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THE IMPORTANCE OF ACCESSIBLE GOVERNMENT DATA IN ADVANCING ENVIRONMENTAL JUSTICE

FRANK D. LOMONTE* & DANIEL DELGADO**

INTRODUCTION

In 2021, investigative journalists with the nonprofit news service ProPublica drew on federal data to create what ProPublica's reporting team called "an unparalleled view of how toxic air blooms around industrial facilities and spreads into nearby neighborhoods."¹ A package of articles and graphics visually dramatized the problem of "sacrifice zones," areas primarily occupied by low-income families where industry has been allowed to maintain unhealthy levels of airborne contaminants under the unwatchful eye of regulators.²

The journalists not only provided a snapshot of conditions in disadvantaged communities, but also furnished access to the underlying data so readers could run queries about their own localities.³ ProPublica's reporting provoked a response from the U.S. Environmental Protection Agency ("EPA"): EPA's chief administrator toured toxic hot spots in Texas, Louisiana, and Mississippi, and announced a program of more intensive air-quality monitoring and surprise inspections of industrial facilities, and contacted the state of Louisiana and several of the state's major polluters to urge immediate steps to curb potentially carcinogenic emissions.⁴

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¹ Lylla Younes, Ava Kofman, Al Shaw & Lisa Song, *Poison in the Air*, PROPUBLICA (Nov. 2, 2021, 5:00 AM), <https://www.propublica.org/article/toxmap-poison-in-the-air> [<https://perma.cc/2CXD-AX9A>].

² *Id.*

³ *Id.*

⁴ Darryl Fears, *EPA Announces 'Bold' Action to Monitor Pollution in 'Cancer Alley'*, WASH. POST (Jan. 26, 2022, 6:00 AM), <https://www.washingtonpost.com/climate-environment/2022/01/26/epa-pollution-cancer-alley-regan/> [<https://perma.cc/36H6-BQ93>]; Ava Kofman, *The EPA Administrator Visited Cancer-Causing Air Pollution Hot Spots Highlighted by ProPublica and Promised Reforms*, PROPUBLICA (Nov. 24, 2021, 3:24 PM),

This example illustrates two competing realities about the central role of data in protecting communities of color against environmental hazards: When data is available, it makes for a compelling case that can fuel effective storytelling and advocacy. But when data is not available—or is sitting idly unexamined in government computers—journalists and advocates are forced to do the government's job of identifying threats to public health.

In recent decades, the United States has experienced a belated reckoning with the concept of environmental injustice, the concentration of environmental hazards in politically and economically disadvantaged communities.⁵ Outraged activism has been the engine of change.⁶ To a great extent, the fuel for that engine has been data. Without documentation, claims of environmental injustice are readily dismissed as anecdotes or unfounded suspicions. The goal of this Article is to underscore the connection between the effectiveness of the environmental justice movement and the quality and accessibility of data.⁷ Being invested in addressing systemic environmental inequities, the authors maintain, means also being invested in public access to reliable information about the hazards. Drawing on case studies, as well as the analysis of statutes, regulations and court interpretations, the authors seek to underscore that the quality and accessibility of information is a foundational, if underappreciated, predicate concern for those working to address environmental inequities.

Part I of this Article sets forth the history and animating principles of the environmental justice movement in the United States during the 1970s, which developed as an adjunct to the larger civil rights movement. Part II then turns to the role of documents and data in exposing

<https://www.propublica.org/article/the-epa-administrator-visited-cancer-causing-air-pollution-hot-spots-highlighted-by-propublica-and-promised-reforms> [<https://perma.cc/UW2B-Y397>].

⁵ See Michele L. Knorr, *Environmental Injustice: Inequities Between Empirical Data and Federal, State Legislative and Judicial Responses*, 6 U. BALT. J. ENV'T L. 71, 72 n.9 (1997) (defining the concept of “environmental injustice” as “intentional siting pollutant releasing facilities that increase the threat of serious health problems for minority and low-income communities”).

⁶ See Rachel D. Godsil, *Remedying Environmental Racism*, 90 MICH. L. REV. 394, 426 (1991) (“Minority communities are beginning to demand political accountability on issues of environmental risks.”).

⁷ See Llewelyn M. Engel, *Emergency Planning and Community Right-to-Know: Environmental Justice Concerns with Disclosure-Based Laws*, 6 GEO. J.L. & MOD. CRITICAL RACE PERSP. 117, 117 (2014) (“Requiring companies to provide citizens and communities with information can be a powerful tool to enact change.”).

where toxins present a risk to public health and where documentation habitually falls short. It discusses how freedom of information laws can unlock access to the documents and data that quantify environmental hazards but also how those laws fail to produce reliable results because of the influence of regulated industries. Part III examines how journalists and advocates use data to call public attention to dangerous environmental conditions and provoke change—and how, at times, they must build their own databases to make up for government regulators’ failings. Part IV concludes by underscoring the symbiotic relationship between two movements—environmental justice and open government—that evolved along parallel timelines with complementary goals. Because effective environmental advocacy depends on requiring regulators to gather and report trustworthy information, the authors conclude, government transparency should be recognized as a necessary prerequisite to the success of environmental justice advocacy.

I. THE ENVIRONMENTAL JUSTICE MOVEMENT

A. *The Meaning(s) of “Environmental Justice”*

Environmental justice addresses a foundational quality-of-life concern for millions of U.S. residents: low-income neighborhoods, especially those with high concentrations of Black occupants, are exposed to more toxins because policymakers and industries choose these places as the sites for polluting industries and waste disposal.⁸ These choices inflict adverse health consequences that weigh especially heavily on people who cannot afford to move away from the hazard—and who are also relatively more likely to handle toxic material during the workday as well as drinking and breathing toxins at home.⁹ In recent years, there has been

⁸ See Robert D. Bullard, *Race and Environmental Justice in the United States*, 18 YALE J. INT’L L. 319, 320 (1993). Bullard asserts that “racial minorities are more likely to be exposed to environmental threats than are whites of the same social class. Race is a powerful predictor of many environmental hazards, including the distribution of air pollution, the location of municipal solid waste facilities, the location of abandoned toxic waste sites, toxic fish consumption, and lead poisoning in children.” *Id.* (footnotes omitted).

⁹ See CARLA A. ZIMRING, *CLEAN AND WHITE: A HISTORY OF ENVIRONMENTAL RACISM IN THE UNITED STATES* 109, 110–12 (2015) (observing that racialized immigrants and Black people have historically been overrepresented in “sanitary occupations” including collecting garbage, sweeping streets, laundering clothes, operating junkyards and otherwise handling society’s waste products, and stating that “[c]onsigning ‘dirty work’ in mills and factories to immigrants and African Americans was common throughout American industry”).

growing awareness that environmental injustices go beyond the discharge of pollutants and also encompass inequities in infrastructure investment that place majority non-white areas at greater exposure to natural hazards, such as the proliferation of urban “heat islands” associated with disinvestment in parks and green spaces.¹⁰

The concept of “environmental justice” is a fluid and evolving one, with no single universally accepted understanding.¹¹ The EPA has defined it as “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.”¹² Others take a more expansive view that goes beyond the EPA’s public policy–focused understanding. “Environment” is sometimes understood within the advocacy community to encompass not just the core pollution issues associated with environmentalism, but more broadly the entire public health landscape influenced by policies and practices concerning race.¹³ These include inaccessibility of affordable housing, lack of economic mobility, and other infirmities that disproportionately limit the options of low-income people of color, consigning them to unhealthy environmental health conditions.¹⁴

There has been some chicken-and-egg debate about whether the statistical evidence that people of color are overrepresented in communities with toxic waste sites really means that developers purposefully choose sites in majority-minority communities, or whether those contaminated neighborhoods *become* less white over time, as property values

¹⁰ Ian Round, Jazmin Conner, Jermaine Rowley & Sandy Banisky, *In Urban Heat Islands, Climate Crisis Hits Harder*, HOWARD CTR. FOR INVESTIGATIVE JOURNALISM (Sept. 3, 2019), <https://cnsmaryland.org/interactives/summer-2019/code-red/neighborhood-heat-in-equality.html> [<https://perma.cc/X83R-Q2BW>].

¹¹ David W. Case, *The Role of Information in Environmental Justice*, 81 MISS. L.J. 701, 707 (2012).

¹² *Learn About Environmental Justice*, EPA, <https://www.epa.gov/environmentaljustice/learn-about-environmental-justice> [<https://perma.cc/LP97-NEDV>] (Sept. 6, 2022).

¹³ See MELISSA CHECKER, POLLUTED PROMISES: ENVIRONMENTAL RACISM AND THE SEARCH FOR JUSTICE IN A SOUTHERN TOWN 17 (2005) (stating that, for environmental justice advocates, the concept of “environment” encompasses not just air and water but also “a host of *social* factors such as housing, schools, neighborhood safety, and employment”).

¹⁴ See Godsil, *supra* note 6, at 399–400; see also Wendy Collins Perdue, Lesley A. Stone & Lawrence D. Gostin, *The Built Environment and Its Relationship to the Public’s Health: The Legal Framework*, 93 AM. J. PUB. HEALTH 1390, 1394 (2003) (“Poor, immigrant, and minority populations suffer much higher rates of chronic disease. They are also much more likely to live in substandard housing, to be exposed to environmental toxins, and to be the victims of unsafe pedestrian facilities.” (footnote omitted)).

diminish and poor people find themselves consigned to living there.¹⁵ A 2001 study by three university researchers, who looked at two decades' worth of siting decisions across California's Los Angeles County, concluded that there was "virtually no evidence" that non-white people were migrating into neighborhoods with facilities that handle toxic waste; rather, the neighborhoods where facilities were located were heavily Black and/or Latino, and heavily low-income, from the beginning when the siting choice was made.¹⁶ The anecdotal evidence is powerful as well. In an award-winning series of articles, the nonprofit news site *MLK50* documented how residents of Boxtown, a low-income section of Memphis where 99% of the population is Black, organized and fought back against plans to bisect their neighborhood with an oil pipeline.¹⁷ Local residents feared that the pipeline would threaten water quality in a neighborhood that already was surrounded by steel mills, oil refineries, and other industries that use, store, and emit potentially hazardous chemicals.¹⁸ In a perhaps unintended moment of candor, a representative of the developer told a town meeting that their community was selected as "basically, a point of least resistance."¹⁹

While it is undoubtedly true that industries locate undesirable uses in locations where land is inexpensive, pure economics alone does not fully explain why communities of color have such differential exposures to environmental health risks.²⁰ The economic and political disadvantages

¹⁵ Manuel Pastor, Jr., Jim Sadd & John Hipp, *Which Came First? Toxic Facilities, Minority Move-In, and Environmental Justice*, 23 J. URB. AFFS. 1, 2 (2001).

¹⁶ *Id.* at 9. A similar phenomenon has been documented in connection with malodorous hog and poultry processing operations in North Carolina, where—although the neighborhoods chosen as plant sites may not be disproportionately Black and brown from the outset—they become less white over time as property values decline and those with more housing options move away from the nuisance. Diana Stanley, *Hatching a Plan for Local Communities: Environmental Justice in Poultry Siting Decisions*, 10 WASH. J. ENV'T L. & POL'Y 32, 45 (2020). The result, of course, is the same: people of color end up living in areas exposed to disagreeable or dangerous emissions at rates greater than their percentage in the population. *Id.* at 47.

¹⁷ Peggy McKenzie, *MLK50's Byhalia Pipeline Stories Win National Award for Breaking Barriers in Community Coverage*, *MLK50* (Oct. 14, 2021), <https://mlk50.com/2021/10/14/mlk50s-byhalia-pipeline-stories-win-national-award-for-breaking-barriers-in-community-coverage/> [<https://perma.cc/2CZC-M42D>].

¹⁸ Leanna First-Arai, *Pipeline Through the Heart: A Black Neighborhood's Uphill Battle Against Oil Developers*, *MLK50* (Sept. 10, 2020), <https://mlk50.com/2020/09/10/this-black-neighborhood-is-trying-to-stop-an-oil-pipeline-theyre-running-out-of-time/> [<https://perma.cc/P673-9SBF>].

¹⁹ *Id.*

²⁰ See Knorr, *supra* note 5, at 80 (citing a 1992 EPA study that concluded 57% of all white

inflicted on communities of color are traceable to an array of business and governmental policy decisions (e.g., “redlining” in home finance, which fueled the rise of “ghetto” housing,²¹ and zoning decisions that consciously placed heavy industry in Black communities), so that race is causally, not just correlatively, associated with being put at greater risk for contaminated air and water—and being a lower priority for restorative infrastructure measures.²² These same types of discriminatory practices—placing limits on the homes that Black people can buy or the workplaces that will hire them—also make it harder for their families to relocate away from neighborhoods that become contaminated.²³

The mainstream environmental movement was slow to appreciate and prioritize public-health concerns afflicting the urban poor.²⁴ For much of its history, “environmentalism” was associated with what might colloquially be called “white people problems”—the loss of wildlife habitat and endangered species, water quality in lakes and streams, and other (undoubtedly serious) concerns that did not speak to the lived experiences of those who, in the colorful phrasing of one historian, were “baptized in PCBs.”²⁵ Only lately are the nation’s leading environmental groups engaging in self-reflection and acknowledging both their problematic past

Americans, 65% of African Americans and 80% of Latino Americans live in areas where air quality is considered “substandard”).

²¹ Jacob W. Faber, *We Built This: Consequences of New Deal Era Intervention in America's Racial Geography*, 85 AM. SOCIO. REV. 739, 742 (2020).

²² See Bullard, *supra* note 8, at 321–23.

²³ See CHECKER, *supra* note 13, at 15 (commenting that limits placed on Black people’s educational achievements, housing mobility, and political power all “limit the opportunities of African Americans to leave a contaminated neighborhood”). Checker, whose book focuses largely on her experience working alongside community activists in Augusta, Georgia, notes that Black residents whose neighborhood was exposed to industrial groundwater contamination became convinced that their houses would have been bought out, and they would have been assisted in relocating, had their neighborhood not been poor and Black. *Id.* at 95.

²⁴ See Robert W. Collin & Robin Morris Collin, *The Role of Communities in Environmental Decisions: Communities Speaking for Themselves*, 13 J. ENV'T L. & LITIG. 37, 44 (1998) (stating that Black environmental justice advocates’ concerns for broader quality-of-life issues, including availability of good schools and jobs, “are overlooked or seen as illegitimate by some leaders within the mainstream environmental movement”).

²⁵ See ELLEN GRIFFITH SPEARS, BAPTIZED IN PCBs: RACE, POLLUTION, AND JUSTICE IN AN ALL-AMERICAN TOWN 297 (2014); see Collin & Collin, *supra* note 24, at 41–42 (stating that mainstream environmental groups “evolved out of a political agenda to conserve wilderness” that did not speak to the concerns of city dwellers); see also CHECKER, *supra* note 13, at 18 (tracing the historical notion that environmental issues reflected the interests of white elites who defined “environment” as an antidote to the ills of city life).

associations with racist people and causes as well as their current failings in providing meaningful leadership opportunities for non-white people.²⁶ People of color have been relatively slow to embrace the environmental movement, in part because they did not find the movement's rhetoric to speak to their concerns and in part because their communities need the jobs and economic development that polluting industries promise when they set up shop.²⁷ For Black and brown communities, spending time on environmental activism might be thought of as a luxury, less urgent than addressing crime, drugs, education, and other pressing everyday needs that are more visible.²⁸ Awareness of the (broadly understood) environmental problems affecting predominantly Black communities has largely been crisis-driven, including the deadly August 2005 Hurricane Katrina in New Orleans, which left an especially heavy mark on communities of color.²⁹ More sustained awareness—not just during high-profile disasters—is the focus of non-governmental actors including: both nationally focused and locally focused nonprofits;³⁰ news organizations such as *Southerly*, which prioritizes coverage of environmental health hazards in under-resourced communities in the Southeast;³¹ and legal clinics in

²⁶ See Darryl Fears & Steven Mufson, *Liberal, Progressive—and Racist? The Sierra Club Faces Its White-Supremacist History*, WASH. POST (July 22, 2020, 9:07 AM), <https://www.washingtonpost.com/climate-environment/2020/07/22/liberal-progressive-racist-sierra-club-faces-its-white-supremacist-history/> [<https://perma.cc/FZ5R-RTJS>] (“Leaders of predominantly white, liberal and progressive groups throughout the field of conservation say they are taking a hard look within their organizations and don’t like what they see.”).

²⁷ CHECKER, *supra* note 13, at 88. Indeed, Checker writes, the initial reaction to high-profile environmental activism from Black leaders in the civil rights movement was suspicion, viewing the work of white advocates like Ralph Nader as a distraction from their own urgent work. *Id.* at 154.

²⁸ See *id.* at 101 (recounting the author’s observation that some of the same community-based organizations in Augusta, Georgia, working on environmental issues were also working on anti-violence campaigns, after-school tutoring, adult education, and various other community needs).

²⁹ See Robert D. Bullard & Beverly Wright, *Disastrous Response to Natural and Man-Made Disasters: An Environmental Justice Analysis Twenty-Five Years After Warren County*, 26 UCLA J. ENV’T L. & POL’Y 217, 243–45 (2008) (describing how New Orleans’ experience with Hurricane Katrina illustrates that poor communities with relatively little political influence do not benefit from flood-control investments to the same extent as more affluent and influential communities).

³⁰ Izzie Ramirez, *12 Environmental Justice Organizations to Donate Time and Money to*, VICE (Sept. 25, 2020, 7:30 AM), <https://www.vice.com/en/article/jgx7xy/environmental-justice-climate-action-organizations-to-donate-time-and-money> [<https://perma.cc/32UU-QGX2>].

³¹ See *About: Our Story*, SOUTHERLY, <https://southerlymag.org/about/> [<https://perma.cc/S5UY-ZZCR>] (last visited Apr. 12, 2023) (describing the news organization’s founding

places like Golden Gate University,³² the University of Miami,³³ and the University of Vermont.³⁴

B. History and Evolution of the Movement

Civil rights activist Ben Chavis is credited with introducing the concepts of “environmental racism” and “environmental injustice” into the popular lexicon.³⁵ Scholar and author Robert D. “Bob” Bullard is often regarded as the “father” of the movement because of his prolific and influential writings, including the oft-cited 1990 book, *Dumping in Dixie*, which chronicles case studies from across the South in which heavily Black communities were singled out as dumping grounds for toxins—and, at times, successfully organized resistance.³⁶ Bullard himself has defined “environmental justice” as a twofold concept—first, adapted from the EPA’s official description: “[T]he 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.”³⁷ But Bullard goes on to add an outcome-based component as well as a process-based component; environmental justice, he explains, also means “that no group of people, including racial, ethnic, or socioeconomic groups, should bear a disproportionate share of the negative environmental consequences resulting from” policies implemented by government or industry.³⁸

mission: “to shed light on overlooked news and stories about the complicated relationship Southerners have with their natural environment”).

³² See *Clinics & Externships: Environmental Law and Justice Clinic*, GOLDEN GATE UNIV. SCH. OF L., <https://law.ggu.edu/academics/clinics/environmental-law-and-justice> [<https://perma.cc/YR2U-PCWS>] (last visited Apr. 12, 2023).

³³ See *Miami Law Clinics: Environmental Justice Clinic*, UNIV. MIAMI SCH. OF L., <https://www.law.miami.edu/academics/experiential-learning/clinics/environmental-justice/index.html> [<https://perma.cc/WKW8-FT2D>] (last visited Apr. 12, 2023).

³⁴ See *Environmental Justice Clinic*, VT. L. & GRADUATE SCH., <https://www.vermontlaw.edu/academics/clinics-and-externships/environmental-justice-clinic> [<https://perma.cc/T52A-8SG9>] (last visited Apr. 12, 2023).

³⁵ Darryl Fears & Brady Dennis, *This Is Environmental Racism*, WASH. POST (Apr. 6, 2021), <https://www.washingtonpost.com/climate-environment/interactive/2021/environmental-justice-race/> [<https://perma.cc/W67N-HEVU>].

³⁶ Cara Buckley, *At 75, the Father of Environmental Justice Meets the Moment*, N.Y. TIMES, <https://www.nytimes.com/2022/09/12/climate/robert-bullard-environmental-justice.html> [<https://perma.cc/2ES3-Y5P4>] (Nov. 10, 2022).

³⁷ Robert D. Bullard & Glenn S. Johnson, *Environmental Justice: Grassroots Activism and Its Impact on Public Policy Decision Making*, 56 J. SOC. ISSUES 555, 558 (2000).

³⁸ *Id.*

One landmark event in the history of the movement took place in 1982 in rural Warren County, North Carolina, about sixty-five miles northeast of Raleigh on the Virginia–North Carolina border.³⁹ Governor James B. Hunt Jr. was struggling to clean up transformer fluid that had been illegally dumped along North Carolina’s highways for years by the Ward Transformer Company.⁴⁰ This fluid contained polychlorinated biphenyls (“PCBs”), the toxic chemical compound that Congress and the EPA banned in the 1970s.⁴¹ Hunt’s eventual solution was to move this unwanted waste to Afton, a predominantly low-income, African American town in Warren County.⁴² Warren County was not the most logical location—the water table was shallow, its residents relied heavily on well water, and the county lacked a hospital—but it had the political advantage of being poor, sparsely populated, and majority Black.⁴³

For residents, the decision to move this poison into their neighborhood was an explicit example of “environmental racism.”⁴⁴ To fight back, some 500 African American residents and activists joined forces to block the transportation of the initial shipment of PCB-contaminated soil.⁴⁵ Police tackled and beat these environmental justice activists.⁴⁶ The National Guard, sheriff’s department, and Afton police were called in to quell what was characterized as a disruptive display of civil disobedience.⁴⁷ In addition to blocking the trucks carrying PCB, the protestors called national newspapers to make these events public, networked with organizations across North Carolina and the Southeastern corridor, educated themselves about the legislative process, and pushed for greater regulation and oversight by the EPA.⁴⁸ The case of Warren County follows a now-familiar pattern: cleaning up waste from one community created a contamination concern for another, less-powerful one downstream. The outcry that accompanied both the siting decision and the

³⁹ Fears & Dennis, *supra* note 35.

⁴⁰ *Id.*

⁴¹ *Id.*

⁴² *Id.*

⁴³ Bullard & Wright, *supra* note 29, at 223–24.

⁴⁴ Fears & Dennis, *supra* note 35.

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ Jenny Labalme, *From the Archives: Dumping on Warren County*, FACING S. (Sept. 30, 2022), <https://www.facingsouth.org/2022/09/archives-dumping-warren-county> [<https://perma.cc/4FCQ-NH5S>].

⁴⁸ *Id.*; Fears & Dennis, *supra* note 35.

heavy-handed government response to protests is largely credited with helping launch the contemporary environmental justice movement.⁴⁹

The national environmental justice movement was galvanized by a “landmark” 1987 study for the United Church of Christ by researcher Charles Lee, who put into stark black-and-white what had long been suspected: “[C]ommunities with greater minority percentages of the population are more likely to be the sites of commercial hazardous waste facilities.”⁵⁰ Race, the study concluded, was “the most significant determinant” correlating with the location of hazardous waste disposal sites.⁵¹ The correlation has many partial explanations: Rural, Black communities in the South are more likely to be poor, and thus lacking in political influence and also susceptible to the appeal of jobs working in industry.⁵² Racialized housing patterns have concentrated poor, Black people into disadvantaged areas, while whites are relatively less geographically segregated by income, so that a low-income white person might, in effect, ride the coattails of the more affluent and influential white homeowner in the next subdivision.⁵³ The United Church followed up with an even more data-robust 2007 study, of which Bullard was a principal co-author, looking at 413 hazardous waste storage, treatment, and disposal facilities identified in EPA databases as active as of 1999.⁵⁴ The 2007 follow-up concluded that nearly 56% of individuals living within a three kilometer radius of these sites were people of color, with Latinos actually making up a greater percentage of those in the affected areas than Black people.⁵⁵ By contrast, just 30% of the people living in communities *not* in close proximity to a hazardous waste site were people of color, attesting to the concentration of these facilities in majority-minority areas.⁵⁶ While the United Church’s focus has been on the correlation between the racial makeup of a community and the likelihood of being home to a toxic waste site, its research speaks to the larger theme of information as the catalyst for awareness and ultimately for change. Much of what environmental

⁴⁹ Bullard & Wright, *supra* note 29, at 221–22.

⁵⁰ CHARLES LEE, UNITED CHURCH OF CHRIST COMM’N FOR RACIAL JUST., TOXIC WASTES AND RACE IN THE UNITED STATES, at xv (1987).

⁵¹ Godsil, *supra* note 6, at 398.

⁵² *Id.* at 399.

⁵³ *Id.*

⁵⁴ ROBERT D. BULLARD, PAUL MOHAI, ROBIN SAHA & BEVERLY WRIGHT, UNITED CHURCH OF CHRIST JUST. & WITNESS MINISTRIES, TOXIC WASTES AND RACE AT TWENTY: 1987–2007, at 51 (2007).

⁵⁵ *Id.* at 51–53.

⁵⁶ *Id.* at 53.

justice advocates have been asking for can be thought of as “informational” in nature: better studies of water quality in their communities, better disclosure of discharges and the associated health risks, and so on.

Environmental justice went from “concept” to “movement” with the landmark National People of Color Environmental Leadership Summit in October 1991, which drew some 650 delegates from across the Americas with the goal of developing a shared, grassroots-based action plan to address environmental inequities.⁵⁷ The summit was credited with prompting the Bush Administration to create the first Office of Environmental Justice within the EPA.⁵⁸ That office was later elevated to a multi-agency working group by President Clinton’s 1994 executive order.⁵⁹ The Clinton order centered information and data as foundational to effective environmental policy change, calling for improved collection of data on the health impacts of toxic exposure on poor and non-white communities, and for greater stakeholder involvement at all stages from site selection through monitoring.⁶⁰ More recently, the administration of President Joe Biden and his appointed EPA administrator, Michael Regan, have taken steps to make environmental justice a visible priority in federal policymaking through a series of executive orders and agency directives, which include overtly considering the impact of regulatory decisions on “pollution-burdened” communities of color.⁶¹

Demonstrating that news reporting about environmental inequities has always been a critical aspect of driving policy change, an investigative report published in 1992 by the *National Law Journal* is widely cited as a watershed moment in advancing the environmental justice movement.⁶² That article, analyzing seven years’ worth of outcomes of federal enforcement actions, found that those mishandling solid waste in violation of federal environmental laws faced exponentially higher

⁵⁷ Bullard & Johnson, *supra* note 37, at 556–57.

⁵⁸ *Id.* at 560.

⁵⁹ *Id.* at 561.

⁶⁰ *Id.*

⁶¹ Michael R. Leslie, *Environmental Justice Rises to the Forefront of EPA Policy*, ABA (June 11, 2021), <https://www.americanbar.org/groups/litigation/committees/environmental-energy/articles/2021/summer2021-environmental-justice-rises-to-the-forefront-of-epa-policy/> [<https://perma.cc/Y4T6-DTY2>].

⁶² See ROBERT D. BULLARD, *DUMPING IN DIXIE: RACE, CLASS, AND ENVIRONMENTAL QUALITY 100* (3d ed. 2000) (crediting National Law Journal reporting with uncovering “glaring inequities” in EPA enforcement practices); see also Knorr, *supra* note 5, at 80 (citing work of National Law Journal as evidentiary support for existence of inequitable environmental practices).

penalties—more than fivefold greater on average—for infractions in predominantly white neighborhoods as opposed to comparable misconduct in majority non-white neighborhoods.⁶³ These findings underscore the multifaceted nature of environmental inequity and the many decision points at which inequities can either be rectified or intensified, from the way regulators make initial siting decisions all the way through to the way penalties are imposed when toxic substances are mishandled or inadequately reported.

The list of environmental struggles is hauntingly long and diverse, and working-class communities of color have been at the front of it because they are more likely to be impacted by extractive industrial operations, such as mining, timber harvesting, and large dams,⁶⁴ as well as by natural disasters such as flooding and hurricanes.⁶⁵ Damage to community health, cultures, ecosystems, and economies from industrial activities is well documented. For example, in California's Silicon Valley, immigrants and people of color live in communities with disproportionately high volumes of hazardous chemicals.⁶⁶ In Chicago, Black people and Latinos live in localities with extremely high rates of garbage dumps and other environmental hazards, and this pattern holds true for Asian Americans, Native Americans, and working-class whites nationally.⁶⁷

But the history of environmental justice and injustice has a deeper genealogy. The relatively recent awakening to a systemic problem belies a much longer history of struggles related to access to land, dispossession, forced removal, and internment. In fact, both native-born and immigrant racialized minorities were impacted by federal policies, urban

⁶³ Marianne Lavelle & Marcia Coyle, *Unequal Protection: The Racial Divide in Environmental Law: A Special Investigation*, NAT'L L.J. (Sept. 21, 1992), <https://www.ejnet.org/ej/nlj.pdf> [<https://perma.cc/WK7P-PNYA>].

⁶⁴ Nataly Perez Manrique, *Logging & Pollution in BIPOC Communities: Why We Need Environmental Justice Now*, DOGWOOD ALL. (Dec. 6, 2021), <https://www.dogwoodalliance.org/2021/12/logging-pollution-in-bipoc-communities/> [<https://perma.cc/K6JU-FPMG>]; Rachael Coccia, *A Reality Check on Environmental Racism & Plastics*, SURFRIDER FOUND. (June 18, 2020), <https://www.surfrider.org/coastal-blog/entry/a-reality-check-on-environmental-racism-plastics> [<https://perma.cc/9ZQ5-GJAN>].

⁶⁵ Aneesh Patnaik, Jiahn Son, Alice Feng & Crystal Ade, *Racial Disparities and Climate Change*, PRINCETON STUDENT CLIMATE INITIATIVE (Aug. 15, 2020), <https://psci.princeton.edu/tips/2020/8/15/racial-disparities-and-climate-change> [<https://perma.cc/2YQT-NBAY>].

⁶⁶ Lisa Sun-Hee Park & David N. Pellow, *Racial Formation, Environmental Racism, and the Emergence of Silicon Valley*, 4 ETHNICITIES 403, 406–08, 413–14, 416–17 (2004).

⁶⁷ See, e.g., DAVID NAGUIB PELLOW, GARBAGE WARS: THE STRUGGLE FOR ENVIRONMENTAL JUSTICE IN CHICAGO 1, 2 (2002).

planning, and population control movements that were viewed as environmental solutions for one group but contributed to environmental injustice for another. At the intersections between race, citizenship, and immigration, scholars Lisa Sun-Hee Park and Stevie Ruiz show how race and nativism operate, while appearing color-blind and simultaneously producing devastating consequences for immigrant and native-born racialized minorities.⁶⁸ Through an examination of three distinct cases that both predate the “official” history of the movement against environmental racism and extend past its heyday into the contemporary problems of the new millennium, they expand our understanding of environmental justice movements by including Japanese-American internment, Mexican-Americans’ eviction from Chavez Ravine in Los Angeles, and population control against Latino immigrants in Aspen, Colorado, as significant examples of how the marginalized have been impacted by racial ideologies and environmental inequality.⁶⁹

The Chavez Ravine case, in particular, illustrates how racialized communities lacking in political or economic power have been forcibly displaced throughout U.S. history once their property becomes enticing for economic exploitation. During the 1950s, some 7,500 Mexican and Mexican-American residents were evicted from the unincorporated community of Chavez Ravine, just east of downtown Los Angeles, to make way for redevelopment that would come to include Dodger Stadium.⁷⁰ Homeowners were given lowball buyouts with the promise of an opportunity to live at brand-new public housing, which never materialized; a few hundred holdout families saw their homes bulldozed.⁷¹ Mexican-American families felt deeply rooted in the community but were no match for the legal, political, and economic forces that arrayed to remove them, backed up by the force of Los Angeles police if any resisted eviction.⁷² This close-knit community was treated by city authorities as an obstacle to progress⁷³ and were disenfranchised in part by their neighborhood’s unincorporated

⁶⁸ Lisa Sun-Hee Park & Stevie Ruiz, *Racial Minorities in the United States: Race, Migration, and Reimagining Environmental Justice*, in ENVIRONMENTAL JUSTICE: KEY ISSUES 225 (Brendan Coolsaet ed., 2021).

⁶⁹ *Id.* at 227–31.

⁷⁰ *Id.* at 229.

⁷¹ Elina Shatkin, *The Ugly, Violent Clearing of Chavez Ravine Before It Was Home to the Dodgers*, LAIST, <https://laist.com/news/la-history/dodger-stadium-chavez-ravine-battle> [<https://perma.cc/RD6S-VRLB>] (Feb. 14, 2023, 10:46 AM).

⁷² Park & Ruiz, *supra* note 68, at 229.

⁷³ *Id.* at 230.

status, meaning they lacked responsive municipal officials to give voice to their concerns.⁷⁴ Park and Ruiz use this and other instances of forced displacement to broaden the lens through which environmental inequity should be viewed: “The history of environmental justice shows us that just as environmental catastrophes are human-made so is social inequality, and the two are deeply intertwined. To tackle one without addressing the other will only function to perpetuate the environmental problem as we fortify the social inequalities that reinforce racial divisions.”⁷⁵

II. THE POWER OF DATA IN ENVIRONMENTAL ADVOCACY

The public plays a uniquely participatory role in enforcing environmental laws—both indirectly, by way of pressure on elected officials, and directly, by bringing lawsuits.⁷⁶ Both types of citizen involvement rely on access to information—documenting where hazards exist, how serious they are, and what it would take to remediate them. Informed public participation throughout the decision-making progress—where facilities are located, how they are monitored, what penalties will be imposed for noncompliance—has value both for regulators (in making better-informed decisions) and for the citizenry (in feeling a sense of inclusion, and, if the process seems fair, coming away with trust in the outcome).⁷⁷ If undesirable industrial siting decisions are treated as a “done deal” (brokered in secrecy between industry and elected officials hungry for economic benefit), those decisions can lack public legitimacy.⁷⁸ Environmental organizations

⁷⁴ *Id.* at 229–30.

⁷⁵ *Id.* at 231.

⁷⁶ Jennifer Lukas Jackson, *Environmental Audit Privilege Laws: Stripping the Public's Right to Know*, 49 CLEV. STATE L. REV. 539, 544–45 (2001).

⁷⁷ See John C. Duncan, Jr., *Multicultural Participation in the Public Hearing Process: Some Theoretical, Pragmatical, and Analeptical Considerations*, 24 COLUM. J. ENV'T L. 169, 186 (1999) (“When members of the public are allowed to participate in the input process, they are able to determine first-hand whether the agency is accurately representing their interests. Thus, the people act as watchdogs of the government.”).

⁷⁸ See Stanley, *supra* note 16, at 56–57 (calling public participation and testimony “vital tools for environmental justice” but observing that affected members of the public often do not find out about siting decisions until after local officials have become invested in a preordained outcome). Indeed, Stanley cites reports that, in Kansas, a chicken manufacturer actually forced local officials to sign nondisclosure agreements that precluded sharing information about a planned poultry processing plant. *Id.* at 57 n.152. On this point, see generally Sabrina Conza, *Chasing Smokestacks in the Dark: The Amazon HQ2 Quest Revives Debate Over Economic Development Secrecy*, 2 J. CIVIC INFO., Nov. 2020,

use data obtained from government regulators in a multitude of ways: to backstop government regulators in checking to make sure industries are complying with their permits; to influence the development of legislation; to support “toxic tort” lawsuits against polluters; and to publicize industry failings, which can have a shaming effect that compels industries to improve their practices (or compels regulators to enforce the law more vigorously).⁷⁹ Public access to information held by government is especially important in the realm of environmental regulation as an independent check on the well-documented phenomenon of “agency capture,” by which industries develop a cozy relationship with regulators that can influence the outcomes of decisions.⁸⁰ Environmental statutes contemplate a rare degree of direct public involvement as primary enforcers, empowering adversely affected citizens to act as, in effect, private attorneys general bringing lawsuits that complement the enforcement efforts of federal regulators.⁸¹ By assigning this responsibility to the citizenry, the law recognizes that agencies such as the EPA have limited resources to take polluters to court, so the public must pursue the cases that regulators cannot.⁸²

The story of environmental regulation has been a story of pull-and-tug between regulated industries and the public over how much information must be gathered and disclosed.⁸³ For instance, corporate lobbyists have advocated successfully in dozens of states for “audit privilege”

at 1, 3 (describing how industries often exact generous economic concessions out of state and local authorities that are negotiated in secret and withheld from the public).

⁷⁹ Eric M. Falkenberg, *The Emergency Planning and Community Right-to-Know Act: A Tool for Toxic Release Reduction in the 90's*, 3 BUFF. ENV'T L.J. 1, 25–28 (1995).

⁸⁰ John D. Echeverria & Julie B. Kaplan, *Poisonous Procedural “Reform”: In Defense of Environmental Right-to-Know*, 12 KAN. J.L. & PUB. POL'Y 579, 589 (2002).

⁸¹ See Katarina K. Böer, Comment, *United Musical Instruments v. The Steel Company: The Conflict Over the Safety of Our Communities and the Emergency Planning and Community Right-to-Know Act*, 91 NW. U. L. REV. 1599, 1603–04 (1997) (observing that the Clean Air Act ushered in citizen lawsuits in 1970 “in response to a perceived governmental failure to enforce the statute” and that citizen suits have since become “a significant tool in enforcement of environmental legislation”).

⁸² Lori May Peters, *Reloading the Arsenal in the Informational War on Pollution—Citizens as Soldiers in the Fight and How a Lack of “Actionable” Legs on Which to Stand Nearly Forced a Cease-Fire*, 10 VILL. ENV'T L.J. 127, 159–60 (1999).

⁸³ See Echeverria & Kaplan, *supra* note 80, at 591–98 (describing how chemical companies have pushed back against environmental laws that require public disclosure by advocating for more industry involvement in determining what needs to be disclosed, expanded judicial review of disclosure requirements, and categorical exemptions from disclosure on the basis of “trade secrets” or “national security”).

statutes that enable them to conceal records of potential hazards they discover themselves, which companies justify on the grounds that secrecy will incentivize them to be candid in their internal communications.⁸⁴ These types of special interest exemptions from disclosure contribute to an unequal playing field between citizens and industry, with only one side fully informed about what types of substances are being handled, how, and with what consequence, which means citizens suing to enforce environmental laws face a substantial strategic disadvantage.⁸⁵

A. *The Central Role of Data and Documentation in Environmental Law*

The modern environmental regulatory movement began in 1969 with the enactment of the National Environmental Policy Act (“NEPA”), which requires federal agencies to take account of the environmental impact of decisions that could detrimentally affect natural resources, such as how and where to construct federal highways, and to show that alternatives less harmful to the environment were considered.⁸⁶ As is the case with many environmental regulations, NEPA has an informational component as well as a regulatory one.⁸⁷ It requires agencies to compile and disseminate assessments of the consequences of federal actions, including creating a baseline of information about the environmental condition of the affected property and how the federal project is expected to change it.⁸⁸ These statutorily mandated “environmental impact statements” are recognized as a mechanism for better-informed public input, giving concerned citizens an opportunity to comment on the tradeoffs involved in an environmental decision before it is too late.⁸⁹ As courts have recognized, NEPA does not dictate a particular outcome but merely

⁸⁴ See Jackson, *supra* note 76, at 542 (explaining that proponents rationalize the privilege as affording companies “an opportunity to investigate their own systems and police themselves”).

⁸⁵ See *id.* at 567 (arguing that “[i]t makes no sense for Congress to consistently include in all major federal environmental statutes the right of the people to sue a violator of the law, if it had anticipated that information crucial to successful litigation would be precluded from disclosure and discovery as a result of a state statutory privilege”).

⁸⁶ 42 U.S.C. §§ 4321, 4331(a)–(b), 4412(a)(4)(B).

⁸⁷ Keith H. Hirokawa & Elizabeth J. Porter, *Aligning Regulation with the Informational Need: Ecosystem Services and the Next Generation of Environmental Law*, 46 AKRON L. REV. 963, 971–72 (2013).

⁸⁸ *Id.*

⁸⁹ See Duncan, *supra* note 77, at 212 (stating that supporters regard NEPA as “a model of how federal environmental laws allow for useful citizen input”).

requires that decisions be well-informed and based on a thorough consideration of the available data.⁹⁰

Other statutes followed NEPA in rapid succession, including the Clean Air Act in 1970⁹¹ and the Clean Water Act in 1972.⁹² Common to all of the major federal statutory regimes is a component of public disclosure and public participation.⁹³ As one team of researchers has observed: “Information disclosure has emerged as a vital tool in the government grab basket . . . for protecting public health and the environment.”⁹⁴

B. *The Limits of Legal and Regulatory Remedies*

Publicity and advocacy are especially essential in improving conditions in environmental “sacrifice zones” because the existing framework of judicial and regulatory remedies is widely recognized as ineffectual.⁹⁵ Federal environmental statutes do not dictate where waste disposal facilities or pollutant-heavy industries can locate,⁹⁶ leaving that decision to the discretion of local zoning boards that are largely made up of white office holders.⁹⁷ Litigants have been largely unsuccessful in using federal discrimination law to challenge siting decisions or to obtain damages from polluters,⁹⁸ so change must come through pressure on elected officials.

⁹⁰ See *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 351 (1989) (“Other statutes may impose substantive environmental obligations on federal agencies, but NEPA merely prohibits uninformed—rather than unwise—agency action.”).

⁹¹ 42 U.S.C. §§ 7401–7671.

⁹² 33 U.S.C. §§ 1251–1388.

⁹³ See Jackson, *supra* note 76, at 564–65 (observing that Congress has “repeatedly recognized a right to know” in federal environmental laws “by providing the right of the public to participate in the permitting process for polluting facilities, to access information compiled by industries regarding compliance, and to enforce the environmental statutes and regulations through citizen suits”); see also *infra* Section III.B.2 (discussing the role of Toxics Release Inventory mandated by Emergency Planning and Community Right-to-Know Act).

⁹⁴ Echeverria & Kaplan, *supra* note 80, at 623.

⁹⁵ DAVID R. BOYD & STEPHANIE KEENE, U.N. HUMAN RIGHTS SPECIAL PROCEDURES, SPECIAL RAPPORTEUR ON HUMAN RIGHTS AND THE ENVIRONMENT, ESSENTIAL ELEMENTS OF EFFECTIVE AND EQUITABLE HUMAN RIGHTS AND ENVIRONMENTAL DUE DILIGENCE LEGISLATION 3 (2022).

⁹⁶ Knorr, *supra* note 5, at 85.

⁹⁷ CHECKER, *supra* note 13, at 96–97.

⁹⁸ See Collin & Collin, *supra* note 24, at 68–69 (commenting that “judicial forums are expensive and many communities perceive judicial forums as inherently hostile to claims of civil and environmental justice,” and that advocates may also hesitate to bring in non-local lawyers whose efforts will drain resources and energy away from grassroots organizing).

Title VI of the Civil Rights Act of 1964 outlaws discrimination on the basis of race, color, or national origin in any federally funded program.⁹⁹ The statute does not act as a direct check on polluting industries, but rather, contemplates legal recourse against a government agency—including those who make siting decisions, as well as those who enforce environmental laws—if those decisions are discriminatory.¹⁰⁰ For decades following the law's enactment, advocates tried to use Title VI to push back against state and local permitting decisions that resulted in concentrating polluters in neighborhoods of color.¹⁰¹ But legal challenges generally failed, because courts widely interpreted Title VI to forbid only intentional acts of discrimination, not acts producing racially inequitable results.¹⁰² Finally in 2001, the Supreme Court removed any doubt in the case of *Alexander v. Sandoval*, ruling that a successful Title VI claim requires proof of discriminatory intent on the part of the government defendant.¹⁰³ That burden has proven prohibitively difficult for plaintiffs to meet;¹⁰⁴ after all, it is rare that a decision to approve a permit cannot be justified by some race-neutral explanation, even if race or ethnicity was at work in the background. The same near-prohibitive burden applies equally to claims under the Equal Protection Clause of the Fourteenth Amendment, as interpreted by the Supreme Court in *Washington v. Davis*.¹⁰⁵ In the

⁹⁹ 42 U.S.C. § 2000d.

¹⁰⁰ See Marianne Engelman Lado, *No More Excuses: Building a New Vision of Civil Rights Enforcement in the Context of Environmental Justice*, 22 U. PA. J.L. & SOC. CHANGE 281, 290 (2019) (explaining that, although a Title VI claim can be brought against any level of government, most claims in the environmental context are against state or local governments involved in siting decisions rather than against federal enforcement authorities).

¹⁰¹ See Knorr, *supra* note 5, at 90–94 (cataloging the history of legal challenges to siting decisions relying on the Equal Protection Clause and federal anti-discrimination statutes).

¹⁰² See *id.* at 90 (commenting that “these laws have not been successful in the fight against environmental injustice” because government siting decisions are facially neutral, meaning that a litigant faces the burden of proving discriminatory intent).

¹⁰³ 532 U.S. 275, 281 (2001).

¹⁰⁴ Albert Huang, *Environmental Justice and Title VI of the Civil Rights Act: A Critical Crossroads*, A.B.A. (Mar. 1, 2012), https://www.americanbar.org/groups/environment_energ_resources/publications/trends/2011_12/march_april/environmental_justice_title_vi_civil_rights_act/ [<https://perma.cc/5P8Z-33FU>].

¹⁰⁵ 426 U.S. 229, 239–40 (1976); see Godsil, *supra* note 6, at 409–10 (discussing how, under *Davis*, plaintiffs challenging environmental siting decisions bear the burden of demonstrating not just a racially disparate effect but a “discriminatory purpose”). Godsil offers the example of an unsuccessful challenge to the siting of a waste disposal site for timber products in *East-Bibb Twiggs Neighborhood Ass'n v. Macon Bibb Planning & Zoning Comm'n*, 896 F.2d 1264, 1267 (11th Cir. 1989). See Godsil, *supra* note 6, at 411–12. There, the Eleventh Circuit affirmed a trial court's dismissal of Equal Protection–based

words of one commentator, assigning such a heavy burden “renders the Equal Protection Clause virtually useless as a legal theory against environmental injustices.”¹⁰⁶

One difficulty in proving a case of discriminatory siting is that data can vary considerably depending on how the area affected by a toxic waste site is defined.¹⁰⁷ For instance, one contrarian study often cited as evidence that Black people are *less* likely to live in proximity to waste disposal facilities than white people is based on using census tract as a stand-in for proximity—though some skeptics have noted that using a different measure of proximity on the same data produces the opposite outcome.¹⁰⁸ This problem of statistical proof proved fatal to plaintiffs’ claims in an environmental justice-themed challenge to the Texas state health department’s approval of a permit for a solid waste facility in Houston.¹⁰⁹ Although the judge strongly suggested that the site—in a residential neighborhood, adjacent to a school—was a poor choice, he did not find it to be actionably discriminatory.¹¹⁰ The judge observed that, when the plaintiffs’ data was viewed by census tract rather than by their preferred measure (quadrant of the city), the distribution of solid waste facilities citywide was almost exactly proportional to the number of predominantly white tracts versus predominantly non-white tracts.¹¹¹

Author Melissa Checker points to another reason that environmental justice advocates have difficulty making progress by way of

claims against county zoning authorities who approved the disposal site, finding neither proof of discriminatory intent in granting the permit nor an established pattern of discriminatory decision-making. *East-Bibb Twiggs Neighborhood Ass’n*, 896 F.2d at 1267.

¹⁰⁶ Knorr, *supra* note 5, at 92.

¹⁰⁷ See generally Bryan Comer & Sharon Moran, *The Evolution of Empirical Environmental Justice Research Methods: A Call for Greater Use of Geographically Weighted Regression*, 10 ENV’T JUST. 11, 11–12 (2017) (discussing various ways that communities may be identified as afflicted by environmental injustice, while also noting that labeling communities may carry unwanted consequences, including diminishing property values as well as social stigma).

¹⁰⁸ See Knorr, *supra* note 5, at 82–83 (citing a 1994 University of Massachusetts-Amherst study, but noting some dispute over its methodology and industry sponsorship).

¹⁰⁹ *Bean v. Sw. Waste Mgmt. Corp.*, 482 F. Supp. 673, 677–78 (S.D. Tex. 1979).

¹¹⁰ *Id.* at 680.

¹¹¹ *Id.* at 679. The court also discounted any purported cause-and-effect between the race of area residents and the location of waste disposal sites for another reason: Industries prefer disposal sites to be near where they operate, and sites tended to be concentrated near Houston’s shipping district for convenience to those industrial users, regardless of what the surrounding neighborhood happened to look like. See *id.* Of course, this makes siting something of a double whammy. Poor and non-white neighborhoods are more likely to be home to heavy industry and its accompanying pollutants, so they are presumptively also the preferred choice when industries need to dump their byproducts.

litigation: Data about the adverse health effects of exposure to contamination is often calibrated around an average amount of exposure affecting a typical adult male.¹¹² The fact that a healthy adult male could eat a modest amount of fish from a polluted stream does not necessarily mean that an elderly woman with pre-existing health conditions—or her toddler grandchild—would be similarly unaffected.¹¹³ In this way, the failure of government regulators to create (or compel industry to create) more complete and nuanced datasets actually can affect people's substantive legal rights.

The EPA itself has authority to bring Title VI actions, but civil rights enforcement has never been treated as a high priority.¹¹⁴ A 2011 study by the accounting firm Deloitte, commissioned by the incoming administration of President Barack Obama, produced a broadside indictment of the EPA's civil rights futility: Staff lacked expertise and training, cases were allowed to languish for years with no sense of urgency, and record-keeping was so deficient that the agency could not even track its own progress.¹¹⁵ During 2015, reporters with the nonprofit Center for Public Integrity in Washington, D.C., took a deep look into the EPA's record of civil rights enforcement, and concluded that the process was "broken."¹¹⁶ They found that complaints were dismissed 95% of the time, and even when cases were taken seriously, they "languished" for years with no visible progress to the frustration of those living in affiliated areas.¹¹⁷ Even what might be termed a success story—a rare finding that a state agency actually violated civil rights law—had all the indicators

¹¹² CHECKER, *supra* note 13, at 118.

¹¹³ *Id.* Checker also points out that people in disadvantaged communities are inherently more likely to face exposure to health hazards from multiple sources—e.g., handling or inhaling chemicals at work—so that causally connecting any particular source of contamination to illness becomes that much more challenging in a legal proceeding. *Id.* at 119.

¹¹⁴ See Lado, *supra* note 100, at 282, 285 (asserting that "civil rights enforcement in the environmental context has languished," and stating that EPA has "failed to build expertise" in civil rights law and "has not developed the will to spend political chits on civil rights enforcement").

¹¹⁵ DELOITTE CONSULTING LP, FINAL REPORT: EVALUATION OF THE EPA OFFICE OF CIVIL RIGHTS 1–2 (2011), https://archive.epa.gov/epahome/ocr-statement/web/pdf/epa-ocr_2011_0321_finalreport.pdf [<https://perma.cc/FA3Y-3S9L>].

¹¹⁶ Talia Buford & Kristen Lombardi, *How to Fix the EPA's Broken Civil-Rights Office*, CTR. FOR PUB. INTEGRITY (Aug. 20, 2015), <https://publicintegrity.org/environment/how-to-fix-the-epas-broken-civil-rights-office/> [<https://perma.cc/MU2W-HA3S>].

¹¹⁷ *Id.*; see also Lado, *supra* note 100, at 300 (stating that, as of 2019, EPA had never used Title VI to impose financial penalties on any governmental entity).

of failure. The EPA made a preliminary finding that the California Department of Environmental Protection failed to protect majority-minority schools against pesticide spraying on adjoining farmlands but took ten years to resolve the case and extracted a meager settlement (installation of one additional pesticide monitoring station) that was unsatisfying to the complainants.¹¹⁸

Nor are state law legal remedies especially promising. Influential industries have successfully lobbied for protection against lawsuits on a nuisance theory, and even where suits are possible, damages may be legislatively capped, making it less appealing for lawyers to invest in taking on complex cases against well-funded businesses.¹¹⁹ Because remedies by way of established legal channels are so ineffective, reformers necessarily have prioritized “self-help” by way of organizing, protest, and publicity.¹²⁰

III. THE PUBLIC’S “RIGHT TO KNOW” AND THE ENVIRONMENT

A. *Freedom of Information Laws*

The federal government, along with every U.S. state and territory, has a statute entitling the public to inspect and copy records that memorialize how government business is conducted.¹²¹ The right to be informed about how government decisions are reached is neither novel to the United States nor recent in vintage; Sweden is thought to be the birthplace of freedom of information (“FOI”) law with a statute that is more than 200 years old.¹²² U.S. FOI laws vary somewhat in scope, but all start with the same animating principle that transparency will make government decisions better, both in appearance (by creating a sense of public confidence)

¹¹⁸ Talia Buford, *In California, an Unsatisfying Settlement on Pesticide-Spraying*, CTR. FOR PUB. INTEGRITY (Aug. 11, 2015), <https://publicintegrity.org/environment/in-california-an-unsatisfying-settlement-on-pesticide-spraying/> [<https://perma.cc/Y3HM-TKWQ>].

¹¹⁹ See Stanley, *supra* note 16, at 59–61 (explaining impact of state “right to farm” laws supported by agribusiness in defeating nuisance claims, as well as other legislative constraints on citizen damage suits, including damage caps and compulsory mediation).

¹²⁰ See, e.g., *How to Stop a CAFO in Your Community*, SUSTAIN RURAL WIS. NETWORK, <https://sustainruralwisconsin.org/how-to-stop-a-cafo-in-your-community> [<https://perma.cc/HC95-FL5Q>] (last visited Apr. 12, 2023).

¹²¹ Cheryl M. Sheinkopf, *Balancing Free Speech, Privacy and Open Government: Why Government Should Not Restrict the Truthful Reporting of Public Record Information*, 44 UCLA L. REV. 1567, 1569 (1997).

¹²² Svitlana Kravchenko, *Is Access to Environmental Information a Fundamental Human Right?*, 11 OR. REV. INT’L L. 227, 235 (2009).

and in substance (by affording the agency the benefit of informed citizen input).¹²³ These statutes are of critical importance because the Supreme Court has refused to recognize any generalized constitutional right to compel government agencies to provide access to records.¹²⁴ In this way, U.S. law actually lags that of a number of other industrialized nations, where both the right to receive information generally—and at times, even a specific right to be informed about the state of the environment—is memorialized as a constitutional entitlement.¹²⁵

What we know today as the federal Freedom of Information Act (“FOIA”) comes from modest roots as a proviso of the Administrative Procedure Act (“APA”),¹²⁶ which sets the process by which executive-branch agencies exercise their authority.¹²⁷ Enacted in 1946, the APA embodies a system of “notice-and-comment” rule-making, under which agencies must give advance warning before enacting regulations and offer the public an opportunity to provide feedback before finalizing the regulation.¹²⁸ The APA thus codified the public’s participatory role in formulating regulations and recognized that access to information is the *sine qua non* of meaningful participation.

FOIA builds on the APA’s foundation by establishing a presumption that records created or maintained by federal executive branch agencies are open to public inspection, with exceptions for categories of records deemed especially sensitive or confidential.¹²⁹ The primary purpose of FOIA, as well as its state analogs, “is to ensure an informed citizenry, vital to the functioning of a democratic society, needed to check against corruption and to hold the governors accountable to the governed.”¹³⁰ As transparency advocate Steven Aftergood has written,

¹²³ *Id.*

¹²⁴ *See* *Houchins v. KQED, Inc.*, 438 U.S. 1, 15 (1978) (Burger, J., plurality) (“Neither the First Amendment nor the Fourteenth Amendment mandates a right of access to government information or sources of information within the government’s control.”).

¹²⁵ *See* Kravchenko, *supra* note 122, at 236 (enumerating examples including Ukraine, where a 1996 constitutional revision recognized a “right of access to information about the environmental situation” and states that “[n]o one shall make such information secret”).

¹²⁶ 5 U.S.C. §§ 551–559.

¹²⁷ *See id.*

¹²⁸ *Id.* § 552(4)(A)(I).

¹²⁹ *Id.* § 552.

¹³⁰ *NLRB v. Robbins Tire & Rubber Co.*, 437 U.S. 214, 242 (1978); *see also* Sheinkopf, *supra* note 121, at 1605 (“When citizens are denied access to records that document the activities of government, they cannot make informed choices concerning whether government is functioning honestly and properly.”).

the free flow of information to interested members of the public is a prerequisite to their participation in the deliberative process and to their ability to hold elected officials accountable. . . . [W]ithout it, citizens are deprived of a meaningful role in the political process, and the exercise of authority is insulated from public oversight and control.¹³¹

Congress enacted FOIA after a decades-long lobbying campaign led by the American Society of Newspaper Editors, and President Lyndon Johnson (somewhat grudgingly as the back story goes) signed it into law on July 4, 1966.¹³² FOIA has been strengthened several times since, most notably in 1974 when, in the throes of public outrage over the Nixon administration's Watergate scandal, Congress greatly revised the statute, including expediting the judicial appeal process, requiring agencies to produce the nonexempt portions of segregable documents, authorizing fee waivers for requests made in furtherance of the public interest, and many other improvements.¹³³

While state FOI statutes predate the federal law by more than a century,¹³⁴ enactment of the 1974 federal statute touched off a new wave of copycat legislation at the state level.¹³⁵ Seven states even memorialize the public's right to be informed about the workings of government in their constitutions.¹³⁶ State legislators have codified the importance of public access as part of the preamble to many of these statutes; Wisconsin, for instance, states:

In recognition of the fact that a representative government is dependent upon an informed electorate, it is declared to be the public policy of this state that all persons are entitled

¹³¹ Steven Aftergood, *Reducing Government Secrecy: Finding What Works*, 27 YALE L. & POL'Y REV. 399, 399 (2009).

¹³² David C. Vladeck, *Information Access—Surveying the Current Legal Landscape of Federal Right-to-Know Laws*, 86 TEX. L. REV. 1787, 1798 (2008).

¹³³ *Id.* at 1820, 1835.

¹³⁴ See Christina Koningisor, *Transparency Deserts*, 114 NW. U. L. REV. 1461, 1474 (2020) (stating that Wisconsin enacted the first known FOI statute in 1849, and that five other states had adopted open records laws by 1900).

¹³⁵ See Breanne Parcels, *Bring Back the Bite: Restoring Teeth to Ohio's Public Records Law*, 38 U. DAYTON L. REV. 225, 230 (2012) (observing that many state FOI laws "were modeled after the federal Freedom of Information Act").

¹³⁶ Jessica Terkovich & Aryeh Frank, *Constitutionalizing Access: How Courts Weigh State Constitutional Claims in Open-Government Litigation*, 3 J. CIVIC INFO. 1, 2 (2021).

to the greatest possible information regarding the affairs of government and the official acts of those officers and employees who represent them. Further, providing persons with such information is declared to be an essential function of a representative government and an integral part of the routine duties of officers and employees whose responsibility it is to provide such information. To that end, [the statute] shall be construed in every instance with a presumption of complete public access, consistent with the conduct of governmental business. The denial of public access generally is contrary to the public interest, and only in an exceptional case may access be denied.¹³⁷

Even where the strong presumption of access is not codified explicitly in statute, courts have widely read state FOI laws to afford the public the broadest possible access, with exemptions to be narrowly construed to give effect to the statutes' remedial purposes.¹³⁸ In addition to their tangible benefits—adding more information to the public discourse—FOI statutes also contribute to a sense that government decisions are honest and legitimate by enabling the public to see the inner workings of governance.¹³⁹

The tug-of-war between regulators and a curious public over access to information is age-old, predating even the advent of the modern open government and environmental movements. In a 1961 case, the Oregon Supreme Court ruled in favor of a requester who was denied access to the results of airborne tests for radioactive material that the state Department of Health had withheld from public view, arguing that the public might be too unsophisticated to understand and interpret it.¹⁴⁰

¹³⁷ WIS. STAT. § 19.31 (1981).

¹³⁸ See *Levy v. Senate of Pa.*, 65 A.3d 361, 381 (Pa. 2013) (“[C]ourts should liberally construe the [open records law] to effectuate its purpose of promoting access to official government information in order to prohibit secrets, scrutinize actions of public officials, and make public officials accountable for their actions.”) (internal quotes and citation omitted); *State ex rel. Thomas v. Ohio State Univ.*, 643 N.E.2d 126, 128 (Ohio 1994) (stating that Ohio Public Records Act “generally is construed liberally in favor of broad access, and any doubt must be resolved in favor of disclosure of public records”).

¹³⁹ See Leanne Holcomb & James Isaac, Comment, *Wisconsin's Public-Records Law: Preserving the Presumption of Complete Public Access in the Age of Electronic Records*, 2008 WIS. L. REV. 515, 525–26 (2008) (“The public's trust in government should also grow as the result of open access, since the citizenry can view every step of the decision-making process and scrutinize it for improprieties.”).

¹⁴⁰ *MacEwan v. Holm*, 359 P.2d 413, 421–22 (Or. 1961).

As methods of gathering and storing information become ever more sophisticated, new and different legal questions emerge, such as the extent to which digital maps generated by geographic information systems (“GIS”) constitute “records” that agencies must make readily accessible at low cost, or whether those maps can be “paywalled” at the cost of extractive licensing fees.¹⁴¹

FOIA laws have enabled researchers, activists and journalists to obtain unprecedented access to the inner workings of government, particularly when combined with modern technology enabling laypeople to analyze massive databases far beyond what would be practicable for human eyes to review. For example, University of Michigan researchers have built a database of more than 133 million individual interactions with the criminal justice system since 1975, with the goal of helping policymakers make better informed decisions.¹⁴² Professor David C. Vladeck shared a story about his involvement in FOIA litigation on behalf of the nonprofit Natural Resources Defense Council (“NRDC”) that is equal parts empowering and frustrating: The NRDC successfully sued the EPA and several other federal agencies to obtain records reflecting the pervasiveness of water contamination resulting from the Department of Defense’s use of percholate, an ingredient in rocket fuel.¹⁴³ The NRDC ultimately settled with the EPA and obtained thousands of documents that aided the organization in exposing the extent of the adverse health effects linked to percholate and the government’s purposeful campaign to downplay those risks.¹⁴⁴ But the litigation took well over five years, in part because agencies failed to diligently search for responsive records, making FOIA, in Vladeck’s words, “a useful but imperfect device to obtain information. . . .”¹⁴⁵

Environmental lawyers rely on FOI statutes to gather research on potential claims, before a case goes into court and litigants gain the

¹⁴¹ See Frank D. LoMonte, *Copyright Versus the Right to Copy: The Civic Danger of Allowing Intellectual Property Law to Override State Freedom of Information Law*, 53 LOY. U. CHI. L.J. 159, 179–82 (2021) (describing how states have sometimes argued that GIS maps and other documents with potential commercial resale value are protected by federal copyright law as the state’s own intellectual property).

¹⁴² KEITH FINLAY & MICHAEL MUELLER-SMITH, U.S. CENSUS BUREAU & UNIV. OF MICH., CRIMINAL JUSTICE ADMINISTRATIVE RECORDS SYSTEM (CJARS): SUMMARY OF CURRENT DATA HOLDINGS 8–10, <https://cjars.isr.umich.edu/overview/research/data-documentation/summary-of-current-data-holdings/> [<https://perma.cc/4GPW-6NEX>].

¹⁴³ Vladeck, *supra* note 132, at 1799–801, 1815–16.

¹⁴⁴ *Id.* at 1815.

¹⁴⁵ *Id.* at 1816.

benefit of subpoenas, requests for production, and other discovery tools.¹⁴⁶ Jeanne Marie Zokovitch Paben, who worked in nonprofit environmental law before becoming a professor, recounts using Florida's public records law to obtain internal notes and memos from the state Department of Environmental Protection ("DEP") about a charcoal plant in Ocala, Florida, that emitted fumes obnoxious to nearby residents.¹⁴⁷ The records indicated a cozy relationship between plant operators and DEP regulators, who gave the operators advance warning of inspections, and once took a plant manager to the home of a citizen complainant to explain that the plant was not to blame for the emissions that prompted the complaint.¹⁴⁸ With support from city officials, Paben's legal team persuaded the DEP to conduct more intensive air-quality testing, which led to issuance of a notice of violation against the charcoal plant.¹⁴⁹ When the DEP and the company entered into negotiations to resolve the adverse finding, neighborhood residents and their lawyers were excluded, but, again, turned to public records requests to follow what the DEP was doing.¹⁵⁰ Paben's experience illustrates the power of transparency laws to, at least somewhat, level the playing field between powerful industries and the people affected by those industries' outputs.

Conservationists have also harnessed FOI laws in disputes with government agencies, to become better informed about what went into agency decisions behind the scenes. For example, a nonprofit advocacy organization, Our Children's Earth Foundation, used FOIA requests to gather ammunition in challenging how the federal government decided to approve a Stanford University construction project that, the Foundation argued, would adversely affect valuable trout habitat.¹⁵¹ When the National Marine Fisheries Service failed to produce all of the records the Foundation wanted—and redacted portions of the ones it did produce—the Foundation sued, and obtained an order forcing the agency to make

¹⁴⁶ See Tim Verslycke & Dallas Wait, *Data Quality in Natural Resource and Environmental Damage Litigation*, 31 NAT. RES. & ENV'T 15, 19 (2017) (describing the importance of data quality in asserting or defending against a claim arising out of exposure to toxins in the environment).

¹⁴⁷ Jeanne Marie Zokovitch Paben, *Approaches to Environmental Justice: A Case Study of One Community's Victory*, 20 REV. L. & SOC. JUST. 235, 256–57 (2011).

¹⁴⁸ *Id.* at 257.

¹⁴⁹ *Id.* at 260–61.

¹⁵⁰ *Id.* at 261.

¹⁵¹ *Our Child.'s Earth Found. v. Nat'l Marine Fisheries Serv.*, 85 F. Supp. 3d 1074, 1079 (N.D. Cal. 2015).

a more diligent search, as well as a declaratory judgment that the agency violated FOIA by taking as long as 295 days to produce its responses.¹⁵²

But FOI laws also have well-documented shortcomings: They are filled with easily exploited loopholes, and enforcement is notoriously slow and costly.¹⁵³ In particular, the laws governing retention of records are weak and easily evaded, so that even where records of governmental and industry activity once existed, they can be purged without much consequence for the custodian.¹⁵⁴ In a pessimistic appraisal of state transparency released in 2015, the nonprofit Center for Public Integrity gave only three states a rating of higher than a D-plus on criteria that included the effectiveness of their FOI laws.¹⁵⁵ The Center's report concluded:

While every state in the nation has open records and meetings laws, they're typically shot through with holes and exemptions and usually have essentially no enforcement mechanisms, beyond the court system, when agencies refuse to comply. In most states, at least one entire branch of government or agency claims exemptions from the laws. Many agencies routinely fail to explain why . . . they've denied requests. Public officials charge excessive fees to discourage requestors.¹⁵⁶

While exemptions for especially sensitive documents are justifiable, more and more categories of record disappear from public view each year, often at the behest of special interests that prefer to avoid scrutiny.¹⁵⁷

¹⁵² *Id.* at 1084, 1089–91.

¹⁵³ See Sarah Lamdan, *Lessons from DataRescue: The Limitations of Grassroots Climate Change Data Preservation and the Need for Federal Records Law Reform*, 166 U. PA. L. REV. ONLINE 231, 243 (2018) (“The FOIA process is notoriously time consuming, complicated, and fraught with potential record-blocking exemptions and procedural obstacles.”).

¹⁵⁴ See *id.* at 241–42 (observing that there is no overarching federal mandate for archivists to preserve digital copies of records, and that whatever statutory directives to retain records exist are “largely discretionary” with “little, if any, consequences for administrators who violate records management policies”).

¹⁵⁵ Nicholas Kusnetz, *Only Three States Score Higher than D+ in State Integrity Investigation; 11 Flunk*, CTR. FOR PUB. INTEGRITY (Nov. 9, 2015), <https://publicintegrity.org/politics/state-politics/state-integrity-investigation/only-three-states-score-higher-than-d-in-state-integrity-investigation-11-flunk/> [<https://perma.cc/J8CU-SBKS>].

¹⁵⁶ *Id.*

¹⁵⁷ See Jeannine E. Rely & Carol B. Schwalbe, *How Business Lobby Networks Shaped the U.S. Freedom of Information Act: An Examination of 60 Years of Congressional Testimony*,

Even Florida, renowned for having one of the nation's strongest open government regimes, exempts more than 1,000 types of documents from its Public Records Act.¹⁵⁸ Worse than their sheer number, exemptions are malleable and easily manipulated by secretive agencies, which can push the boundaries of broadly worded exclusions, knowing that a frustrated requester's only recourse is generally to file suit.¹⁵⁹ A great many exemptions are designed to keep information about businesses' interactions with regulators secret. In a much criticized 2019 FOIA interpretation, the U.S. Supreme Court decided that grocers' interests in protecting their "trade secrets" overrides the public's interest in knowing how much money retailers are making off the federal food-stamp program, so that store-by-store records may be withheld from FOIA requesters.¹⁶⁰ Because the Supreme Court's *Argus Leader* decision lowers the threshold for information to qualify as a confidential "trade secret," it is likely to become even more difficult to obtain records about the chemicals and processes that federally regulated industries are using.¹⁶¹

33 GOV'T INFO. Q. 404, 413 (2016) (examining decades' worth of congressional testimony by business interests regarding scope of federal FOIA, and concluding that corporate lobbying efforts "ultimately led to information about businesses being less available to the public").

¹⁵⁸ Elizabeth Koh & Emily L. Mahoney, *Lawmakers, in Whittling Down Public Records, Add Exemptions They Say Are Necessary After Parkland*, TAMPA BAY TIMES (Mar. 11, 2018), <https://www.tampabay.com/florida-politics/buzz/2018/03/11/lawmakers-in-whittling-down-public-records-add-exemptions-they-say-are-necessary-after-parkland/> [<https://perma.cc/B6GN-3DVE>].

¹⁵⁹ See Koningisor, *supra* note 134, at 1463–64 (recounting story of New York Times reporter who was told that a report needed from a state agency in Texas, regarding the state's 2017 response to Hurricane Harvey, would be withheld based on an exemption to the Texas Public Information Act for records of "terrorism or related criminal activity," a decision the Times chose not to fight because of the cost of suing).

¹⁶⁰ *Food Mktg. Inst. v. Argus Leader Media*, 139 S. Ct. 2356, 2365–66 (2019).

¹⁶¹ See Jane E. Kirtley, Scott Memmel & Jonathan Anderson, *More "Substantial Harm" Than Good: Recrafting FOIA's Exemption 4 After Food Marketing Institute v. Argus Leader Media*, 46 MITCHELL HAMLINE L. REV. 497, 516 (2020) (collecting criticism from scholars and journalists following *Argus Leader* ruling, and agreeing that "the Supreme Court's decision . . . fails to protect important public interests in government transparency, newsgathering, and the free flow of information" and calls for congressional reform); see also Vladeck, *supra* note 132, at 1792 ("Courts have interpreted exemptions in FOIA and other statutes for trade secrets and confidential business information quite expansively, creating a broad and widening gap in the public's ability to acquire environmental information generated by corporations and submitted to the government to enable it to carry out its environmental-protection responsibilities."). In addition to trade-secret law, industries can also use intellectual property law to lock away information about

As with many laws that guarantee the rights of the individual against the state, the government's enthusiasm for complying with FOI laws is at its lowest in times of national crisis. Federal and state governments took advantage of the national sense of existential panic after the September 11, 2001, terror attacks on New York City and Washington, D.C., to make vast amounts of information disappear from public view, including spatial data that, purportedly, might enable attackers to locate future targets.¹⁶² Federal and state mapping tools are of special value and interest to the environmental community, and withdrawing them from public view on the basis of (perhaps dubious) national security concerns carries real information costs with which the government inadequately reckoned.¹⁶³

Along with the overbroad application of FOI exemptions, cost is a habitual source of frustration for requesters. While some states cap what agencies can charge to solely the physical cost of making a copy, others allow agencies to pass on the hourly wage of employees who must retrieve and redact the records, which can inflict prohibitively burdensome charges.¹⁶⁴ Horror stories abound: A television station in Kansas was assessed \$40,000 to retrieve email correspondence from the state labor department documenting the frequency of complaints about unemployment insurance fraud.¹⁶⁵ The *Atlanta Journal-Constitution* was told that retrieving records about how the state of Georgia's emergency

their products and processes from disclosure to competitors and the public. See Wendy E. Wagner, *Commons Ignorance: The Failure of Environmental Law to Produce Needed Information on Health and the Environment*, 53 DUKE L.J. 1619, 1645 (2004).

¹⁶² Patricia E. Salkin, *GIS in an Age of Homeland Security: Accessing Public Information to Ensure a Sustainable Environment*, 30 WM. & MARY ENV'T L. & POL'Y REV. 55, 58–60 (2005).

¹⁶³ See *id.* at 61 (observing that “[e]nvironmental justice advocates have relied on both government and Internet-provided GIS data to learn about public health and environmental risks present in various minority and low-income communities across the country.”). As Professor Salkin notes, governments’ reluctance to release GIS maps predates the post-9/11 war on terror and historically was based on agencies’ hopes of commercially monetizing the maps, which justifies some skepticism about whether terrorism is being cited opportunistically to legitimize a financially motivated decision. See *id.* at 63 (commenting that “federal and state governments appear to be cloaking their reluctance to share certain GIS data by using homeland security as a justification to promote secrecy”).

¹⁶⁴ See Holcomb & Isaac, *supra* note 139, at 568 (commenting that “the allocation of all redaction costs to the requester can defeat the public’s right to access”).

¹⁶⁵ Pilar Pedraza, *\$40,000 for Public Records? The KAKE News Investigates Fight with KDOL over Your Unemployment*, KAKE NEWS (Apr. 26, 2021, 3:47 PM), <https://www.kake.com/story/43731092/dollar40000-for-public-records-the-kake-news-investigates-fight-with-kdol-over-your-unemployment> [https://perma.cc/HTZ8-GBST].

management agency responded to the COVID-19 pandemic would cost \$33,000 and take eight months to fulfill.¹⁶⁶ As one legal commentator has observed, because FOI laws enable agencies to charge much more than the nominal cost of making a duplicate, “fees for copies have functioned as a barrier to access to public records in a number of cases.”¹⁶⁷

Delay and avoidance are, likewise, recurring problems. A top Ohio official has characterized municipal governments’ compliance with their FOI responsibilities as “miserable.”¹⁶⁸ Marquette University researchers tested compliance rates among municipal governments across nine states, asking for routine documents that should be readily accessible, and received successful responses from only 63% of those surveyed, with compliance rates as low as 37% (Mississippi) and 23% (Oklahoma), even after multiple reminders.¹⁶⁹ A team from the University of Minnesota tried a comparable experiment with databases routinely kept by state universities and received similarly mixed levels of cooperation: Out of 132 requests, 22 produced no response at all, and even though the requests asked each university for the same documents, the time to respond ranged from 4 to 111 days.¹⁷⁰

Federal FOIA in particular is notoriously slow to produce results. Agencies habitually accumulate backlogs—requests to which a response is overdue, according to FOIA’s statutory timetable¹⁷¹—that number into the thousands or even tens of thousands,¹⁷² a situation only worsened by the slowdown associated with COVID-19 workplace adjustments during

¹⁶⁶ David Wickert, *Cost of Georgia COVID Records: \$33,000 and Rising*, ATLANTA J.-CONST. (Sept. 22, 2020), <https://www.ajc.com/politics/cost-of-georgia-covid-records-33000-and-rising/IWCUASSEQFEUXJBDXWASJ4PYHE/> [<https://perma.cc/6FXA-4CLJ>].

¹⁶⁷ See John Bender, *Solid-Gold Photocopies: A Review of Fees for Copies of Public Records Established under State Open Records Laws*, 29 URB. LAW. 81, 85–86, 90, 117 (1997) (observing that the true cost of making a copy should be about five to seven cents per page, but state FOI statutes allow for charges up to \$1.25 per page).

¹⁶⁸ *Parcels*, *supra* note 135, at 243.

¹⁶⁹ A. Jay Wagner, *Inherent Frictions and Deliberate Frustrations: Examining the Legal Variables of State FOI Law Administration*, 3 J. CIVIC INFO. 29, 39 (2021).

¹⁷⁰ Jonathan Anderson & Sarah K. Wiley, *Freedom of the Database: Auditing Access to Structured Data*, 3 J. CIVIC INFO. 30, 47 (2021).

¹⁷¹ USAID, FOIA BACKLOG REDUCTION PLAN 2 (2019), <https://www.usaid.gov/foia/backlog-reduction-plan> [<https://perma.cc/H2AS-73LQ>].

¹⁷² See U.S. GOV’T ACCOUNTABILITY OFF., FREEDOM OF INFORMATION ACT: AGENCIES ARE IMPLEMENTING REQUIREMENTS BUT ADDITIONAL ACTIONS ARE NEEDED (GAO-18-365) at 31 (2018) (reporting that, in the most recent year studied, the State Department had 22,664 backlogged requests and the Department of Homeland Security had 46,788).

2020 and 2021.¹⁷³ Environmental agencies are not the worst offenders—that distinction belongs to intelligence, defense and law enforcement agencies—but they still are plagued by delays. The EPA reported that, as of April 2018, 2,537 pending requests had failed to receive a response within the statutorily allotted time.¹⁷⁴ Despite a promise to reduce the clog by 25%, a year later the backlog still stood at 2,128 requests, only a 16% improvement.¹⁷⁵ As a result of agencies’ failure to prioritize timely compliance, requesters regularly receive records far past the point at which they are relevant or useful.¹⁷⁶ In one memorable recent case, a New Orleans journalist who asked the FBI for its file of a closed investigation into congressional misconduct finally received its response twelve years later—after he had retired.¹⁷⁷ The reporter’s story prompted a piquant observation from a prominent First Amendment attorney: “The Freedom of Information Act is broken.”¹⁷⁸

If professors and experienced journalists encounter this level of adversity in obtaining documents from government agencies, the obstacle is even more formidable to ordinary citizens curious about conditions in their neighborhoods.¹⁷⁹ Without training, legal support, and the deep pockets to write a five-figure check, community advocates face long odds if government regulators make up their minds to be hidebound.¹⁸⁰

¹⁷³ Nate Jones, *Public Records Requests Fall Victim to the Coronavirus Pandemic*, WASH. POST (Oct. 1, 2020, 9:01 AM), https://www.washingtonpost.com/investigations/public-records-requests-fall-victim-to-the-coronavirus-pandemic/2020/10/01/cba2500c-b7a5-11ea-a8da-693df3d7674a_story.html [<https://perma.cc/4NBJ-KU5W>].

¹⁷⁴ EPA, FISCAL YEAR 2021: JUSTIFICATION OF APPROPRIATION ESTIMATES FOR THE COMMITTEE ON APPROPRIATIONS, TAB 13: PROGRAM AND PERFORMANCE ASSESSMENT (EPA-190-S-20-001), at 726 (2020), <https://www.epa.gov/sites/default/files/2020-03/documents/fy21-cj-13-program-performance.pdf> [<https://perma.cc/7E8D-8TYE>].

¹⁷⁵ *Id.*

¹⁷⁶ See Vladeck, *supra* note 132, at 1801 (stating that FOIA’s statutory time limits “are rarely met and are unenforceable as a practical matter”).

¹⁷⁷ Bruce Alpert, *The Times-Picayune Sought FBI Files on Bill Jefferson’s Corruption Case. They Came 12 Years Later*, NOLA.COM (Oct. 19, 2021, 11:00 AM), https://www.nola.com/news/courts/article_8c902abe-30ef-11ec-92a1-ff621c3b80ec.html [<https://perma.cc/5DBD-WGEZ>].

¹⁷⁸ *Id.*

¹⁷⁹ See Parcels, *supra* note 135, at 246 (quoting Ohio’s state auditor, whose agency received responses from just 60% of municipal governments that received a public records request: “If my office gets only 60 percent, what is the response rate for a lone citizen?”); see also Collin & Collin, *supra* note 24, at 47 (“It is very difficult for residents to find out information about the state of their local environment, and how to participate in environmental decisions.”).

¹⁸⁰ See Collin & Collin, *supra* note 24, at 47 (observing that FOIA requests “tend to

B. The Obligation to Measure and Disclose Environmental Hazards

1. Freedom of (Some) Information

A foundational shortcoming of freedom of information laws is that government custodians are obligated to disclose only records they possess; agencies are not affirmatively obligated to create new records, or to find out the answers to seemingly obvious questions.¹⁸¹ While the federal statute and some of its state counterparts speak in terms of access to “information,” that nomenclature is something of an exaggeration; the public is statutorily entitled only to *documents*, not to *answers*.¹⁸² This feature of U.S. FOIA law contrasts somewhat with a broader understanding under international law that people should have a right to information, not just to documents.¹⁸³ A 2004 joint declaration from leading non-governmental actors including the United Nations Special Rapporteur on Freedom of Opinion and Expression called for a practice of “maximum disclosure” and spoke in terms of “the right to access information held by public authorities,” not just a right to inspect *records*.¹⁸⁴

Just as there is no statutory duty under U.S. law to compile and create a new record just because a requester wishes that one existed,

require professional assistance, . . . may not always produce the necessary information,” and may be regarded by inexperienced users as uncomfortably confrontational and likely to provoke retaliation).

¹⁸¹ See *Inst. for Just. v. Internal Revenue Serv.*, 941 F.3d 567, 569 (D.C. Cir. 2019) (“FOIA imposes no duty on agencies to create new records in response to FOIA requests.”); see also *Holcomb & Isaac*, *supra* note 139, at 528 (observing that “a record authority is not required to create a new record by extracting and compiling information from existing records into a new format”).

¹⁸² See *State ex rel. Lanham v. Ohio Adult Parole Auth.*, 687 N.E.2d 283, 285 (Ohio 1997) (ruling that inmates’ request to produce qualifications of parole board members was improper under Ohio Public Records Act, which requires agencies only to produce pre-existing documents, not compile answers to questions); see also *Am. Civ. Liberties Union v. Ariz. Dep’t of Child Safety*, 377 P.3d 339, 345 (Ariz. App. 2016) (explaining that Arizona’s “public records law does not require an agency, in responding to a public records request, to create a new record that compiles analytical information about information”).

¹⁸³ See *Kravchenko*, *supra* note 122, at 230–31 (explaining that many countries infer a right of access to information held by the government as a necessary adjunct of the constitutionally protected right to freedom of expression, so that FOI is a creature of human-rights law).

¹⁸⁴ *Ambeyi Ligabo, Miklos Haraszti & Eduardo Bertoni, International Mechanisms for Promoting Freedom of Expression: Joint Declaration*, IACHR, https://www.oas.org/en/iachr/expression/showarticle.asp?art_ID=319&IID=1 [<https://perma.cc/6D4X-CN7E>] (last visited Apr. 12, 2023).

there is no overarching duty for the federal government to monitor, and report on, the existence of potentially hazardous contaminants in the environment.¹⁸⁵ Consequently, the U.S. citizenry must depend on a patchwork regime of health and safety statutes that require industries to report (generally to the government, not directly to the public) when they do something that poses a toxic hazard.¹⁸⁶

Lawmakers and regulatory agencies have pursued two parallel approaches to the problem of contaminants in air, water, and land: regulating the use and release of pollutants and also requiring reporting when contaminants are being stored, used, or discharged.¹⁸⁷ Reporting requirements are necessary because, left to their own devices, industries would have little economically rational reason to admit when they spill or mishandle dangerous substances.¹⁸⁸ All of the incentives are aligned toward concealing or minimizing responsibility, since voluntary disclosure could open up liability both to tort litigation and to regulatory penalties.¹⁸⁹ Indeed, polluting industries have powerful legal incentives to remain willfully blind of the consequences of their actions, so, unless compelled to do so, they have little motivation to conduct or underwrite research that might disclose inconvenient truths.¹⁹⁰ As one scholar has observed, “Remaining ignorant about the potential harms caused by one’s products and activities increases the likelihood that the actor can avoid

¹⁸⁵ See Bradley C. Karkkainen, *Information as Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 GEO. L.J. 257, 260–61 (2001) (commenting that federal regulations typically contemplate gathering only the minimum amount of data necessary to assess compliance with a particular program’s standards, so that “data are difficult to aggregate, compare, rank, or track over time”); see also Ryan P. Kelly, *Will More, Better, Cheaper, and Faster Monitoring Improve Environmental Management?*, 44 ENV’T L. 1111, 1112 (2014) (making a similar point in the context of fisheries management, where policymakers have not routinely gathered basic information such as abundance and catch rates of particular species of fish).

¹⁸⁶ See, e.g., Karkkainen, *supra* note 185, at 285–86.

¹⁸⁷ See Engel, *supra* note 7, at 117 (“There are two major types of environmental laws: those focused on regulating conduct and those requiring information to be made public without any accompanying restrictions.”).

¹⁸⁸ See Wagner, *supra* note 161, at 1622 (“[R]ational choice theory predicts that if wrongdoers are going to invest in research at all, they will dedicate resources to concealing and contesting incriminating information and producing exculpatory excuses and alibis.”).

¹⁸⁹ See *id.* at 1625 (observing that environmental laws “actually deter regulated parties from volunteering information on the adverse effects of their activities”).

¹⁹⁰ See *id.* at 1631 (commenting that, while industries often sponsor research advancing public knowledge because there is also some competitive business advantage to be gained, such is not the case with researching health and safety risks associated with toxics, where awareness of the risk may give rise to liability).

tort suits and stay out of the range of plaintiffs' attorneys' radar."¹⁹¹ Left to their own devices, companies will also default to nondisclosure because disclosure of potential hazards might provide government officials with ammunition to enact new regulations.¹⁹² As with the federal FOIA, the notion that industries must affirmatively volunteer information about their processes that would otherwise be a closely guarded corporate secret is not unique to the United States.¹⁹³ Globally, a variety of laws and treaties obligate private enterprises to disclose potentially polluting activities to regulators and/or the general public.¹⁹⁴

2. Flawed, but Powerful: EPA's Toxics Release Inventory

A form of a "pocket FOIA" disclosure statute exists as part of the federal Emergency Planning and Community Right-to-Know Act ("EPCRA").¹⁹⁵ EPCRA contains three distinct reporting requirements that apply to a federally selected menu of several thousand hazardous chemicals.¹⁹⁶ First, industries must submit a "material safety data sheet" and a "hazardous chemical inventory form" telling state and local emergency response agencies which chemicals they handle and in what quantity.¹⁹⁷ Second, in the event of a release of a substance categorized as "extremely" hazardous, industries must give immediate notice to the applicable emergency responders for the area affected by the release.¹⁹⁸ And third, industries that release toxic chemicals exceeding federally specified quantities over the course of the year must file annual reports with the EPA and its state level counterpart documenting the circumstances of the release.¹⁹⁹ The EPA compiles these reports into what is known as the "Toxics Release Inventory" database, or TRI.²⁰⁰

Congress enacted EPCRA following the accidental releases of airborne toxins from Union Carbide chemical plants in Bhopal, India, in

¹⁹¹ *Id.* at 1639. Professor Wagner gives the example of the toxic herbicide known as "Agent Orange," which was known to contain a carcinogen dangerous to human health for many years before that knowledge became public. *Id.* at 1643.

¹⁹² Echeverria & Kaplan, *supra* note 80, at 587.

¹⁹³ See Kravchenko, *supra* note 122, at 242.

¹⁹⁴ *Id.*

¹⁹⁵ 42 U.S.C. §§ 11001–11050.

¹⁹⁶ *Id.* §§ 11021–11023.

¹⁹⁷ *Id.* §§ 11021–11022.

¹⁹⁸ *Id.* § 11004(b).

¹⁹⁹ *Id.* § 11023.

²⁰⁰ *Id.* § 11023(j).

1984 and in Charleston, West Virginia, in 1985.²⁰¹ The Bhopal release killed an estimated 15,000 people, regarded as the world's worst ever industrial disaster.²⁰² While the Bhopal disaster is widely cited as the triggering event that impelled Congress to act, EPCRA was actually based on a number of comparable state statutes predating Bhopal, including one in New Jersey that became a go-by for Congress.²⁰³ EPCRA's disclosure-based approach represents a compromise with regulated industries and imposes little burden on them beyond merely sharing what they have already detected; it does not obligate industries to affirmatively monitor for releases they may be failing to detect.²⁰⁴ Moreover, compliance with the duty to report is notoriously spotty, and the EPA lacks much enforcement authority to verify whether facilities are reporting accurately and completely.²⁰⁵

Notwithstanding its limitations, EPCRA and the federal inventory it created have been hailed as ushering in a "quiet revolution" in environmentalism, establishing what is now "widely accepted": that the citizenry has a right to know about toxins in their midst.²⁰⁶ EPCRA has been called "one of the nation's most effective environmental laws" because of the power of its data gathering and disclosure regimen, which over its first decade of existence was credited with bringing about a steady reduction in the release of TRI-listed pollutants.²⁰⁷ Professor Sidney M. Wolf asserts that publication of the toxics inventory has been effective in a number of ways, including pressuring states to enact their own pollution control legislation and embarrassing the chief executives of major polluters into curbing emissions for reputational purposes.²⁰⁸ Significantly, Wolf says the TRI has fueled better informed journalism about environmental issues, beginning with the very first public release of TRI data in 1989, which became fodder for a three-day series in *USA*

²⁰¹ *EPCRA Milestones Through the Years*, EPA, <https://www.epa.gov/epcra/epcra-milestones-through-years> [<https://perma.cc/B8VE-KPAZ>] (Oct. 5, 2022).

²⁰² Engel, *supra* note 7, at 120.

²⁰³ Karkkainen, *supra* note 185, at 319–20.

²⁰⁴ *Id.* at 294.

²⁰⁵ See Engel, *supra* note 7, at 133 (citing criticism from the federal Government Accountability Office that faulted the EPA for bringing few enforcement actions under EPCRA and being slow to resolve them).

²⁰⁶ Sidney M. Wolf, *Fear and Loathing About the Public Right to Know: The Surprising Success of the Emergency Planning and Community Right-to-Know Act*, 11 J. LAND USE & ENV'T L. 217, 313 (1996).

²⁰⁷ Karkkainen, *supra* note 185, at 287.

²⁰⁸ Wolf, *supra* note 206, at 292, 305, 308.

Today.²⁰⁹ While TRI data is useful to journalists, advocates and regulators, it also can be informative to investors, and to prospective employees and customers, in making better informed decisions about whether particular companies are too risky to be associated with.²¹⁰ The fear of being stigmatized as “polluters” can impel reputation-conscious businesses to reduce their use and release of toxins without the need for costly legal or regulatory proceedings.²¹¹ Environmental justice advocates have drawn on TRI data to identify communities where adverse exposure risks are concentrated, as a way of opposing particular siting plans or calling for more rigorous enforcement of existing standards.²¹²

Courts have recognized that deprivation of information can itself be an injury separate and apart from the injury of being exposed to pollutants.²¹³ For instance, in a 2013 case against petroleum giant BP arising out of the Deepwater Horizon oil spill in the Gulf of Mexico, the Fifth Circuit underscored the importance of compliance with EPCRA’s disclosure requirements to “ensure[] that the public is given access to important health-related information.”²¹⁴ The court rejected BP’s contention that the widespread availability of information on the internet was a substitute for complying with EPCRA, because such a position “ignores the fact that EPCRA places an affirmative statutory duty on the owner or operator of the facility to report the information.”²¹⁵ Indeed, being denied the statutorily guaranteed right to be informed can itself be an injury sufficient to confer legal standing to sue, as a Kentucky court held in a case involving a chicken processor’s failure to fully report its release of ammonia into the environment.²¹⁶

²⁰⁹ *Id.*

²¹⁰ See Karkkainen, *supra* note 185, at 323, 326–27 (explaining how investors, workers and customers can use TRI data to protect their interests); see also Echeverria & Kaplan, *supra* note 80, at 590 (“If citizens obtain access to new information, or can obtain information more quickly and easily, they can make a host of decisions in a more informed fashion about where to live, what products to buy, and what medical treatment to obtain.”).

²¹¹ Peters, *supra* note 82, at 162.

²¹² See Karkkainen, *supra* note 185, at 322 (“In recent years, TRI has taken on an ‘environmental justice’ flavor as low-income and minority communities add complaints of disparate impact, backed by TRI-derived inter-community comparisons, to underlying concerns about toxic exposures.”).

²¹³ See, e.g., *Ctr. for Biological Diversity v. BP Am. Prod. Co.*, 704 F.3d 413, 432 (5th Cir. 2013).

²¹⁴ *Id.* at 429.

²¹⁵ *Id.* at 430.

²¹⁶ See *Sierra Club v. Tyson Foods, Inc.*, 299 F. Supp. 2d 693, 704 (W.D. Ky. 2003) (“Plaintiffs argue that Defendants’ failure to report the ammonia releases has harmed the

In theory, EPCRA should equip the public with knowledge to make informed choices about where to work and live, which companies' products to patronize or boycott, and which facilities should be targeted for political advocacy.²¹⁷ But the law has been criticized, in the words of one environmental law professor, as “relatively crude and underdeveloped . . . limited by the narrowness, incompleteness, and unreliability of its data.”²¹⁸ Among the law's shortcomings is that EPCRA requires disclosure to government regulators but not necessarily to the general public.²¹⁹ At least one court has held that, as a result of EPCRA's structure, a member of the public cannot sue to compel disclosure of data held by state regulators in the same way that a member of the public could sue to enforce access rights under FOIA or its state analogs.²²⁰

The statute's focus on internal, rather than external, disclosure is perhaps understandable given that, when Congress enacted the first wave of environmental right-to-know statutes in the 1970s, its primary concern was to furnish information for the benefit of firefighters and other emergency responders who might be summoned to a chemical leak, rather than to the public at large.²²¹ Although EPCRA did result in the creation of a compulsory inventory that the EPA has now turned into a searchable online database,²²² the data that it generates is limited, owing

Plaintiffs because it has denied them access to critical information and has impaired the ability of government agencies to properly respond to releases. Plaintiffs have alleged precisely the type of injury—failure to receive information—that Congress intended to prevent by enacting the reporting requirements of both CERCLA and EPCRA.”); *see also* *Don't Waste Ariz., Inc. v. McLane Foods, Inc.*, 950 F. Supp. 972, 981 (D. Ariz. 1997) (holding that company's failure to timely file EPCRA-required disclosures can be grounds for citizens to sue, even if company cures violation by making filing belatedly).

²¹⁷ Engel, *supra* note 7, at 118.

²¹⁸ Karkkainen, *supra* note 185, at 262.

²¹⁹ *See* 42 U.S.C. §§ 11021–11023.

²²⁰ *See* *Dep't of Labor & Indus. v. Heltzel*, 90 A.3d 823, 832–33 (Pa. Commw. Ct. 2014) (holding that EPCRA is not a public access statute conferring an affirmative and enforceable duty for agencies to afford citizens access to state database of hazardous chemical users, and that limited disclosure duties under EPCRA supersede more expansive right of access under state FOI law).

²²¹ *See* Collin & Collin, *supra* note 24, at 47 (explaining that the primary purpose of environmental disclosure laws was “to help local fire and police officials respond safely to emergencies involving hazardous chemicals in their communities”); *see also* Jackson, *supra* note 76, at 545 (commenting that data gathering and reporting obligations under federal environmental statutes generally exist to supply information to regulators “for the purpose of ensuring permit compliance,” rather than primarily for the public's use).

²²² *Toxics Release Inventory*, EPA, <https://edap.epa.gov/public/extensions/newTRISearch/newTRISearch.html?#> [<https://perma.cc/W33A-C7Q7>] (last visited Apr. 12, 2023).

to the relatively narrow scope of EPCRA's reporting requirements.²²³ The TRI does not describe the circumstances of any particular release or identify the exact substance that was released, instead furnishing a general idea of the volume of the release and the name and location of the facility.²²⁴ Nor does the TRI gather and report small quantity releases that might add up problematically over time.²²⁵ Critics have faulted the TRI as unhelpfully narrow: The obligation to report applies only to large players, only to certain industries, and only to a limited range of chemicals, representing a small fraction of those used in U.S. industries.²²⁶ Nor does the data document whether a release has actually resulted in exposure to the public, which is arguably a more salient piece of information than just the raw quantity of material released.²²⁷ As Professor Karkkainen has observed, just knowing that a facility released a pound of some substance offsite says little without also knowing the toxicity of the substance and the size of the population in the exposure area.²²⁸

3. Breaking Government's Data Silos

While research in the hands of regulators and researchers is often "siloeed" by a particular regulated activity or a particular discipline, journalists in the popular press have been able to break the silos and make this connection. For instance, a 2021 series in the *Tampa Bay Times* documented how a shoddily managed lead smelting plant exposed workers to doses of lead far exceeding federal safety limits, taking advantage of workers' unwillingness to complain about the exposure because most were immigrants or people with felony records lacking formal education and desperate for good paying work.²²⁹ The *Times*' discovery about unsafe

²²³ See Karkkainen, *supra* note 185, at 331 (stating that "TRI information provides, at best, one narrow and potentially highly misleading indicator of environmental performance").

²²⁴ See Engel, *supra* note 7, at 131–32. Engel critiques the limitations of Toxics Release Inventory: "[I]t identifies only the facility and the volume of chemicals stored and released. While this is valuable information, it does little to reveal a facility's true impact on human health and the environment."

²²⁵ Collin & Collin, *supra* note 24, at 48.

²²⁶ David W. Case, *The Role of Information in Environmental Justice*, 81 MISS. L.J. 701, 736 (2012); see also Gary D. Bass & Alair MacLean, *Enhancing the Public's Right-to-Know about Environmental Issues*, 4 VILL. ENV'T L.J. 287, 301 (1993) (noting that certain large users of chemicals, including mining companies and utilities, are not subject to EPCRA's statutory duty to report, nor are federal government facilities).

²²⁷ Jackson, *supra* note 76, at 549.

²²⁸ Karkkainen, *supra* note 185, at 332–33.

²²⁹ Corey G. Johnson, Rebecca Woolington & Eli Murray, *Poisoned, Part 1: The Factory*,

conditions inside the plant led to further revelations that toxic lead dust was escaping the plant and contaminating the air and accumulating in the soil in a neighborhood surrounding the plant, which is mostly non-white.²³⁰ The *Times*' reporting underscores the breadth of "environmental justice" as an interconnected web of concerns that include exposure to health hazards in industrial workplaces—and the inability to find safer work elsewhere—as well as toxins in the air, water and land.

When data is locked away inside government vaults, then while it is theoretically "public" in the sense of being available to a knowledgeable requester, it is "practically obscure."²³¹ The case study of Tallevast, an unincorporated largely Black area of Southwest Florida, exemplifies this obscurity concern: Journalists belatedly discovered some 1,800 documents within Florida's Department of Environmental Protection that might have given warning that, for decades, a former beryllium plant had been actively contaminating groundwater, creating health risks for downstream communities.²³² Although the contamination was well-known to regulators—and to the plant's subsequent purchaser—by at least the mid-1990s, it was not revealed to the public until 2004.²³³

The failure of the legal system to require regulators to create databases that answer essential environmental questions can leave the public in the dark. Journalists for *Mississippi Today* documented systemic failures in the analysis of children's blood lead tests at the zip-code level—an epidemiology practice employed by most of the nation's health departments to narrow pools of risk—which had the direct result of holding back progress on remediating lead paint hazards.²³⁴ The Mississippi

TAMPA BAY TIMES (Mar. 24, 2021), <https://projects.tampabay.com/projects/2021/investigations/lead-factory/gopher-workers/> [<https://perma.cc/Y2MJ-9UYS>].

²³⁰ Corey G. Johnson, Rebecca Woolington & Eli Murray, *Poisoned, Part 3: The Fallout*, TAMPA BAY TIMES (Dec. 2, 2021), <https://projects.tampabay.com/projects/2021/investigations/lead-factory/pollution-fallout/> [<https://perma.cc/GN4Y-2RK2>].

²³¹ See *Dep't of Justice v. Reps. Comm. for Freedom of the Press*, 489 U.S. 749, 780 (1989) (recognizing concept of "practical obscurity," by which records are theoretically retrievable upon request but are unlikely ever to be compiled because of their scattered locations).

²³² James Manigault-Bryant, Ruby Bagwyn & José Constantine, *Poisoning Tallevast*, BOS. REV. (Feb. 3, 2021), <https://bostonreview.net/articles/james-manigault-bryant-ruby-bagwyn-jose-constantine-poisoning-tallevast/> [<https://perma.cc/C2KB-VD5Q>].

²³³ *Id.*

²³⁴ Erica Hensley, *How Many Mississippi Kids Are Poisoned by Lead? Massive Undercounts, Inconsistent Testing Provides Officials Few Answers*, MISS. TODAY (July 24, 2020), <https://mississippitoday.org/2020/07/24/how-many-mississippi-kids-are-poisoned-by-lead-massive-undercounts-inconsistent-testing-provides-officials-few-answers/> [<https://perma.cc/SR6G-7ATL>].

State Department of Health told journalists that two seemingly related datasets—lead in water and lead in children’s blood—are not cross-referenced because they are maintained by different agencies.²³⁵ The lack of affirmative “database creation” obligations leaves journalists, researchers and advocates to fill gaps in the public’s knowledge base—ironically while at the same time paying government agencies for the privilege of accessing data that belongs to the public.

Laws compelling regulated entities to gather and disclose data are so essential because marketplace incentives are so heavily skewed against transparency. As Professor Wendy E. Wagner has written, the economic self-interests of business entities that handle, sell, or release toxic materials mitigate in favor of concealing unfavorable information, and even affirmatively discrediting potentially incriminating information developed by researchers, journalists, and other third parties.²³⁶ Among the disincentives to candor is the tort system. As Wagner writes, a company that develops information about the adverse health effects of its activities will be exposing itself to liability for disregarding known risks *and* will have created a trail of documentation, discoverable by plaintiffs’ attorneys, that proves the known existence of the hazard.²³⁷ The result of lopsided economic and legal incentives, and weak regulatory compulsions, means that rather obvious fundamental questions about toxics in the environment go unasked and unanswered: There is no systematic testing of air, land, or groundwater for contaminants, and whatever testing *is* done tends to be crisis-driven and limited to particular known or suspected contaminants.²³⁸ As a result, even the best crafted FOIA request by the most determined requester will produce a null response, because the records simply do not exist within the government’s custody.

The absence of trustworthy and independent government data inflicts real informational costs on the public. “Gray literature” underwritten by industry can occupy the field and drive policymaking, skewing

²³⁵ *Id.*

²³⁶ Wagner, *supra* note 161, at 1631 (observing that corporate polluters “vastly prefer ignorance over research because most documentation of externalities will ultimately affect them negatively”); *see also id.* at 1649 (commenting that industries “may actively work to obfuscate especially damaging information produced by others” about the adverse effects of the industries’ activities).

²³⁷ *See id.* at 1639 (“Remaining ignorant about the potential harms caused by one’s products and activities increases the likelihood that the actor can avoid tort suits and stay out of the range of plaintiffs’ attorneys’ radar.”).

²³⁸ *See id.* at 1624 (“The quality of most air, water, and land in the U.S. is unknown, even though the country has devoted hundreds of pages of laws to regulating activities that threaten the environment.”).

the debate toward positions that reinforce rather than remedy inequity.²³⁹ Industry influence over sponsored research is well-documented in the tobacco and pharmaceutical industries to the point where funders have been able to scuttle clinical trials that appear bound to produce unfavorable results.²⁴⁰ So, too, have petrochemical makers and other industries responsible for greenhouse gas emissions amplified studies that are cherry-picked (and sometimes outright faulty) to cultivate the impression that the scientific community is uncertain about global climate change.²⁴¹ While literature can have significant value even without the imprint of established academic institutions and publishing houses,²⁴² those gatekeepers have a role to play in weeding out the most blatant corporate propaganda and refusing to lend legitimacy to it. A 2021 study by researchers with

²³⁹ “Gray literature refers to reports or publications that have not had a formal, independent peer review.” Deborah M. Brosnan, *Science, Law, and the Environment: The Making of a Modern Discipline*, 37 ENV’T L. 987, 1002 n.59 (2007) (citing PATRICK J. SULLIVAN, JAMES M. ACHESON, PAUL L. ANGERMEIER, TONY FAAST, JEAN FLEMM, CYNTHIA M. JONES, E. ERIC KNUDSEN, THOMAS J. MINELLO, DAVID H. SECOR, ROBERT WUNDERLICH & BROOK A. ZANETELL, AM. FISHERIES SOC’Y & ESTUARINE RSCH. FOUND., *DEFINING AND IMPLEMENTING BEST AVAILABLE SCIENCE FOR FISHERIES AND ENVIRONMENTAL SCIENCE, POLICY, AND MANAGEMENT* 13 (2006).

²⁴⁰ See Wagner, *supra* note 161, at 1657. Wagner comments that:

[S]ponsors historically have been able to exert dramatic control over the outcome of research, to the point of designing studies, framing research questions, and even editing and ghostwriting articles. Sponsors also routinely reserve the right to suppress publication of research that they fund and are not reticent to use this right if study results are adverse to their interests.

Id. See also Lisa Bero, *When Big Companies Fund Academic Research, the Truth Often Comes Last*, CONVERSATION (Oct. 2, 2019, 4:04 PM), <https://theconversation.com/when-big-companies-fund-academic-research-the-truth-often-comes-last-119164> [<https://perma.cc/F67R-TE8A>]. Bero expresses concern that, globally, government and nonprofit support for scientific research is declining so that academics are increasingly reliant on grants from industry, with potential consequences for their academic freedom: “Internal industry documents obtained through litigation have revealed many examples of industry sponsors influencing the design and conduct of research, as well as the partial publication of research where only findings favourable to the funder were published.” *Id.*

²⁴¹ See George Monbiot, *The Denial Industry*, GUARDIAN (Sept. 19, 2006, 10:45 AM), <https://www.theguardian.com/environment/2006/sep/19/ethicalliving.g2> [<https://perma.cc/H77Z-H2JW>] (describing how ExxonMobil adopted techniques from the tobacco industry to bankroll organizations with no genuine expertise in climate science to publish blog posts, petitions and other documents sowing doubt about scientific consensus over climate change).

²⁴² See Taryn L. Rucinski, *The Elephant in the Room: Toward a Definition of Grey Legal Literature*, 107 L. LIBR. J. 543, 544 (2015) (rejecting broad-brush devaluation of gray literature as a category, and commenting that “despite its ephemeral nature, grey literature is both practical and meaningful, particularly to the legal community”).

the University of Massachusetts–Amherst looking at various areas of controversy involving environmental health and safety—including smoking, pesticides, coal mining, and climate change—found that industry advocates opposing government regulation all relied on the same core set of tactics, including attacking the design of studies that produce unfavorable information, misrepresenting what the unfavorable studies show, and speaking in hyperbolic or absolutist language about the purported adverse consequences of over-regulation.²⁴³ In other words, the people responsible for perpetuating environmental injustices well understand that winning the information battle is critical to winning the ultimate policymaking war, and government regulators and environmental advocates cannot underestimate the importance of trustworthy and effectively presented counter-information. There will always be “information” out in the field—whether real or manufactured—and it is largely within the government’s control whether the field is dominated by agenda-driven propaganda or is counterbalanced by well-researched facts.

IV. THE POWER OF INFORMATION IN ENVIRONMENTAL JUSTICE STORYTELLING AND ADVOCACY

During 2022, the city of Jackson, Mississippi, declared a “water emergency” that officials blamed on floodwaters overwhelming the community’s antiquated treatment facilities.²⁴⁴ The spectacle of a state capital city of 150,000 people without drinkable water for weeks that stretched into months galvanized the state and federal governments, belatedly, into action.²⁴⁵ In November 2022, the U.S. Justice Department brought an enforcement action in federal court against the city of Jackson, which agreed to accept a federal monitor to oversee efforts to bring the city into compliance with clean water laws.²⁴⁶

²⁴³ Rebecca F. Goldberg & Laura N. Vandenberg, *The Science of Spin: Targeted Strategies to Manufacture Doubt with Detrimental Effects on Environmental and Public Health*, 20 ENV'T HEALTH, Mar. 6 2021, at 1, 1–2, <https://ehjournal.biomedcentral.com/articles/10.1186/s12940-021-00723-0> [<https://perma.cc/7BXS-N5P4>].

²⁴⁴ Phil Hesel & Stephanie Gosk, *Jackson, Mississippi, Is Without Reliable Running Water After River Rises to Dangerous Level*, NBC NEWS, <https://www.nbcnews.com/news/us-news/jackson-mississippi-reliable-running-water-rcna45397> [<https://perma.cc/8M7Z-LVNR>] (Aug. 30, 2022, 11:12 AM).

²⁴⁵ Emmanuel Felton, *Living in a City with No Water: ‘This is Unbearable’*, WASH. POST (Sept. 3, 2022, 9:11 AM), <https://www.washingtonpost.com/nation/2022/09/03/jackson-mississippi-water-crisis/> [<https://perma.cc/ML82-4K2R>].

²⁴⁶ Teddy Grant & Luke Barr, *DOJ Reaches Agreement, Files New Complaint Against Jackson, Mississippi, over Water Crisis*, ABC NEWS (Nov. 29, 2022, 5:22 PM), <https://abc>

What seemed to be a sudden (and nationally ignored) crisis was, in fact, a slow motion train wreck years in the making. Advocates say that, as Jackson became an increasingly Black majority city—from less than 50% in 1980 to 83% today—the white-controlled state government disinvested from infrastructure and allowed the city’s water system to fall into disrepair.²⁴⁷ In addition to low water pressure and periodic boil-water notices due to contamination, Jackson also suffers from elevated lead levels reminiscent of those found in Flint, Michigan’s water supply.²⁴⁸ Only when sustained national media attention focused policymakers’ attention on the visually arresting embarrassment of city dwellers in a nation of affluence being forced to queue up for bottled water did regulators finally take remedial steps.²⁴⁹

Documenting and quantifying a problem can make a decisive difference in galvanizing support to address it. But doing so requires, first, that a problem be susceptible to measuring, and second, that both financial resources and political will exist to prioritize quantifying it. Once again, Jackson offers a case study.

It is anecdotally well-known that Mississippi residents, especially children, are being exposed to toxic lead from paint, water pipes, and other sources in their man-made environment.²⁵⁰ But the evidence is only

news.go.com/US/doj-reaches-agreement-files-new-complaint-jackson-mississippi/story?id=94161574 [https://perma.cc/N9JU-PZEQ].

²⁴⁷ Kayode Crown, ‘*All of a Sudden It’s Undrinkable: Why an Entire US City Has No Clean Water*, GUARDIAN (Sept. 1, 2022, 3:52 PM), <https://www.theguardian.com/us-news/2022/sep/01/jackson-mississippi-clean-drinking-water-flooding-problems> [https://perma.cc/MZ4N-4UDN].

²⁴⁸ Kate Galbraith & Matthew Teague, *High Levels of Lead Found in Mississippi Capital’s Water Likened to Flint Crisis*, GUARDIAN (Mar. 17, 2016, 8:03 AM), <https://www.theguardian.com/us-news/2016/mar/17/high-levels-lead-mississippi-water-flint-michigan> [https://perma.cc/Q9X6-DUUW].

²⁴⁹ See Molly Minta, ‘*Y’all Just Coming to Get a Story: Local Organizers Say Media Neglects Jackson Until Crisis*, MISS. TODAY (Sept. 9, 2022), <https://mississippitoday.org/2022/09/09/local-organizers-say-media-neglects-jackson-until-crisis/> [https://perma.cc/4PS6-3BUM] (describing frustration from some Jackson residents that they are ignored until national media declares a crisis); see also Anthony Warren, *National Media’s Narrative on the Jackson Water Crisis Breaks Along Ideological Lines*, WLBT-TV NEWS (Sept. 1, 2022, 6:32 PM), <https://www.wlbt.com/2022/09/01/national-medias-narrative-jackson-water-crisis-breaks-along-ideological-lines/> [https://perma.cc/Y2KB-TUG5] (describing how national and even international news media showed up in Jackson after initial reports of water outage, with CNN alone devoting 35 minutes of airtime to the story during one day in August 2022).

²⁵⁰ Erica Hensley, *Mississippians Work to Reduce Childhood Lead Exposure as State*,

anecdotal because the Mississippi Department of Health has not devoted resources to gathering statewide data in a sustained way and has not aggregated or cross-referenced whatever data does exist that measures lead risks from different sources of exposure.²⁵¹ Jackson is the only city in Mississippi that tracks children's blood lead tests at the zip code level, which is considered a standard epidemiological practice at county health departments elsewhere to help identify sources of risk.²⁵² Outside of Jackson, the state health department analyzes lead exposure data at only the county level, which is insufficient to pinpoint sources of risk.²⁵³

Once again, the job of filling gaps in government data is being taken up by the news media. In July 2022, *Consumer Reports* magazine and a consortium of Mississippi-based news organizations began offering free testing kits to local residents in hopes of compiling a database documenting where drinking water is tainted by lead and other heavy metals.²⁵⁴ The partnership exemplifies how advocates and journalists are increasingly not just reporting on what government data says but creating their own data where government-compiled data is lacking or unreliable.

A. *The Flint Water Crisis: The Power (and Shortcomings) of Data on Display*

A problem that is documented cannot be denied and is difficult to ignore. Disclosure statutes such as EPCRA are credited with helping mobilize pressure for industries with poor reputations as polluters to take curative steps, which also helps the businesses themselves operate more efficiently.²⁵⁵

Activists, journalists, and researchers depend on two primary streams of information about the condition of the environment and man-made activities that may threaten it: (1) permits and applications that

Feds Fail to Intervene, SOUTHERLY (Oct. 5, 2021), <https://southerlymag.org/2021/10/05/solving-mississippi-childhood-lead-crisis/> [<https://perma.cc/GVN8-ZMN4>].

²⁵¹ Erica Hensley, *Lead Poisoning Data Incomplete in Mississippi*, MISS. TODAY (July 26, 2020), https://www.djournal.com/mississippi-today/lead-poisoning-data-incomplete-in-mississippi/article_9da376f3-8f81-53ca-b8f1-52d6403c597e.html [<https://perma.cc/LSN5-WXBU>].

²⁵² Erica Hensley, *Tap Water Could Be Linked to Dangerous Lead Levels in Jackson's Kids. Mississippi Isn't Keeping Track*, SOUTHERLY (Apr. 28, 2021), <https://southerlymag.org/2021/04/28/jackson-lead-tap-water/> [<https://perma.cc/CX5P-4HMU>].

²⁵³ *Id.*

²⁵⁴ *Come Get Your Free \$800 Water Testing to Help You and the State Have Better Water*, MISS. CTR. FOR INVESTIGATIVE REPORTING (July 19, 2022), <https://www.mississippicir.org/news/get-your-free-800-water-testing> [<https://perma.cc/NFW8-HE9N>].

²⁵⁵ Engel, *supra* note 7, at 125.

must be reviewed by government agencies before a major commercial undertaking; and (2) periodic reports that industries must provide about certain substances they handle, store, and release that have been identified as potentially hazardous. The quality and practical usefulness of these information sources vary. When good information *is* available, it can change the public discourse and bring about change, because a risk that is quantified is harder to ignore. Disclosure and dissemination of information has long been a crucial component of effective environmental advocacy.²⁵⁶

The infamous drinking water crisis afflicting the largely Black community of Flint, Michigan, offers an object lesson in what happens when contamination is not accurately measured and honestly reported—and what happens when truthful information finally comes to light.²⁵⁷ The crisis has its roots in decades’ worth of degradation of water quality in the Flint River, long an industrial dumping ground.²⁵⁸ A state-appointed city manager made the tragically shortsighted cost-cutting decision in 2014 to switch the financially troubled city away from the City of Detroit’s treated water to the less expensive Flint River water.²⁵⁹ The water proved corrosive to the city’s antiquated lead pipes and led users to complain about skin rashes and other adverse health effects.²⁶⁰

Local officials downplayed the problem as long as they could, pressing the state to loosen water-testing requirements and then “pre-flushing”

²⁵⁶ See, e.g., *Horn v. City of Birmingham*, 718 So. 2d 694 (Ala. 1998). In *Horn*, the court observed that an element of the success realized by neighborhood activists who sued to block siting of a garbage transfer station in their community was pervasive media coverage of the controversy, which was the subject of more than ninety newspaper articles and a segment on Alabama Public Television Network, which helped bring about a change in the waste company’s procedures to incorporate public concerns in future location decisions. See *id.* at 700–01.

²⁵⁷ See Melissa Denchak, *Flint Water Crisis: Everything You Need to Know*, NRDC (Nov. 8, 2018), <https://www.nrdc.org/stories/flint-water-crisis-everything-you-need-know> [<https://perma.cc/CJ2A-U5NW>].

²⁵⁸ Marianne Engelman Lado, *Toward Civil Rights Enforcement in the Environmental Justice Context—Step One: Acknowledging the Problem*, 29 FORDHAM ENV’T L. REV. 1, 9 (2017).

²⁵⁹ See Nicholas J. Schroeck, *The Flint Water Crisis, Drinking Water Regulations and Gaps in Lead, Copper, and Legionella Protections*, 97 U. DET. MERCY L. REV. 509, 511–13 (2020) (explaining the decision to switch water systems and immediate adverse public reaction to river water, which local officials attempted to downplay and rationalize).

²⁶⁰ Ryan Felton, *Flint’s Tainted Water May Have Led to Rashes and Hair Loss, Investigation Finds*, GUARDIAN (Aug. 23, 2016, 3:14 PM), <https://www.theguardian.com/us-news/2016/aug/23/flint-lead-tainted-water-crisis-skin-rashes-hair-loss-michigan> [<https://perma.cc/4NCC-7JFY>].

taps to produce deceptively clean test results.²⁶¹ Ultimately, it was informed citizens and activists who exposed years of government inaction and neglect.²⁶² LeeAnne Walters, a Flint resident whose family had an outbreak of ailments linked to elevated iron and lead in their home's water, obtained and publicized a buried Environmental Protection Agency document asserting that the contamination was far more serious than local authorities were letting on.²⁶³ Walters' activism led to the involvement of a renowned Virginia Tech scientist, Marc Edwards, who ran independent tests concluding—contrary to the city's assurances—that some 5,000 Flint homes had lead levels in their tap water exceeding the safety standard set by the World Health Organization.²⁶⁴

The power of credible information undercutting the local government's narrative proved too powerful to ignore.²⁶⁵ In October 2015, the city switched away from Flint River water, residents turned out Flint's incumbent mayor, the newly elected mayor declared a state of emergency, and key officials at the Michigan Department of Environmental Quality were replaced.²⁶⁶ Some 10,000 lead pipes were dug up and replaced, and class-action litigation against the state and city led to a \$641 million settlement pool compensating afflicted residents.²⁶⁷ A postmortem on the crisis by the Michigan Civil Rights Commission concluded that “[t]here were and still are racialized policies, practices, cultural norms, and institutional arrangements that help create and maintain racially

²⁶¹ ANNA CLARK, *THE POISONED CITY: FLINT'S WATER AND THE AMERICAN URBAN TRAGEDY* 119 (2018); see also Lindsey J. Butler, Madeleine K. Scammell & Eugene B. Benson, *The Flint, Michigan, Water Crisis: A Case Study in Regulatory Failure and Environmental Injustice*, 9 ENV'T JUST. 93, 95 (2016) (explaining that flushing taps before testing violates EPA's lead and copper rule, which sets a goal of zero for lead in tap water).

²⁶² *Id.* at 97.

²⁶³ Donovan Hohn, *Flint's Water Crisis and the 'Troublemaker' Scientist*, N.Y. TIMES MAG. (Aug. 16, 2016), <https://www.nytimes.com/2016/08/21/magazine/flints-water-crisis-and-the-troublemaker-scientist.html> [<https://perma.cc/UPN5-3LNY>]; see also CLARK, *supra* note 261, at 79–82 (describing the Walters family's symptoms, and findings of water tests in the Walters home); *id.* at 110 (describing how Walters tracked down public records).

²⁶⁴ Hohn, *supra* note 263.

²⁶⁵ See Butler et al., *supra* note 261, at 94 (stating that, although EPA officials knew of elevated lead levels at least as early as April 2015, they “did not act until January 2016 when fierce media attention prompted them to act”).

²⁶⁶ Merrit Kennedy, *Lead-Laced Water in Flint: A Step-By-Step Look at the Makings of a Crisis*, NPR (Apr. 20, 2016, 6:39 PM), <https://www.npr.org/sections/thetwo-way/2016/04/20/465545378/> [<https://perma.cc/QT39-SN3H>].

²⁶⁷ Natasha Blakely, *Seven Years On: The Flint Water Crisis Has Yet to Conclude*, GREAT LAKES NOW (Oct. 27, 2021), <https://www.greatlakesnow.org/2021/10/seven-years-flint-water-crisis/> [<https://perma.cc/CM7G-T5GU>].

disparate outcomes” in Flint.²⁶⁸ Tellingly, the city’s population is 62.6% people of color, and 41.6% of residents live below the poverty line.²⁶⁹

Virginia Tech’s Edwards offered his own postmortem account of the Flint experience as well in a 2018 lecture at Pennsylvania’s Juniata College.²⁷⁰ Although finding fault with exaggeration in some media coverage of the severity of the lead poisoning problem, Edwards said capturing the attention of the national news media was indispensable toward bringing about a successful resolution for Flint families:

[S]cientific data and facts are meaningless in a war like this. You might as well be dropping spit balls on people from thirty thousand feet. What we had to do was engage the fourth estate, the press. And the way that you engage the press is to tell a story. Our approach was to tell the heroic science story of the Flint residents This was a very powerful weapon that we unleashed²⁷¹

The Flint experience is no outlier. Time and again, getting information into the hands of the news media has proven successful in amplifying the unheeded voices of poor people suffering with contaminated water and air.²⁷² As one commentator put it, “more information on an important public issue tends to lead to public pressure which can lead to reform.”²⁷³

B. *Successes in Creating Data*

Where data is lacking or unreliable, journalists, researchers and advocates often find themselves having to create it.²⁷⁴ In May 2022,

²⁶⁸ MICH. CIVIL RIGHTS COMM’N, THE FLINT WATER CRISIS: SYSTEMIC RACISM THROUGH THE LENS OF FLINT 10 (2017), <https://www.michigan.gov/-/media/Project/Websites/mdcr/mcr/reports/2017/flint-crisis-report-edited.pdf?rev=4601519b3af345cfb9d468ae6ece9141> [<https://perma.cc/JK8E-SA4V>].

²⁶⁹ Butler et al., *supra* note 261, at 94, 96.

²⁷⁰ Marc A. Edwards, *The Water Crisis in Flint, Michigan: Citizen Scientists, the Media, and Science Anarchists*, 18 JUNIATA VOICES 105, 109 (2018).

²⁷¹ *Id.* at 109.

²⁷² See Falkenberry, *supra* note 79, at 28 (“The publication of releases can be used to both arouse public attention about the dangers that they may face and also to taint an industry’s image so as to gain more bargaining power in permit proceedings. The use of the media in this way can be a very powerful tool for environmentalists.”).

²⁷³ Wolf, *supra* note 206, at 281.

²⁷⁴ See Verslycke & Wait, *supra* note 146, at 15 (stating that “environmental groups are

Florida's *Tampa Bay Times* was awarded the Pulitzer Prize in the local news reporting category for a multipart series, "Poisoned," looking at how a local lead smelting plant had sickened generations of workers and discharged toxins into the surrounding community.²⁷⁵ The editor of the *Times*, Mark Katches, accompanied the prize announcement with a column describing how his three-reporter team "did work regulators should have done in Tampa years ago"—even taking courses to become certified lead inspectors so they could credibly test the air and water surrounding the Gopher Resource factory, in a way regulators had failed to do.²⁷⁶ Reporters tested soil samples in a residential neighborhood adjoining the plant and found elevated lead levels.²⁷⁷ Gopher employees told the newspaper that the plant's operators figured out how to evade regulators by taking curative measures on pre-announced "air monitoring days" to artificially diminish the plant's emissions.²⁷⁸ As a result of the *Times*' reporting, local regulators directed Gopher Resources to upgrade the plant's ventilation system and fined the operators more than \$500,000.²⁷⁹

The story of Gopher Resource is eerily reminiscent of the experience, a generation earlier, of West Dallas residents who discovered that a lead battery recycling plant was dousing their neighborhood with lead particles emitted during the smelting process.²⁸⁰ Residents complained to city authorities about the plant on-and-off over the course of five decades, with little success until their cause was taken up by the *Dallas Morning News*.²⁸¹ The *News* published a series of revelatory articles in 1983 credited with inciting public backlash, provoking a series of class-action civil

increasingly collecting their own data through citizen science efforts," but that the data may not be admissible in court due to questions about methodology).

²⁷⁵ Zachary T. Sampson, *Tampa Bay Times Reporters Win Pulitzer Prize for 'Poisoned' Series*, TAMPA BAY TIMES, <https://www.tampabay.com/investigations/2022/05/09/tampa-bay-times-reporters-win-pulitzer-prize-for-poisoned-series/> [https://perma.cc/47LY-3Q2U] (May 10, 2022).

²⁷⁶ Mark Katches, *Reporting Team that Won Pulitzer Did Work Regulators Should Have Done in Tampa Years Ago*, TAMPA BAY TIMES, <https://www.tampabay.com/investigations/2022/05/10/reporting-team-that-won-the-pulitzer-did-the-work-regulators-should-have-done-in-tampa-bay-years-ago/> [https://perma.cc/5SM5-BH2T] (May 10, 2022).

²⁷⁷ Johnson et al., *supra* note 230.

²⁷⁸ *Id.*

²⁷⁹ Corey G. Johnson, Rebecca Woolington & Eli Murray, *Tampa Lead Factory Faces \$518,000 Fine for Environmental Violations*, PBS FRONTLINE & TAMPA BAY TIMES (Jan. 22, 2022), <https://www.pbs.org/wgbh/frontline/article/tampa-lead-factory-518000-fine-environmental-violations/> [https://perma.cc/R55W-4RPV].

²⁸⁰ Bullard, *supra* note 8, at 332.

²⁸¹ *Id.*

suits and impelling the state attorney general's office to take enforcement action.²⁸² Ultimately, both the plant operator and the EPA agreed to undertake extensive remediation programs, and the operator paid out \$45 million to settle the civil litigation.²⁸³

ProPublica, a leading nationwide nonprofit news organization, specializes in creating databases that fill gaps in publicly available government data, both alone and in collaboration with locally based news organizations.²⁸⁴ In 2021, a team of reporters tested air quality around South Florida sugarcane fields and found high levels of particulate matter, which is linked to adverse health consequences, during times when the sugar industry was burning fields as part of the harvesting process.²⁸⁵ In addition to running their own tests, the reporting team equipped local residents with air-monitoring sensors and asked them to compile four months' worth of emissions data in their own neighborhoods, tapping into the lived experience of the people most affected.²⁸⁶ Reporters also examined eight years' worth of hospital admission data from Palm Beach County, Florida, and discovered that emergency room visits for respiratory problems "spiked" in correlation with periods of sugar cane burning.²⁸⁷ Reporters had to do this fieldwork because of the government's lack of diligence. The EPA did not prioritize replacing a long-malfunctioning monitor that cost no more than \$35,000, and even if it had been working, the government's chosen method of calculating toxin levels—a twenty-four hour average—did not adequately capture the adverse health effects of short-term spikes in particulates.²⁸⁸ Not surprisingly, the adversely affected neighborhoods were in the lower-income western portion of Palm

²⁸² *Id.* at 333.

²⁸³ *Id.*

²⁸⁴ *About Us*, PROPUBLICA, <https://www.propublica.org/about/> [<https://perma.cc/AA7Q-JBTQ>] (last visited Apr. 12, 2023).

²⁸⁵ Lulu Ramadan, Ash Ngu & Maya Miller, *The Smoke Comes Every Year. Sugar Companies Say the Air Is Safe*, PALM BEACH POST & PROPUBLICA (July 8, 2021), <https://projects.propublica.org/black-snow/> [<https://perma.cc/BND4-QMQZ>].

²⁸⁶ Logan Jaffe, *Testing the Air to Tell a Story: How We Investigated Air Pollution Near Florida's Sugar Fields*, PALM BEACH POST & PROPUBLICA (July 19, 2021, 5:00 AM), <https://www.propublica.org/article/testing-the-air-to-tell-a-story-how-we-investigated-air-pollution-near-floridas-sugar-fields> [<https://perma.cc/Y9PW-Q8XW>].

²⁸⁷ Lulu Ramadan, "A Complete Failure of the State": *Authorities Didn't Heed Researchers' Calls to Study Health Effects of Burning Sugar Cane*, PALM BEACH POST & PROPUBLICA (Aug. 19, 2021, 6:00 AM), <https://www.propublica.org/article/a-complete-failure-of-the-state-authorities-didnt-heed-researchers-calls-to-study-health-effects-of-burning-sugar-cane> [<https://perma.cc/N5JR-R9JF>].

²⁸⁸ Ramadan et al., *supra* note 285.

Beach County, which is majority Black and Latino, and not the eastern end well-known as the playground of the Kennedy and Trump clans.²⁸⁹

Even where government data does exist in raw form, journalists and advocacy organizations often perform the intermediary role of curating the data to be comprehensible and salient for a broad public audience. For instance, the nonprofit consumer advocacy organization Good Jobs First uses government records to maintain a searchable online tracker of penalties levied on corporations for violating various federal and state laws, including price-fixing, workplace safety, and anti-pollution laws.²⁹⁰ A search of the organization's database of more than 80,000 records of environmental sanctions since 2000 discloses that every one of the ten most-penalized entities is either an energy company or an automaker.²⁹¹ While that data theoretically is accessible through the U.S. Justice Department and various state and federal regulatory agencies, the government does not undertake to compile it all in a central location—leaving that task to the private sector.

One example of the type of government records that exist in raw form but gain new significance when contextualized by journalists and researchers are the warning notices issued when local water treatment systems fail.²⁹² Journalists with the environmental journalism nonprofit project *Floodlight*, working in collaboration with two local radio stations and a Baton Rouge-based news website, gathered a year's worth of boil water notices from throughout Louisiana and calculated, on a per capita basis, which communities were most heavily affected by outages in clean drinking water.²⁹³ The “winner” of this ignominious distinction was Madison Parish, the second poorest parish in the state, where residents received forty-three different warning notices about unsafe drinking water over the course of twelve months.²⁹⁴ After years of neglect, the federal government stepped up in December 2021, a few months after the

²⁸⁹ *Id.*

²⁹⁰ *Violation Tracker*, GOOD JOBS FIRST, <https://violationtracker.goodjobsfirst.org/> [<https://perma.cc/GFW9-PRGA>] (last visited Apr. 12, 2023).

²⁹¹ *Violation Tracker Summary for Offense Group*, GOOD JOBS FIRST, https://violationtracker.goodjobsfirst.org/summary?offense_group_sum=environment-related%20offenses [<https://perma.cc/A667-EJF7>] (last visited Apr. 12, 2023).

²⁹² See, e.g., Sara Sneath, *Louisiana Boil Water Notices Paint a Picture of the State's Failing Drinking Water Infrastructure*, LA. ILLUMINATOR (May 13, 2021, 5:00 PM), <https://lailluminator.com/2021/05/13/louisiana-boil-water-notices-paint-a-picture-of-the-states-failing-drinking-water-infrastructure> [<https://perma.cc/T9CQ-FAV7>].

²⁹³ *Id.*

²⁹⁴ *Id.*

Floodlight water series, with \$101 million in grant money dedicated to improving water quality in underserved Louisiana communities.²⁹⁵

C. *Instances Where the “Data Safety Net” Failed*

At times, what regulators *fail* to measure—or the measurements they fail to make accessible and usable to the public—reflect what might be termed “willful blindness” to adverse conditions. The government’s failure to inquire into seemingly obvious questions, or to compile fragmented bits of information into a usefully centralized database, is not limited to the environmental context at all. Government data about the workings of the criminal justice system is fragmented, stale, error-laden, and at times entirely missing.²⁹⁶ But the failing is perhaps especially inexcusable when it comes to the environment, since all life on the planet depends on a safe supply of air and water.

Remarkably little is known about the condition of land, air, and water either because the data is not gathered at all or because it is unreliable.²⁹⁷ One author has called the practice of monitoring environmental conditions “the neglected stepchild of basic science,” underemphasized both by policymakers and by scientists themselves.²⁹⁸ Indeed,

²⁹⁵ Gabbii King, *EPA to Allocate over \$101 Million to Improve Louisiana Drinking Water Infrastructure*, WDSU NEWS, <https://www.wdsu.com/article/epa-to-allocate-over-dollar101-million-to-improve-louisiana-drinking-water-infrastructure/38416504> [<https://perma.cc/78F6-G7EH>] (Dec. 2, 2021, 5:30 PM).

²⁹⁶ See, e.g., Kiara Alfonseca & Luke Barr, *Department of Justice Fails to Fully Count Prison Deaths, Senate Report Finds*, ABC NEWS (Sept. 20, 2022, 2:23 PM), <https://abcnews.go.com/Politics/departments-justice-fails-fully-count-prison-deaths-senate-story?id=90199150> [<https://perma.cc/N5GB-KN5A>] (citing a U.S. Senate subcommittee investigation that found Justice Department statistics on deaths within prisons missed at least 990 cases in one year alone); John K. Roman & Asheley Van Ness, *One Answer to Firearm Violence: Fix Our Gun Data Infrastructure*, CRIMEREPORT (Oct. 29, 2020), <https://thecrimereport.org/2020/10/29/one-answer-to-firearm-violence-fix-our-gun-data-infrastructure/> [<https://perma.cc/CE78-KKA3>] (commenting on systematic failure to collect and report data about how criminals obtain firearms: “the United States’ current gun data infrastructure fails to properly collect and share fundamental data on gun possession, distribution, ownership, acquisition and storage”).

²⁹⁷ See Eric Biber, *The Problem of Environmental Monitoring*, 83 U. COLO. L. REV. 1, 4 (2011) (“There are tremendous gaps in our knowledge about a wide range of environmental resources, from water quality, to air quality, to endangered species, to wetlands. Those gaps result not just from the absence of monitoring data but also from the ineffective nature of much of the monitoring data that is available.”).

²⁹⁸ Kelly, *supra* note 185, at 1116, 1143 (asserting that more and better quality data is needed “for creating better, more data-driven natural resources policy”).

it has been argued that regulators have a perverse incentive *not* to gather too much data about environmental conditions because uncertainty allows them to avoid documenting inconvenient facts that opponents might use to second guess agency decisions.²⁹⁹ To cite just one of many examples, there is no centralized publicly available database of land set aside in “conservation easements,” where owners receive tax benefits in exchange for agreeing to maintain land in an undeveloped state.³⁰⁰ Without that data, critics argue, the public cannot maintain oversight over whether landowners are meeting their stewardship obligations.³⁰¹ Even where data does exist, the federal approach to environmental protection has been criticized as siloed into pollutant vectors (air, water, land) rather than holistically looking at community health conditions, and federal data-gathering arguably suffers from the same shortcoming.³⁰²

Ironically, one of the arguments that regulated industries have made (sometimes successfully) in opposing disclosure of government-held information is that the data is unreliable and hence will cause the public to jump to erroneous conclusions.³⁰³ But this is hardly an argument for suppressing data; it is an argument for improving it, which starts with committing government resources to capturing the cumulative human exposure toll of toxins being used, stored, or disposed of, and regularly updating and publishing the findings without the need for a FOIA lawsuit.

CONCLUSION

When Donald Trump took office as U.S. President in January 2017 and began installing his own executive branch appointees, controversy erupted almost overnight over the disappearance of studies and data from the websites of scientific agencies.³⁰⁴ The websites of the

²⁹⁹ See *id.* at 1142 (“Ignorance maximizes discretion, and therefore has significant political value.”).

³⁰⁰ See Amy Wilson Morris & Adena R. Rissman, *Public Access to Information on Private Land Conservation: Tracking Conservation Easements*, 2009 WIS. L. REV. 1237, 1244–46 (2009) (explaining the growth of conservation easements as lower-cost alternative to government land acquisition, and commenting that “[l]ack of tracking drastically curtails the ability for public-policy analysts to evaluate the costs and benefits of conservation easements”).

³⁰¹ *Id.* at 1242.

³⁰² See Collin & Collin, *supra* note 24, at 43 (noting “media by media development of environmental law rather than an approach based upon biosystems” that results in a “disconnection between public health and environmental indicators” at all levels of government oversight).

³⁰³ Echeverria & Kaplan, *supra* note 80, at 598.

³⁰⁴ Coral Davenport, *With Trump in Charge, Climate Change References Purged from*

Interior Department, the Energy Department, the EPA, and others were purged of references to global climate change,³⁰⁵ in keeping with the Trump administration’s policy of downplaying the existence of a man-made problem, which candidate Trump referred to as a “hoax.”³⁰⁶ In anticipation of the impending erasure of environmental data, a ragtag group of more than 1,500 volunteers began working nights and weekends to “scrape” potentially vulnerable records from federal websites.³⁰⁷ Though well-intentioned, the disorganized effort produced an overwhelming and largely unusable jumble of records, underscoring the need for government agencies to archive their own materials for public use.³⁰⁸ Just months after Joe Biden took office as Trump’s successor, the websites were again revised, restoring once-forbidden references to climate change as a matter of global urgency.³⁰⁹ That both administrations treated the display of research and data as such a priority—of symbolic as well as practical value—attests to the reality-shaping power of information: When documentation of a problem ceases to exist, the problem is easily denied and solutions deprioritized. The “now you see it, now you don’t” disappearing act also highlighted how feebly outdated federal laws protect the public’s right of access to digital versions of data, which can be destroyed without consequence or legal recourse.³¹⁰

Website, N.Y. TIMES (Jan. 20, 2017), <https://www.nytimes.com/2017/01/20/us/politics/trump-white-house-website.html> [<https://perma.cc/8AQH-Q29S>].

³⁰⁵ Scott Waldman, *Climate Web Pages Erased and Obscured Under Trump*, SCI. AM. (Jan. 10, 2018), <https://www.scientificamerican.com/article/climate-web-pages-erased-and-obscured-under-trump/> [<https://perma.cc/8ZHK-R6LM>] (citing study by advocacy group Environmental Data & Governance Initiative, which “found a drastic overhaul of public information on climate change during the Trump administration”).

³⁰⁶ Louis Jacobson, *Yes, Donald Trump Did Call Climate Change a Chinese Hoax*, POLITIFACT (June 3, 2016), <https://www.politifact.com/factchecks/2016/jun/03/hillary-clinton/yes-donald-trump-did-call-climate-change-chinese-h/> [<https://perma.cc/9W53-LWSZ>] (enumerating instances on Twitter and in a 2015 speech in which Trump referred to global warming as a “hoax”) (internal quotes omitted).

³⁰⁷ See Lamdan, *supra* note 153, at 235 (describing volunteer initiative dubbed “Data-Rescue” that resulted in gathering copies of more than 70 million web pages and 40 million PDF documents).

³⁰⁸ See *id.* at 233 (“The data collection failed to yield a searchable, publicly accessible, complete archive of the federal government’s climate change data.”).

³⁰⁹ Dino Grandoni & Brady Dennis, *Biden Administration Revives EPA Web Page on Climate Change Deleted by Trump*, WASH. POST (Mar. 18, 2021, 5:46 PM), <https://www.washingtonpost.com/climate-environment/2021/03/18/epa-website-climate/> [<https://perma.cc/2REW-X9QA>].

³¹⁰ See Lamdan, *supra* note 153, at 240 (pointing out that the Federal Records Act, 44 U.S.C. § 3101, lacks meaningful penalties for noncompliance, and concluding that “modifying federal records laws to account for the online accessibility of modern government

Information about how industries operate is essential both for successful regulation and for successful advocacy. As Professor David W. Case has observed: “A robust and effective environmental protection system is not possible if environmental policymakers lack access to necessary information.”³¹¹ The link between environmental justice and environmental data has long been recognized. As far back as 1994, a Clinton administration executive order directed federal agencies to prioritize offering information about environmental health and safety in a form that is “concise, understandable, and readily accessible to the public.”³¹² The order went an important step further, instructing agencies to affirmatively generate and analyze data “assessing and comparing environmental and human health risks borne by populations identified by race, national origin, or income.”³¹³

One tangible indicator of progress on this front was the 2015 rollout of the EPA’s EJSCREEN online mapping tool.³¹⁴ EJSCREEN integrates the agency’s own data with U.S. Census Bureau demographic data to enable users to generate maps correlating race and income with proximity to hazardous waste cleanup sites, industries known to discharge chemicals into waterways, and more.³¹⁵ EJSCREEN is the new-and-improved version of a tool originally piloted in December 2007, known as the Environmental Justice Strategic Enforcement Assessment Tool (“EJSEAT”), which was criticized as overly narrow and missing key sources of pollution.³¹⁶ Even with the site upgraded from the 2007 version,

information and provide real consequences for violating records management requirements would better protect online federal records”).

³¹¹ See Case, *supra* note 11, at 703; see also Hirokawa & Porter, *supra* note 87, at 965 (making a similar point, in reliance on court’s analysis in *Clinch Coalition v. Damon*, 316 F. Supp. 2d 364 (W.D. Va. 2004): “[I]f environmental regulation is intended to facilitate a more efficient management of resources by correcting for resource market inefficiencies regulating from incomplete information, regulatory intervention should employ investigatory methodologies that result in the production of a more informed resource management decision”).

³¹² Exec. Order No. 12,898, 3 C.F.R. 859 (1995), *reprinted as amended in* 42 U.S.C. § 4321, at § 5-5(c) (2021).

³¹³ *Id.* § 3-302.

³¹⁴ Heather Hansman, *The EPA Has a New Tool for Mapping Where Pollution and Poverty Intersect*, SMITHSONIAN MAG. (July 14, 2015), <https://www.smithsonianmag.com/innovation/epa-has-new-tool-mapping-where-pollution-poverty-intersect-180955663/> [<https://perma.cc/FJ5K-LXCE>]. To access the tool, see *EJScreen: Environmental Justice Screening and Mapping Tool*, EPA, <https://www.epa.gov/ejscreen> [<https://perma.cc/M3C6-XFGM>] (Jan. 30, 2023).

³¹⁵ Hansman, *supra* note 314.

³¹⁶ See Case, *supra* note 11, at 711, 725–26 (describing 2007 rollout of EJSEAT, which the

critics say EJSCREEN is only minimally useful, and fell into neglect when the Trump administration made environmental justice a lower priority.³¹⁷ As one environmental journalist explained:

[T]he tool doesn't provide a granular view of the environmental issues facing communities, and the federal government does not incorporate the tool's findings into its decision-making process. Critics of the tool also say it fails to accurately represent the unique suite of environmental justice issues that each state represents, as it uses the same 11 indicators to evaluate the entire country.³¹⁸

The story of the environmental justice movement is a story, for better and for worse, about the accessibility of data about the environment.³¹⁹ Indeed, the failure to make information accessible to afflicted communities has itself been regarded as its own environmental justice issue.³²⁰ Citizens who are irate about the effects of industrial development in their neighborhoods often find themselves equally irate about being denied information, and furnishing better information is sometimes part-and-parcel of government-imposed remedial actions.

Complete and accurate data about the environmental consequences of government and industry decisions will capture the total costs inflicted on land, water, air, and people. Markets do not always “price in” the economic consequences of providing goods and services, so governmental requirements to capture those “externality” costs—i.e., how much

EPA had in development since 2003), 727–28 (referencing 2010 report of National Environmental Justice Advisory Council that identified shortcomings in EJSEAT’s scope and reliability); *see also* Comer & Moran, *supra* note 107, at 13 (observing that EJSEAT “did not advance beyond the ‘draft’ form” because of numerous flaws, including failing to assign differential values to each variable that went into calculating whether a community qualified as a community of environmental justice concern, failing to recognize that all risk factors are not equally significant).

³¹⁷ See Zoya Teirstein, *Elizabeth Warren Blasts the EPA for Neglecting Environmental Justice*, GRIST (Oct. 21, 2020), <https://grist.org/politics/elizabeth-warren-lambastes-the-epa-for-neglecting-environmental-justice/> [<https://perma.cc/9J4L-X37L>].

³¹⁸ *Id.*

³¹⁹ See Salkin, *supra* note 162, at 59–60 (making the connection between effective advocacy and access to information, and commenting that “government must carefully safeguard open access to information that advances the ability of communities to plan for and protect against environmental and public health concerns”).

³²⁰ LUKE W. COLE & SHEILA R. FOSTER, *FROM THE GROUND UP: ENVIRONMENTAL RACISM AND THE RISE OF THE ENVIRONMENTAL JUSTICE MOVEMENT* 109 (2001).

will a certain manufacturing process contribute to water pollution that society will have to pay to clean up—arguably makes markets work more efficiently.³²¹

When open government laws work as advertised, they empower journalists, researchers and activists to effectively pursue change.³²² Without effective and well-enforced disclosure laws, industries can leverage their asymmetrical information monopoly to fend off opposition from the citizenry.³²³ In the words of Professor Case: “Citizens cannot effectively participate in important governmental activities such as environmental regulation without dependable access to information about the environmental activities of businesses and industry.”³²⁴ But, as exemplified by the Howard Center findings about “heat islands” in urban Baltimore,³²⁵ data is often deficient when conditions in communities of color are understudied, forcing journalists, researchers and activists to create the data that government regulators should have created.³²⁶ Advances in technology, such as harvesting microscopic traces of DNA left by organisms in the land and water, are increasingly making it possible to measure and track that which was previously undetectable.³²⁷ But the law of access

³²¹ Hirokawa & Porter, *supra* note 87, at 979, 982.

³²² See Hannah J. Wiseman, *Trade Secrets, Disclosure, and Dissent in a Fracturing Energy Revolution*, 111 COLUM. L. REV. SIDEBAR 1, 4 (2011) (commenting, in the context of public hearings about hydraulic fracking technique of extracting natural gas, that “high quality citizen participation within these forums is essential, and quality participation by individuals requires public access to information”); Martha L. Black & Ellen J. Kohler, *Diminishing Democracy: A Review of Public Participation in Michigan’s Environmental Decisionmaking*, 50 WAYNE L. REV. 219, 306 (2004) (“In order to participate as an informed member of the public, citizens must have ready access to information on proposed permits.”).

³²³ See Karkkainen, *supra* note 185, at 316. Karkkainen states that communities face a strategic disadvantage in generating pressure to enforce or strengthen standards, “because firms possess superior access to information about their own pollution, production processes, and alternatives. Because information of this sort is ordinarily difficult for individual citizens or community groups to acquire, all but the most visible and egregious pollution may go unnoticed and unchallenged.”

³²⁴ Case, *supra* note 11, at 704. See also Karkkainen, *supra* note 185, at 316.

³²⁵ Ian Round, Jazmin Conner, Jermaine Rowley & Sandy Banisky, *Code Red: In Urban Heat Islands, Climate Crisis Hits Harder*, HOW. CTR. FOR INVESTIGATIVE REPORTING (Sept. 3, 2019), <https://cnsmaryland.org/interactives/summer-2019/code-red/neighborhood-heat-inequality.html> [<https://perma.cc/5X8J-R9UT>].

³²⁶ See Case, *supra* note 11, at 705 (noting a “particularly acute” need for information about where toxins are disproportionately affecting people’s health so regulators and public health professionals can target their efforts, but also noting the pronounced “asymmetries” of information between industries and the surrounding communities of color).

³²⁷ Kelly, *supra* note 185, at 1120–21.

has not evolved with the same dispatch. In one of many shortcomings, federal records retention statutes do not require agencies to archive and make accessible the digital versions of their publications, even though paper archives are far more inconvenient for the public to examine.³²⁸

The experience of environmental justice advocates in pursuing information about contamination of under-resourced neighborhoods mirrors the experience of any investigative reporter who relies on FOI laws: Compliance can be slow, costly, grudging, and incomplete.³²⁹ As Professor Vladeck puts it, FOIA and other affirmative disclosure statutes provide “what is at best a piecemeal and not entirely satisfactory pathway to needed environmental information and . . . at worst the illusion of a right of access where none exists.”³³⁰ The work of reforming these compliance problems has largely been “owned” by an overmatched handful of advocacy organizations, heavily dependent on funding from news media organizations that are increasingly unable to subsidize open government advocacy.³³¹ In addition to being underfunded and overmatched by industry, open-government organizations are overwhelmingly white-led,³³² leaving them vulnerable to the same type of blind spots that long afflicted the environmental movement as well.

What does patching the frayed safety net of environmental data look like? Professor Vladeck suggests a multipart approach to making FOIA laws work effectively for the needs of the environmental movement, including obligating government agencies to affirmatively publish their data and documents rather than waiting for a demand; scrutinizing claims of trade-secret protection less deferentially; and allowing agencies to withhold records about industry practices only after considering the

³²⁸ See Lamdan, *supra* note 153, at 240 (pointing out that records retention protocols were developed before the advent of the internet, such that they “prescribe outdated data access practices and they do not require online publication or webpage preservation”).

³²⁹ See Koningisor, *supra* note 134, at 1473 (observing that “members of the media argue that enumerated exemptions have been construed so broadly that they swallow vast categories of records and that excessive time delays make the statute nearly unusable”).

³³⁰ Vladeck, *supra* note 132, at 1788.

³³¹ Mya Frazier, *A Battered FOIA Collides with the \$2 Trillion Bailout*, COLUM. JOURNALISM REV. (Apr. 20, 2020), <https://www.cjr.org/watchdog/covid-19-pandemic-bailout-foia.php> [<https://perma.cc/SSS5-RKYW>].

³³² See DAVID CUILLIER, JOHN S. & JAMES L. KNIGHT FOUND., MAPPING THE CIVIC DATA UNIVERSE: TEN WAYS TO IMPROVE ACCESS TO GOVERNMENT INFORMATION THROUGH EXPANDED INTERSTELLAR CONNECTIONS 9 (2020), https://knightfoundation.org/wp-content/uploads/2020/03/Civic-Data-Universe_FINAL.pdf [<https://perma.cc/T38H-F5YF>] (reporting results of a survey that showed just 5% of leaders of governmental and nonprofit organizations working in the field of civic data identified as racial minorities).

public's interest in disclosure, rather than just the industry's interest in protecting its trade secrets.³³³ Professor Wendy E. Wagner suggests curtailing industry's aggressive over-categorization of documents as "confidential business information"—a category analogous to trade-secret designation—which can prevent the public from seeing important records submitted to the EPA.³³⁴ As the designation process works today, the EPA simply accepts the industry's assertion of confidentiality at face value, and a disappointed requester has no remedy other than to file a FOIA lawsuit.³³⁵ When industries insist that information about their operations must be kept secret, there is often a more effective response to address the purported concern; for instance, rather than exempting the location of major infrastructure projects from FOI law on the rationale of preventing terrorist attacks, the facilities could actually be better designed to repel or withstand attacks.³³⁶ Professors Bass and MacLean have argued that the relative success of a disclosure-based approach to regulation, exemplified by EPCRA, could be a model for the EPA to adopt a more pro-disclosure culture in general, including recognizing an affirmative duty to gather and disseminate information about public health risks rather than waiting to be notified of them.³³⁷ Finally, strengthening existing "pocket FOIA" laws such as EPCRA could address long-identified defects that diminish the reliability of industry-reported data, which consists largely of estimates that regulators do not audit for validity.³³⁸

Even where documents and data *are* available, they do not always tell a complete story, because nothing obligates environmental regulatory

³³³ Vladeck, *supra* note 132, at 1793–94.

³³⁴ See Wagner, *supra* note 161, at 1700–01 (stating that assertions of confidentiality require no substantiation, and that "for the privilege to apply, the firm has only to stamp the documents 'confidential'").

³³⁵ See *id.* at 1702 (noting that there is no penalty for mischaracterizing a document as confidential business information, and that a requester suing under FOIA will be up against the strategic disadvantage that only the industry author knows why the document is purportedly confidential); see also Echeverria & Kaplan, *supra* note 80, at 613 (observing that Congress has sometimes overridden trade secret protection in environmental statutes, such as the Toxic Substances Control Act, which authorizes disclosure of otherwise-confidential business information when necessary to prevent "unreasonable risk" of harm to people or the environment).

³³⁶ Echeverria & Kaplan, *supra* note 80, at 617.

³³⁷ Bass & MacLean, *supra* note 226, at 303, 305–06.

³³⁸ See Alexander Volokh, *The Pitfalls of the Environmental Right-to-Know*, 2002 UTAH L. REV. 805, 815 (2002) (commenting that neither the EPA nor its state counterparts are charged with verifying TRI data submissions, which are mostly estimates and not actual measurements).

agencies to assess the cumulative health risks to a community from multiple sources of exposure to toxins.³³⁹ As Professor Wagner has written:

Despite the enormous growth in environmental law and regulation since the 1970s, much of the scientific information needed to ensure environmental protection is still missing. The quality of most air, water, and land in the U.S. is unknown, even though the country has devoted hundreds of pages of laws to regulating activities that threaten the environment.³⁴⁰

While making FOIA laws work better for requesters would advance environmental justice, even drastic FOIA reforms will be incomplete without also obligating the government to collect high-value data and maintain it in a retrievable and usable format.

Better information about environmental hazards is an essential “deliverable” from open government. The “data divide” that denies communities of color complete information that the government knows—or *should* know—about conditions within their neighborhoods is an environmental justice concern.³⁴¹ Because accessibility of information is such a difference-maker both in individualized life choices (e.g., Do we eat the fish? Do we sell the house?) as well as in effective public policy advocacy, a complete environmental justice agenda must contemplate an element of FOI reform as well.

³³⁹ See Collin & Collin, *supra* note 24, at 60–61 (describing the example of Flint, Michigan, where residents faced exposure to toxic lead from multiple sources, including lead-based paint in old homes, emissions from an industrial incinerator, and drinking water carried through lead pipes).

³⁴⁰ Wagner, *supra* note 161, at 1623–24 (internal citation omitted).

³⁴¹ See Engel, *supra* note 7, at 131 (“The first step towards environmental justice must be a broad-based community education campaign that raises awareness of right-to-know laws and how data can be accessed.”).