisis*, Shorenstein Center on Media Pol. & Pub. Pol'y, July 11, 2017, https://shorensteincenter.org/environmental-justice-unjust-coverage-of-the-flint-water-crisis/.

124. *This Town Is Like Thousands That Are Vulnerable to Contaminated Water, With No Fix in Sight*, FOX6, Nov. 28, 2018, https://fox6now.com/2018/11/28/this-town-is-like-thousands-that-are-vulnerable-to-contaminated-water-with-no-fix-in-sight/.

125. EPA's responsibility is to protect and restore waters to ensure that drinking water is safe and sustainably managed. According to EPA, more than 300 million Americans depend on 50,000 community water systems. By 2018, EPA stated that 92% of community water systems would provide drinking water that meets all applicable health-based drinking water standards through approaches including effective treatment and source water protection. By 2018, 88% of the population in Indian country served by community water systems would receive drinking water that meets all applicable health-based drinking water standards. U.S. EPA, *Drinking Water Performance and Results Report*, https://www.epa.gov/ground-water-and-drinking-water/drinking-water-performance-and-results-report (last updated June 27, 2017). But, a 2018 EPA report found that nationwide, nearly one-third of the nation's public water systems had at least one violation of the SDWA. Those systems served more than 87 million Americans. And, in a 2017 report, the OIG stated that the SDWA and its regulations require community water systems to routinely monitor and report drinking water quality. If a system does not monitor the quality of its water, consumers and primacy agencies cannot know whether the water meets health-based standards. *See* OIG, U.S. EPA, EPA Is Taking Steps to Improve State Drinking Water Program Reviews and Public Water Systems Compliance Data, Report No. 17-P-0326 (2017), https://www.epa.gov/sites/production/files/2017-07/documents/_epaoig_20170718-17-p-0326.pdf.

We in the environmental law and policy community should not be afraid of the environmental movement going slowly: we should be afraid only of the movement standing still. Achieving environmental justice for all communities should not be based on the race or the socioeconomic status of the residents of any community, and those factors should not dictate the environmental risks that any American faces. Securing environmental justice should not be conditional. Every American is entitled to clean land, clean air, and clean water to improve their lives, protect their families, and strengthen their communities.

As the cases in Pennsylvania and Montana have demonstrated, environmental constitutionalism works. From a strategic point of view, it may make sense for litigators to bring legal action in the state courts of Hawaii, Illinois, Massachusetts, Montana, New York, Pennsylvania, and Rhode Island because of the existence of environmental rights amendments in their state constitutions.

One could safely argue that Ms. van Rossum said it best, when she wrote:

> Explicitly recognizing a right to a healthy environment would alter how people think about the environment and our relationship to it. The mantra "pure water, clean air, and a healthy environment" would take on the stature of an entitlement in people's minds, becoming far more than what it is right now—a "nice idea." . . . Constitutional amendments protecting the right to a clean environment have the power to change everything about how people interact with one another, with the world, with their decision-makers, and with future generations.[126]

The Flint residents would have benefitted tremendously if the Michigan Constitution had a self-executing individual citizen's environmental rights amendment. Who could conceivably be against every American having the human right to clean water, clean land, and clean air enshrined in state constitutions and the U.S. Constitution?

126. van Rossum, *supra* note 64, at 13.