

NEW YORK CITY AS A LABORATORY OF ENVIRONMENTAL INNOVATION

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The world is increasingly urban.¹ By 2050, the United Nations projects that more than two-thirds of global population will live in cities.² Urbanization is even more pronounced in the United States, where eighty percent of people live in urban areas,³ defined broadly. People move to these cities for a variety of reasons—urban settings provide economic and educational opportunity, and serve as hubs for technical, cultural, and social innovation.⁴ Indeed, in the United States, the twenty-five largest cities generate more than half of national GDP.⁵ New York City alone generates nearly nine percent of the United States' GDP,⁶ and were it a country, New York City would have the ninth largest GDP in the world.⁷

With large populations, significant resources, and varying degrees of legal authority, cities like New York City have become the focal point for many social, environmental, and economic struggles. But cities fit awkwardly into the United States legal systems. The federal constitution assigns certain powers to the federal government, reserving the rest to states.⁸ Cities are not mentioned.

Given that cities are sub-state entities, much like states are sub-national entities, the fifty states have created different approaches to structuring their cities.

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¹ UNITED NATIONS, DEPT. ECON. AND SOC. AFFS., POPULATION DIVISION, *World Urbanization Prospects: The 2018 Revision*, U.N. Doc. ST/ESA/SER.A/420, at 9 (2019) (explaining that from 1950 to 2018, the share of global population living in urban areas nearly quintupled, with urban population growing at much faster rate than overall population growth).

² *Id.* at 10.

³ *Urban Area Facts*, U.S. CENSUS BUREAU, <https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural/ua-facts.html> [<https://perma.cc/NFL6-TNAD>].

⁴ See, e.g., Dallas Gislason, *How Cultural Diversity Makes a City a Better Place to Live, Work, and Play*, MEDIUM (Mar. 18, 2021), <https://dallasgislason.medium.com/how-cultural-diversity-makes-a-city-a-better-place-to-live-work-and-play-ab9080af853e> [<https://perma.cc/7GZM-DHQ2>] (making these points).

⁵ *U.S. Metro Economies: US Metros Compared to Global and State Economies*, U.S. CONF. OF MAYORS 10–11 (June 2022), <https://www.usmayors.org/wp-content/uploads/2022/06/USCM-FINAL-FINAL-Metro-Economy-Report-Final-6-3-22.pdf> [<https://perma.cc/SQ4E-8AX3>]; *The Top 25 Metro Areas Make Up Half of U.S. GDP*, STATISTA (July 12, 2019), <https://www.statista.com/chart/18684/us-cities-by-gdp/#:~:text=Jul%2012%2C%202019-,GDP%20of%20the%20U.S.,as%20the%20other%20359%20cities> [<https://perma.cc/2VSN-XUX9>].

⁶ STATISTA, *supra* note 5.

⁷ U.S. CONF. OF MAYORS, *supra* note 5, at 1.

⁸ U.S. CONST. amend. X.

Typically, states either follow Dillon's Rule or Home Rule.⁹ Dillon's Rule, named after Iowa Supreme Court Justice John Forest Dillon, interprets city powers narrowly.¹⁰ In a Dillon's Rule jurisdiction, a city may exercise only those powers expressly delegated by the state.¹¹ By contrast, New York, like many other large cities, has constitutionally guaranteed Home Rule powers—meaning that the city has the general power to enact laws to regulate and to provide services.¹²

Cities are at the epicenter of today's environmental and social crises. These are the governments responding to our nation's deepest and most pressing policy concerns. As such, Home Rule cities are uniquely positioned to serve as laboratories for policy experimentation and progress. The interplay between federal, state, and local authority creates both opportunities and constraints for municipal action. On the positive side of the ledger: cities operate on a local scale and are the point of delivery for government services. Cities often have the capacity to (relatively) rapidly implement policies tailored to local needs. Moreover, the connections between local governance choices and community impacts are frequently visible and legible. On the negative side, even Home Rule cities have bounded authority, and their policy initiatives are vulnerable to state and federal interference.¹³

New York City has been threading this needle successfully. Over the past two decades, New York City has emerged as a leader in environmental innovation, leveraging its legal authority, political will, and creative problem-solving to tackle pressing local problems with global implications. Ever since Superstorm Sandy, the city has been acutely aware of the threats it faces from climate change, including

⁹ See generally Alvin D. Sokolow, *Dillon's Rule*, CTR. FOR STUDY OF FEDERALISM (2006), <https://federalism.org/encyclopedia/no-topic/dillons-rule/> [https://perma.cc/Z6D8-5V9B] (explaining Dillon's Rule); Richard Briffault, *Home Rule for the Twenty-First Century*, 36 URB. LAW. 253 (2004) (describing the importance of home rule).

¹⁰ See *Clinton v. Cedar Rapids & Mo. River R. R. Co.*, 24 Iowa 455, 475 (1868) (finding that cities "owe their origin to, and derive their powers and rights wholly from, the legislature.").

¹¹ *Id.* See also *Trenton v. New Jersey*, 262 U.S. 182, 187 (1923) (finding that unless there was a state constitutional provision to the contrary, cities had "no inherent right of self-government which is beyond the legislative control of the State," characterizing them instead as mere "department[s] of the State," with "powers and privileges" such as the State has seen fit to grant). Many states, by their constitution, guarantee some or all municipalities the right of home rule. See National League of Cities, *Principles of Home Rule for the 21st Century* 10–13 (2020) (describing the evolution of home rule and showing that many states by their constitution guarantee some or all municipalities the right of home rule) <https://www.nlc.org/wp-content/uploads/2020/02/Home-Rule-Principles-ReportWEB-2-1.pdf> [https://perma.cc/R9DU-AGTD].

¹² N.Y. CONST. art. IX § 2(c) (guaranteeing this right to local governments); see National League of Cities, *Principles of Home Rule for the 21st Century*, 100 N.C. L. REV. 1329 (2022) (discussing home rule).

¹³ As just one example, New York City has been trying to create a congestion pricing zone for at least a decade. State and federal obstruction continually prevented the program until 2024. And now the Trump administration purports to have withdrawn federal approval. For an overview of this history, see Kate Slevin, *Congestion Pricing: A Retrospective*, REG'L PLAN ASS'N (Jan. 27, 2025), <https://rpa.org/news/lab/congestion-pricing-a-retrospective> [https://perma.cc/JJ75-HE6Z]. For an explanation of state interference with local decision-making, see generally Quinton D. Lucas and Gavriel Schreiber, *Post-Emption and the Mayoral Toolbox: Levers and Limits of City Resistance to State Preemption*, 91 CHI. L. REV. 2229 (2024).

sea-level rise, extreme weather events, and urban heat island effects.¹⁴ These climate-related threats are compounded by the city's dense population, aging infrastructure, and the legacy of structural racism which has left low-income communities and communities of color disproportionately burdened by pollution and environmental hazards.¹⁵

New York starts this environmental journey with some unique advantages and disadvantages. For example, the average New York City resident relies on public transit,¹⁶ does not own a car, and lives in a relatively small unit within a multi-family dwelling.¹⁷ As a result, these New Yorkers generate a tiny fraction of the carbon and pollution associated with suburban and rural American life. Yet, the city generates vast quantities of waste each day, all of which is exported to other communities for disposal. New York City is thus both a contributor to, and victim of, environmental degradation.

New York City has consistently demonstrated its ability to turn these challenges into opportunities, crafting policies that address both environmental and social inequities while advancing sustainability goals. Since 2017, New York City has had local laws requiring that environmental justice concerns be incorporated into all New York City decision-making and that all city agencies identify opportunities for promoting environmental justice.¹⁸ This Article highlights three of the city's more transformative and ambitious sustainability projects that seek to do this—Renewable Rikers, the Daylighting of Tibbetts Brook, and Local Law 97's building retrofit requirements. All three projects exemplify how municipalities can take local action that recognize the nexus between urban health, racial equality, and sustainability, thereby achieving multiple goals at once. These important policy innovations demonstrate how creative urban policymaking can build what the Kansas Journal of Law and Public Policy 2025 conference called “Cities of Tomorrow.” This Article begins with some level setting about the environmental

¹⁴ *A Stronger More, Resilient New York*, N.Y.C. MAYOR'S OFF. OF CLIMATE & ENV'T JUST. 9–26 (2013), https://s-media.nyc.gov/agencies/sirr/SIRR_spreads_Lo_Res.pdf [<https://perma.cc/RJT5-SJSF>].

¹⁵ Sheila R. Foster, Ana Baptista, Khai Hoan Nguyen, Jack Tchen, Marco Tedesco & Robin Leichenko, *NPCC4: Advancing Climate Justice in Climate Adaptation Strategies for New York City*, 1539 ANNALS N.Y. ACAD. SCI. 77 (Aug. 19, 2024).

¹⁶ Commuters make more than a billion trips a year on public transit in New York City. Ben Brachfeld, *NYC Subway Hits 1 Billion Riders in 2024, on Track for a Post-Pandemic Record Pace*, AMNY (Nov. 4, 2024), <https://www.amny.com/nyc-transit/nyc-subway-billion-riders-2024/> [<https://perma.cc/W5H7-A7BB>]. Only a minority of New York households own cars, and if Staten Island (which has very limited transit options) is excluded, it is a small minority. Thomas P. DiNapoli, *The Cost of Living in New York City: Transportation*, OFF. N.Y. STATE COMPTROLLER (Oct. 2024), <https://www.osc.ny.gov/files/reports/pdf/report-16-2025.pdf> [<https://perma.cc/F93H-VC82>].

¹⁷ More than seventy percent of New York City's housing stock is in buildings with three or more units. Nearly a quarter is in buildings with more than 100 units. U.S. Census Bureau, *2023 New York City Housing and Vacancy Survey* 2–3 (2023), <https://www.nyc.gov/assets/hpd/downloads/pdfs/about/2023-nychvs-selected-initial-findings.pdf> [<https://perma.cc/UWN9-7AQB>].

¹⁸ See, e.g., N.Y.C., N.Y., LOCAL LAW 64 (2017); N.Y.C., N.Y., LOCAL LAW 60 (2017).

justice and climate challenges we face. It then provides an overview of these three New York City projects, emphasizing how each project reimagines the urban space to respond to environmental and environmental justice challenges.

Each project is a victory. Like all social justice victories, each is partial, contingent, and incomplete—what Kansas City's Mayor, Quinton Lucas, describes as “bittersweet half wins.”¹⁹ Nevertheless, they are victories and should be understood as such. They should be celebrated, studied, and expanded upon. Each represents a way that New York City is using its authority under state law to simultaneously address environmental problems, climate problems, and racial justice problems. The city is taking these steps because it recognizes that these are not individual problems amenable to individual solutions. Rather, they are all aspects of the same problem. By thinking creatively about law, New York is making progress on environmental, climate, and racial justice goals at once. In this era of rapid and profound federal retreat from all three, the role of cities (and states) is even more important than it was when the Kansas Journal of Law and Public Policy planned this conference.

I. THE FORCES ARRAYED AGAINST US

We are in a climate emergency.²⁰ The ten warmest years on record have been the last ten years.²¹ In 2024, we crossed the unenviable mark of global mean temperature exceeding 1.5 degrees Celsius (2.7 degrees Fahrenheit) above pre-industrialization levels.²² That is the level that the Paris Agreement indicated as its goal in order to ward off the worst impacts of climate change.²³ The new year continued this trend, with January 2025 being the hottest on record—1.75 degrees Celsius (3.15 degrees Fahrenheit) above pre-industrial levels.²⁴ Rather than grapple with this urgent and growing crisis, however, the Trump administration has instead removed all mention of climate change from federal websites.²⁵ The administration

¹⁹ Lucas & Schreiber, *supra* note 13 at 2233.

²⁰ *The Climate Emergency*, UN ENV'T PROGRAMME, <https://www.unep.org/climate-emergency> [https://perma.cc/S979-DTQB]. In 2023, UN Secretary General António Guterres famously stated that the era of global warming has ended and “the era of global boiling has arrived.” Ajit Niranjana, ‘Era of Global Boiling Has Arrived,’ Says UN Chief as July Set to be Hottest Month on Record, THE GUARDIAN (Jul. 27, 2023), <https://www.theguardian.com/science/2023/jul/27/scientists-july-world-hottest-month-record-climate-temperatures> [https://perma.cc/S4SW-ZHXX].

²¹ WMO Confirms 2024 as Warmest Year on Record at About 1.55°C Above Pre-Industrial Levels, WORLD METEOROLOGICAL ORG. (Jan. 10, 2025), <https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level> [https://perma.cc/NL4H-NUDC].

²² *Id.*

²³ Paris Agreement to the United Nations Framework Convention on Climate Change, Dec. 12, 2015, T.I.A.S. No. 16-1104.

²⁴ United Nations, *It's Official: January Was the Warmest on Record*, UN NEWS (Feb. 6, 2025), <https://news.un.org/en/story/2025/02/1159846> [https://perma.cc/UKW6-8SNP].

²⁵ Oliver Milman, *Scientists Brace for the Worst as Trump Purges Climate Mentions from Websites*, THE GUARDIAN (Feb. 4, 2025), <https://www.theguardian.com/us-news/2025/feb/04/trump-climate-change-federal-websites> [https://perma.cc/E84Y-ZT6Q]; Will Steakin, *USDA Orders Removal of Climate Change Mentions from Public Websites*, ABC NEWS (Jan. 31, 2025, 1:18 PM), <https://abcnews.go.com/US/usda-orders-removal-climate-change-mentions-public-websites/story?id=118312216> [https://perma.cc/YK4E-SG2X].

announced its intention to ramp up domestic fossil fuel production,²⁶ weaken vehicle fuel efficiency standards,²⁷ and to put up roadblocks to carbon free energy production.²⁸ These measures will result in increased carbon emissions and will exacerbate the climate crisis.

At the same time that he took these steps to promote fossil fuel use and undermine the fight against climate change, Trump simultaneously abandoned the federal government's decades long commitment to environmental justice.²⁹ His administration summarily closed environmental justice offices and fired any worker whose job title seemed to relate in any way to environmental justice, which Trump views as part of the DEI (diversity, equity, and inclusion) initiatives that he is determined to wipe out.³⁰ For clarity, environmental justice is simply the principle that all people are entitled to fair treatment and meaningful involvement in the environmental decisions that affect their communities.³¹

The intersection of these Trump policies—increasing fossil fuel use and de-emphasizing environmental justice—will have tragic consequences. Burning more fossil fuel does not just mean emitting more carbon dioxide into the atmosphere. Fossil fuel combustion releases carbon dioxide alongside other air pollutants like particulate matter (PM_{2.5}, PM₁₀), nitrogen oxides (NO_x), sulfur oxides (SO_x) and volatile organic compounds (VOCs)—all of which can be deadly to people and animals that like to breathe.³² Exposure to air pollutions causes heart disease,³³ and

²⁶ Exec. Order No. 14,156, 90 Fed. Reg. 8433 (Jan. 20, 2025).

²⁷ Alice Kaswan, *President Trump's War on Electric Vehicles: Part II*, CTR. PROGRESSIVE REFORM (Feb. 18, 2025), <https://progressivereform.org/cpr-blog/trump-war-on-electric-vehicles-part-ii/> [<https://perma.cc/5YD7-2HA5>].

²⁸ Memorandum of January 20, 2025, 90 Fed. Reg. 8363 (Jan. 20, 2025).

²⁹ Exec. Order No. 14,174, 90 Fed. Reg. 8637 (Jan. 21, 2025) (repealing multiple executive orders).

³⁰ Valerie Volcovici, Sarah N. Lynch & Jeff Mason, *Trump Administration Cuts Environmental Justice Programs at EPA, DOJ*, REUTERS (Feb. 6, 2025, 5:39 PM), <https://www.reuters.com/world/us/trump-administration-cuts-environmental-justice-programs-epa-doj-sources-say-2025-02-06/> [<https://perma.cc/LA2C-X5QJ>].

³¹ See generally CLIFFORD VILLA, NADIA AHMAD, REBECCA BRATSPIES, ROGER LIN, CLIFFORD RECHTSCHAFFEN, EILEEN GAUNA & CATHERINE O'NEILL, ENVIRONMENTAL JUSTICE: LAW, POLICY & REGULATION (3rd ed. 2020). The iconic articulation of “environmental justice” comes from the 1991 statement issued at the First National People of Color Environmental Leadership Summit. *The Principles of Environmental Justice*, ENERGY JUST. NETWORK (Oct. 1991), <https://www.ejnet.org/ej/principles.html> [<https://perma.cc/Z889-5UDG>]. These principles include the demand “that public policy be based on mutual respect and justice for all peoples, free from any form of discrimination or bias.”

³² Rongqi Abbie Liu, Yaguang Wei, Xinye Qiu, Anna Kosheleva & Joel D. Schwartz, *Short Term Exposure to Air Pollution and Mortality in the US: A Double Negative Control Analysis*, 21 ENV'T HEALTH 1 (2022).

³³ Robert D. Brook, Sanjay Rajagopalan, C. Arden Pope III, Jeffrey R. Brook, Aruni Bhatnagar, Ana V. Diez-Roux, Fernando Holguin, Yuling Hong, Russell V. Luepker, Murray A. Mittleman, Annette Peters, David Siscovick, Sidney C. Smith, Jr., Laurie Whitsel & Joel D. Kaufman, *Particulate Matter Air Pollution and Cardiovascular Disease*, 121 CIRCULATION 2331 (2010).

an array of other cardiopulmonary conditions,³⁴ including asthma,³⁵ strokes³⁶, and chronic obstructive pulmonary disease.³⁷ Exposure can also be carcinogenic,³⁸ and can harm the immune, endocrine, nervous, and reproductive systems. In short, the polluting activities promoted by the Trump Administration will drive climate change while simultaneously putting people at increased risk for a wide array of illness and disease.

Neither the air pollution nor the health risks it creates are distributed equally. Instead, despite generating much less pollution than their white counterparts, people of color are exposed to much more pollution.³⁹ Americans of color are twice as likely to live in communities with unhealthy air than are white Americans.⁴⁰ This phenomenon is systemic, holding true across states, in both urban and rural areas, and across all income levels.⁴¹ The systemic nature of this inequality is so well documented that in a recent judicial opinion a Fourth Circuit Judge, J. Harvie Wilkinson (appointed by Ronald Reagan), wrote: “[i]t is well-established—almost to the point of judicial notice—that environmental harms are visited disproportionately upon the dispossessed . . . on minority populations and poor communities”⁴² This racialized and systematically unequal distribution of pollution produces profound health inequities. For example, Black Americans have more than double the risk of dying from asthma-related complications.⁴³

³⁴ Fangfang Li, Zhen An, Haibin Li, Xia Gao, Gui Wang & Weidong Wu, *Involvement of Oxidative Stress and the Epidermal Growth Factor Receptor in Diesel Exhaust Particle-Induced Expression of Inflammatory Mediators in Human Mononuclear Cells*, 15 *MEDIATORS INFLAMMATION* 1 (2019).

³⁵ George D. Thurston & Mary B. Rice, *Air Pollution Exposure and Asthma Incidence in Children*, 321 *J. AM. MED. ASS'N* 1875 (2019).

³⁶ Anoop S. V. Shah, Kuan Ken Lee, David A. McAllister, Amanda Hunter, Harish Nair, William Whiteley, Jeremy P. Langrish, David E. Newby & Nicholas L. Mills, *Short Term Exposure to Air Pollution and Stroke: Systematic Review and Meta-Analysis*, 350 *BMJ* 1 (2015).

³⁷ Sha Liu, Yumin Zhou, Suixin Liu, Xinyu Chen, Weifeng Zou, Dongxing Zhao, Xiaochen Li, Jinding Pu, Lingmei Huang, Jinlong Chen, Bing Li, Shiliang Liu & Pixian Ran, *Association Between Exposure to Ambient Particulate Matter and Chronic Obstructive Pulmonary Disease: Results from a Cross-Sectional Study in China*, 72 *BMJ THORAX* 788 (2017).

³⁸ *The Carcinogenicity of Outdoor Air Pollution*, 14 *LANCET ONCOLOGY* 1262 (2013) (analyzing multiple studies).

³⁹ Christopher W. Tessum, Joshua S. Apte, Andrew L. Goodkind, Nicholas Z. Muller, Kimberely A. Mullins, David A. Paoletta, Stephen Polasky, Nathaniel P. Springer, Sumil K. Thakrar, Julian D. Marshall & Jason D. Hill, *Inequity in Consumption of Goods and Services Adds to Racial-Ethnic Disparities in Air Pollution Exposure*, 116 *PROC. NAT'L ACAD. SCI.* 6001 (2019) (documenting how racial groups disproportionately generate or bear the burdens of pollution); Ihab Mikati, Adam F. Benson, Thomas J. Luben, Jason D. Sacks & Jennifer Richmond-Bryant, *Disparities in Distribution of Particulate Matter Emission Sources by Race and Poverty Status*, 108 *AM. J. PUB. HEALTH* 480 (2018) (reporting that in the most polluted counties in the United States, people of color are a significant majority of residents, despite being a minority overall in the United States).

⁴⁰ *Key Findings*, *AM. LUNG ASS'N* (2024), <https://www.lung.org/research/sota/key-findings> [<https://perma.cc/V7G8-Z4EL>].

⁴¹ Mikati et al., *supra* note 39 (demonstrating that racial disparities in pollution exposure are more pronounced than disparities based on economic status).

⁴² *McKiver v. Murphy-Brown, LLC*, 980 F.3d 937, 982 (4th Cir. 2020) (Wilkinson, J., concurring).

⁴³ *Most Recent National Asthma Data*, CDC (data as of 2021), https://www.cdc.gov/asthma/most_recent_national_asthma_data.htm [<https://perma.cc/H9W7-97MS>]. This situation is compounded by unequal access to health care. David R. Williams & Toni

II. HOW DID WE GET HERE?

To understand these current urban environmental disparities and their attendant disparate health outcomes, it is necessary to first understand the impacts of redlining on urban communities.⁴⁴ This ninety-year-old history has a direct relationship with who breathes polluted air, who drinks contaminated water, and who lives on toxic land today, and who does not.

During the Great Depression, many people were unemployed and at risk of losing their homes to foreclosure. In response, the United States created the Home Owners' Loan Corporation (HOLC), a new federal agency empowered to rescue distressed homeowners.⁴⁵ HOLC did so by guaranteeing and refinancing overdue mortgages on better terms with lower interest rates and longer repayment schedules.⁴⁶ And it did this successfully for more than one million homeowners during the Great Depression.⁴⁷ The caveat—HOLC did so for white homeowners, at the expense of everyone else.⁴⁸

To determine which loans to guarantee, HOLC created maps assessing the investment risks in cities across the United States.⁴⁹ These maps divided urban neighborhoods into four color-coded designations: green, blue, yellow, and red. Areas colored green were deemed to have the highest investment potential. Blue meant still desirable. Yellow equaled “in decline.” Then came the areas deemed hazardous for investment: those neighborhoods were outlined in red. Overwhelmingly, these redlined neighborhoods were majority-Black neighborhoods. This was not a secret. It was on the face of the maps themselves, and in the text of the accompanying reports. In fact, “infiltration” by Black or Jewish people, or “mixed races” were explicitly identified as factors that lowered a neighborhood’s value and as the reason for a red designation.⁵⁰ The government then

D. Rucker, *Understanding and Addressing Racial Disparities in Health Care*, 21 HEALTH CARE FIN. REV. 75 (2000).

⁴⁴ The recently issued EJNYC Report underscored the present-day legacy of this historical practice. *A Study of Environmental Justice Issues in New York City*, N.Y.C. MAYOR’S OFF. CLIMATE & ENV’T JUST. 28–30 (2024), <https://climate.cityofnewyork.us/topic/environmental-justice/> [<https://perma.cc/PG45-83CX>].

⁴⁵ Home Owners’ Loan Act of 1933, 12 U.S.C. §§ 1461–1468.

⁴⁶ *Id.* at § 1463(d)(2).

⁴⁷ *Statement by the President on the Record of the Home Owners’ Loan Corporation*, NAT’L ARCHIVES (Mar. 9, 1950), <https://www.trumanlibrary.gov/library/public-papers/51/statement-president-record-home-owners-loan-corporation> [<https://perma.cc/W89M-CK3M>].

⁴⁸ RICHARD ROTHSTEIN, *THE COLOR OF LAW* 18–19 (2017). A 1950s assessment of the HOLC program noted that in New York City, 86 percent of the properties insured under HOLC loans were in “native white” or “native white and foreign” neighborhoods and only 1 percent were from neighborhoods described as “Negro.” C. LOWELL HARRISS, *HISTORY AND POLICIES OF THE HOME OWNERS’ LOAN CORPORATION* 53 (1951).

⁴⁹ These maps are available from the University of Richmond’s *Mapping Inequality* project. *Mapping Inequality*, UNIV. RICH., <https://dsl.richmond.edu/panorama/redlining/> [<https://perma.cc/U3GU-ZEFX>].

⁵⁰ The thousands of neighborhood security reports that went into producing the redlining maps are available from the *Mapping Inequality* project, alongside the maps themselves. *Id.*

used these maps to determine where it would guarantee loans. Banks refused to issue mortgages for home buyers seeking to buy in “declining” or “hazardous” neighborhoods.⁵¹

The practice of redlining devastated Black communities by starving them of investment and driving down home values.⁵² By restricting access to financing and suppressing land values, redlining created a cycle of disinvestment. This kind of overt racial discrimination is illegal today, prohibited by the Fair Housing Act of 1968.⁵³ But the effects of redlining still linger. Many profound environmental inequities, including the disproportionate siting of polluting infrastructure in formerly redlined neighborhoods, trace their origins to redlining.⁵⁴ New York City identifies the legacy of redlining as a key variable in the interconnected web of issues that create environmental injustice in the city today.⁵⁵ For example, there is a clear correlation between the redlining map of NYC and the spatial distribution of many environmental and health issues including heat vulnerability.⁵⁶ As the climate changes, heat vulnerability will only get worse. Those most vulnerable to heat are those in old or poorly maintained housing, those without air conditioning, and those in neighborhoods with few trees and green spaces—all of which is the legacy of redlining.⁵⁷

One of the most pernicious impacts from this racist history is the way that the legacy of redlining continues to harm children today. Redlined communities have higher rates of air pollution today.⁵⁸ This air pollution poses unique health risks

⁵¹ LaDale C. Winling & Todd M. Michney, *The Roots of Redlining: Academic, Governmental, and Professional Networks in the Making of the New Deal Lending Regime*, 108 J. AM. HIST. 42, 62 (2021).

⁵² *Id.* at 42–43.

⁵³ 42 U.S.C. §§ 3601–19.

⁵⁴ N.Y.C. MAYOR'S OFF. CLIMATE & ENV'T JUST, *supra* note 44, at 29.

⁵⁵ *Id.* at 54–57.

⁵⁶ *Protecting New Yorkers from Extreme Heat*, NYSEDA, <https://www.nyseda.ny.gov/Featured-Stories/Protecting-New-Yorkers-from-Extreme-Heat> [<https://perma.cc/M7KF-7Y49>] (making this connection); Jeremy S. Hoffman, Vivek Shandas & Nicholas Pendleton, *The Effects of Historical Housing Policies on Resident Exposure to Intra-Urban Heat: A Study of 108 US Urban Areas*, 8 CLIMATE 1, 9–12 (2020).

⁵⁷ Ryan DoanNguyen, *Scorched by History: Discriminatory Past Shapes Heat Waves in Minority and Low-Income Neighborhoods*, ASSOCIATED PRESS (Jul. 8, 2024), <https://www.ap.org/news-highlights/spotlights/2024/scorched-by-history-discriminatory-past-shapes-heat-waves-in-minority-and-low-income-neighborhoods/> [<https://perma.cc/JW8U-D6A7>]; David J. Nowak, Alexis Ellis & Eric J. Greenfield, *The Disparity in Tree Cover and Ecosystem Service Values Among Redlining Classes in the United States*, 221 LANDSCAPE & URB. PLAN. 1 (2022); *Extreme Heat*, N.Y.C. MAYOR'S OFF. CLIMATE & ENV'T JUST., <https://climate.cityofnewyork.us/challenges/extreme-heat/> [<https://perma.cc/75KF-EWJZ>].

⁵⁸ Haley M. Lane, Rachel Morello-Frosch, Julian D. Marshall & Joshua S. Apte, *Historical Redlining is Associated with Present-Day Air Pollution Disparities in U.S. Cities*, 9 ENV'T SCI. & TECH. LETTERS 345 (2022); *see also* Cesar O. Estien, Christine E. Wilkinson, Rachel Morello-Frosch & Christopher J. Schell, *Historical Redlining is Associated with Disparities in Environmental Quality Across California*, 11 ENV'T SCI. & TECH. LETTERS 54 (2024).

for children⁵⁹ because their bodies are still developing.⁶⁰ Exposure to high levels of air pollution is closely tied to elevated childhood asthma rates.⁶¹ The same neighborhoods that were redlined, that are majority Black and Latinx today, that have the highest heat vulnerability, also have the highest childhood asthma rates.⁶² Childhood asthma is a predictor of days missed from school,⁶³ which in turn is one of the the biggest predictors of involvement with the criminal justice system.⁶⁴ This correlation between environmental injustice and mass incarceration is further amplified by the reality that many of the neighborhoods most overburdened with

⁵⁹ Franziska Rosser, *Outdoor Air Pollution and Pediatric Respiratory Disease*, 45 CLINICS IN CHEST MED. 531 (2024); WHO, *Air Pollution and Child Health: Prescribing Clean Air* (2018), <https://iris.who.int/bitstream/handle/10665/275545/WHO-CED-PHE-18.01-eng.pdf?sequence=2> [https://perma.cc/94LS-PK5S].

⁶⁰ Diganta Saikia & Bandana Mahanta, *Cardiovascular and Respiratory Physiology in Children*, 63 INDIAN J. ANAESTHESIA 690 (2019). These same physiological characteristics make children uniquely vulnerable to the impacts of climate change. EPA, *Climate Change and Children's Health and Well-Being in the United States* (2023), https://www.epa.gov/system/files/documents/2023-04/CLiME_Final%20Report.pdf [https://perma.cc/6RJY-WK9S].

⁶¹ Matthew C. Altman, Meyer Kattan, George T. O'Connor, Ryan C. Murphy, Elizabeth Whalen, Petra LeBeau, Agustin Calatroni, Michelle A. Gill, Rebecca S. Gruchalla, Andrew H. Liu, Stephanie Lovinsky-Desir, Jacqueline A. Pongracic, Carolyn M. Kercsmar, Gurjit K. Hershey Khurana, Edward M. Zoratti, Stephen J. Teach, Leonard B. Bacharier, Lisa M. Wheatley, Steve M. Sigelman, Peter J. Gergen, Alkis Togias, William W. Busse, James E. Gern & Daniel J. Jackson, *Associations Between Outdoor Air Pollutants and Non-Viral Asthma Exacerbations and Airway Inflammatory Responses in Children and Adolescents Living in Urban Areas in the USA: A Retrospective Secondary Analysis*, 7 LANCET PLANETARY HEALTH E33 (2023) (finding that exposure to increased PM_{2.5} and ozone pollution were significantly correlated with asthma).

⁶² Patrick H. Ryan, Antonella Zanobetti, Brent A. Coull, Howard Andrews, Leonard B. Bacharier, Dakota Bailey, Paloma I. Beamer, Jeff Blossom, Cole Brokamp, Soma Datta, Tina Hartert, Gurjit K. Khurana Hershey, Daniel J. Jackson, Christine C. Johnson, Christine Joseph, Jorja Kahn, Nathan Lothrop, Margee Louisias, Heike Luttmann-Gibson, Fernando D. Martinez, Eneida A. Mendoça, Rachel L. Miller, Dennis Ownby, Sima Ramratnam, Christine M. Seroogy, Cynthia M. Visness, Anne L. Wright, Edward M. Zoratti, James E. Gern & Diane R. Gold, *The Legacy of Redlining: Increasing Childhood Asthma Disparities through Neighborhood Poverty*, 210 AM. J. RESPIRATORY CRITICAL CARE MED. 1201 (2024); Sonali Bose & Kecia Carroll, *An Unfortunate Inheritance: Child Asthma in the Aftermath of Redlining*, 210 AM. J. RESPIRATORY CRITICAL CARE MED. 1171 (2024).

⁶³ See Sara B. Johnson, Paul Spin, Faith Connolly, Marc Stein, Tina L. Cheng & Katherine Connor, *Asthma and Attendance in Urban Schools*, 16 PREVENTING CHRONIC DISEASE 1 (2019); Joy Hsu, Xiaoting Qin, Suzanne F. Beavers & Maria C. Mirabelli, *Asthma-Related School Absenteeism, Morbidity, and Modifiable Factors*, 51 AM. J. PREVENTATIVE MED. 23 (2016).

⁶⁴ Prison Policy Initiative & VOCAL-NY, *Mapping Disadvantage: The Geography of Incarceration in New York State* (Feb. 19, 2020), <https://www.prisonpolicy.org/origin/ny/report.html> [https://perma.cc/FTW3-88P9] (documenting that high imprisonment communities have high youth asthma rates). This is a correlation, not a causal link. It is important to remember that most children with asthma and indeed most children who miss a lot school do not become involved with the criminal justice system. Robert Balfanz & Vaughan Byrnes, *Meeting the Challenge of Combating Chronic Absenteeism*, JOHNS HOPKINS SCH. OF EDUC., <https://www.attendanceworks.org/wp-content/uploads/2017/09/NYC-Chronic-Absenteeism-Impact-Report-Nov-2013.pdf> [https://perma.cc/YW9Y-9ED7].

polluting infrastructure are frequently also the neighborhoods targeted for over-policing.

III. WHAT CAN WE DO?

The problems are legion and daunting. It took us decades to get here and we are still working to understand the contours of the challenges we face. But as lawyers, our job is not just to identify problems but to solve them. To that end, I offer some lessons from New York City that demonstrate how substantive legal tools can be deployed to build real change for real people on the ground. Taking a leaf from the pages of the poet Adrienne Rich, it is important to remember the power we have, not just the obstacles we face.⁶⁵

Society solves environmental problems best by prioritizing protecting the most vulnerable and the most impacted. For this reason, the lessons I offer consist of three innovative urban environmental projects, all of which start and end with environmental justice. Each is a work in progress. Each has strengths and weaknesses, and each offers lessons for what to do and what to avoid. By sharing these partial, contingent lessons, my hope is that readers will see something they can use in their own practice, in their own city. By learning from each other, we can build an upswell of local level victories for the environment.

A. Lesson #1 Renewable Rikers

Renewable Rikers is a plan to tie the closure of New York City's main jail on Rikers Island with the construction of state-of-the-art green infrastructure.⁶⁶ Embodied in three local laws collectively known as Renewable Rikers,⁶⁷ this plan demonstrates the transformative potential of intentional, creative policymaking that pays attention to the intersections between social justice, racial justice, and environmental justice. Renewable Rikers meets current and future sustainability needs through decisions that respond to the legacy of brutality and racialized injustice at the Rikers Island jail.⁶⁸

⁶⁵ At the end of *Poem XVII* Rich wrote:

“and these are the forces they had ranged against us,
and these are the forces we had ranged within us.”

ADRIENNE RICH, *Poem XVII*, in *THE DREAM OF A COMMON LANGUAGE: POEMS 1974–1977* 29–30 (1978). This is how I see this essay—with parts I and II describing the forces ranged against us, and part III hinting at some of the forces ranged within us.

⁶⁶ See generally Rebecca Bratspies, *Renewable Rikers: A Plan for Restorative Environmental Justice*, 66 LOY. L. REV. 371 (2020) (describing the genesis of the Renewable Rikers project).

⁶⁷ The three local laws that are collectively known as Renewable Rikers are Local Laws 16, 17, and 31 of 2021. N.Y.C., N.Y., Local Law 16 (2021); N.Y.C., N.Y., Local Law 17 (2021); N.Y.C., N.Y., Local Law 31 (2021).

⁶⁸ For a detailed exploration of these issues, see generally Rebecca Bratspies, *What Makes it a Just Transition? A Case Study of Renewable Rikers*, 40 PACE ENV'T L. REV. 1 (2023).

The island's entire history has been toxic. In 1884, New York City bought Rikers Island from the Rikers family.⁶⁹ At the time, Rikers Island was ninety-eight square acres. By dumping coal ash and other trash into the East River to fill in the island's shoals,⁷⁰ New York City "reclaim[ed]" what it described as underwater land,⁷¹ thereby more than tripling the size of Rikers Island. This hard, dangerous work was performed by forced prison labor.⁷² In 1935, the newly enlarged island became New York City's main jail.⁷³ The Rikers Island jail quickly became infamous as reports,⁷⁴ exposés,⁷⁵ and lawsuits⁷⁶ documented patterns of gratuitous and excessive violence at Rikers.⁷⁷ Indeed, the Rikers Island jail ranks as one of the ten worst correctional facilities in the United States.⁷⁸ Worse, more than eighty percent of those detained on Rikers Island are pre-trial detainees—people who have been convicted of nothing and are in custody only because they cannot afford bail.⁷⁹

⁶⁹ The Rikers family made their fortune by exploiting enslaved labor. For a description of Richard Riker's involvement in what came to be known as the kidnapping club, an infamous scheme to kidnap free Black New Yorkers, declare them to be fugitive slaves, and send them into slavery in the South, see REBECCA BRATSPIES, *NAMING GOTHAM: THE VILLAINS, ROGUES & HEROES BEHIND NEW YORK'S PLACE NAMES* 117–20 (2023). For more on this topic, see also JONATHAN DANIEL WELLS, *THE KIDNAPPING CLUB: WALL STREET, SLAVERY, AND RESISTENCE ON THE EVE OF THE CIVIL WAR* (2020).

⁷⁰ *Reclaiming Riker's Island*, N.Y. TIMES, Nov. 25, 1900, at 15.

⁷¹ *Riker's Island Harbor Line*, N.Y. TIMES, Jan. 17, 1893, at 9.

⁷² For more on the forced labor that built Rikers Island, see Jarrod Shanahan & Jayne Mooney, *New York City's Captive Work Force: Remembering the Prisoners Who Built Rikers Island*, 56 INT'L J. L., CRIME & JUST. 13 (2019).

⁷³ *462 Prisoners Moved*, N.Y. TIMES, Dec. 3, 1935, at 4.

⁷⁴ See GRAHAM RAYMAN & REUVEN BLAU, *RIKERS: AN ORAL HISTORY* (2023) (detailing fifty years of stories from Rikers Island); The Nunez Monitoring Team, *Status Report on DOC's Action Plan by the Nunez Independent Monitor* 15 (Apr. 24, 2023), <https://storage.courtlistener.com/recap/gov.uscourts.nysd.383754/gov.uscourts.nysd.383754.520.0.pdf> [<https://perma.cc/Q5DF-CZE3>].

⁷⁵ See U.S. DEP'T OF JUSTICE, *CRIPA Investigation of the New York City Department of Correction Jails on Rikers Island* (Aug. 4, 2014) [hereinafter *CRIPA Investigation*], <https://www.justice.gov/sites/default/files/usao-sdny/legacy/2015/03/25/SDNY%20Rikers%20Report.pdf> [<https://perma.cc/GHH6-GFJE>]; Graham Rayman, *Rikers Violence: Out of Control*, VILLAGE VOICE (May 9, 2012), <https://www.villagevoice.com/rikers-violence-out-of-control/> [<https://perma.cc/E7LE-34EF>].

⁷⁶ See, e.g., *Sheppard v. Phoenix*, 210 F. Supp. 2d 450 (S.D.N.Y. 2002).

⁷⁷ *CRIPA Investigation*, *supra* note 75, at 3 (describing "rampant use of unnecessary and excessive force by DOC staff").

⁷⁸ See James Ridgeway & Jean Casella, *America's 10 Worst Prisons: Rikers Island*, MOTHER JONES (May 14, 2013), <https://www.motherjones.com/politics/2013/05/america-10-worst-prisons-rikers-island-new-york-city/> [<https://perma.cc/XJ5C-ZQU5>]; see John Surico, *How Rikers Island Became the Most Notorious Jail in America*, VICE (Jan. 11, 2016, 1:00 AM), <https://www.vice.com/en/article/how-rikers-island-became-the-most-notorious-jail-in-america/> [<https://perma.cc/6CUY-8QM5>].

⁷⁹ See *The State of New York City Jails*, OFF. N.Y.C. COMPTROLLER (Aug. 9, 2023), <https://comptroller.nyc.gov/reports/the-state-of-new-york-city-jails/> [<https://perma.cc/2DFF-TR2V>] (reporting that eighty-seven percent of the jail's population was persons detained pretrial).

Rikers Island is toxic literally as well as metaphorically. In addition to the brutality and toxicity of the jail, the island's waste fill would for decades catch fire and emit obnoxious smoke.⁸⁰ Because so much of it is essentially a poorly-constructed landfill, the island continues to offgas methane—a potent greenhouse gas⁸¹ and probably a driver of cardiopulmonary disease.⁸² It is also directly in the flight path for LaGuardia Airport—meaning that those who work or are incarcerated on the island are exposed to an immense noise burden.⁸³

Under the leadership of *JustLeadershipUSA*, an organization headed by formerly incarcerated individuals, the case for shutting the jail at Rikers Island gained power.⁸⁴ This #CloseRikers campaign embodied the procedural environmental justice tenet of meaningful involvement from those directly impacted by a decision, and the Jemez Principle for Democratic Organizing that communities speak for themselves.⁸⁵ They organized around an audacious goal—not to make Rikers more humane but to shut it down entirely.

Responding to the groundswell of support for the #CloseRikers campaign, City Council created a panel to investigate mass incarceration in general and Rikers Island in particular. This panel, headed by former New York Chief Judge Jonathan Lippman, was tasked with considering institutional racism as part of an inquiry into whether New York City could close the jail at Rikers Island.⁸⁶ The next year, the Lippman Commission issued its first report: *Criminal Justice and Incarceration*

Under New York law, the primary justification for holding someone in pretrial detention is to ensure their presence at court proceedings. N.Y. CRIM. PRO. L. § 510.10(1). However, being held pretrial on Rikers Island actually makes it less likely that an individual will be present for court proceedings. Matt Katz, *1 in 4 People Jailed in NYC are Not Being Brought to Court on Time*, GOTHAMIST (Feb. 20, 2023), <https://gothamist.com/news/1-in-4-people-jailed-in-nyc-are-not-being-brought-to-court-on-time> [<https://perma.cc/ZNS6-M48S>].

⁸⁰ See *Says Dumps Menace Riker's Island Prison*, N.Y. TIMES, Oct. 29, 1931, at 4; *Riker's Island Use as Dump Denounced*, N.Y. TIMES, Nov. 27, 1938, at 13; *Riker's Island Dumping Nuisance*, N.Y. TIMES, Jul. 8, 1894, at 9.

⁸¹ Kathleen A. Mar, Charlotte Unger, Ludmila Walderdorff & Tim Butler, *Beyond CO2 Equivalence: The Impacts of Methane on Climate, Ecosystems, and Health*, 134 ENV'T SCI. & POL'Y 127, 128–29 (2022).

⁸² GLOBAL BURDEN DISEASE, *Global Burden of Chronic Respiratory Diseases and Risk Factors, 1990–2019: an Update from the Global Burden of Disease Study 2019*, LANCET at 5–9 (Apr. 25, 2023); Oliver Mendoza-Cano, Xóchitl Trujillo, Miguel Huerta, Mónica Ríos-Silva, Agustín Lugo-Radillo, Jaime Alberto Bricio-Barrios, José Clemente Rueda-Abad, Rebeca Yasmín Pérez-Rodríguez, Ana Luz Quintanilla-Montoya, Juan Manuel Uribe-Ramos, Valeria Argentina Mendoza-Olivo & Efrén Murillo-Zamora, *Assessing the Relationship Between Energy-Related Methane Emissions and the Burden of Cardiovascular Diseases: A Cross-Sectional Study of 73 Countries*, SCI. REP. (2023).

⁸³ Bruno Gallo, *Airport Noise Footprint Exposed, Path to Mitigation Unclear*, GOTHAM GAZETTE (Dec. 6, 2016), <https://www.gothamgazette.com/city/6654-airport-noise-footprint-exposed-path-to-mitigation-unclear> [<https://perma.cc/W92G-YSUY>].

⁸⁴ Janos Marton, *#CLOSErikers: The Campaign to Transform New York City's Criminal Justice System*, 45 FORDHAM URB. L.J. 499, 534–35 (2018). For more information, see #CLOSErikers, JUSTLEADERSHIPUSA, <https://jlusa.org/campaign/closerikers> [<https://perma.cc/3JVM-LCUM>].

⁸⁵ *Jemez Principles for Democratic Organizing: #3 Let People Speak for Themselves*, SW. NETWORK ENV'T & ECON. JUST. (Dec. 1996), <https://www.ejnet.org/ej/jemez.pdf> [<https://perma.cc/9LNT-PQCF>].

⁸⁶ *Speaker Mark Viverito's 2016 State of the City Address, Remarks as Prepared for Delivery*, N.Y.C. COUCIL (Feb. 11, 2016), <https://council.nyc.gov/press/2016/02/11/46/> [<https://perma.cc/CR5H-7V8J>].

Reform: A More Just New York.⁸⁷ Calling Rikers a “stain on our great city,”⁸⁸ this report unequivocally called for the Rikers Island jail to be shut. New York City Council responded with a local law setting a deadline for the closure of the jail.⁸⁹

That is where Renewable Rikers comes in. The #CloseRikers advocates teamed up with environmental justice advocates and pressed City Council to put racial justice at the center of decisions about how to repurpose the island.⁹⁰ The result was a plan to dedicate a portion of Rikers Island to large scale solar generation and battery storage⁹¹ and to build a modern waste water treatment facility on the island.⁹² These new facilities can facilitate the removal of antiquated, polluting facilities from environmental justice communities,⁹³ many of which are the same communities most impacted by incarceration on Rikers Island.⁹⁴ Perhaps most importantly, Renewable Rikers ensures that all these changes occur with the participation and involvement of those most impacted by incarceration on Rikers Island.⁹⁵

Step by step, Renewable Rikers is becoming real. A year ago, NYC issued its feasibility studies for wastewater treatment⁹⁶ and for renewable energy on Rikers Island.⁹⁷ Both studies indicate these plans are cost-effective and beneficial. The waste water treatment facility will improve water quality, produce green renewable energy, improve stormwater management through resilient renewable infrastructure, all while reducing impacts on currently overburdened communities.⁹⁸ The energy facility will generate clean energy at scales large enough to make significant

⁸⁷ *A More Just New York City*, INDEP. COMM’N ON N.Y.C. CRIM. JUST. & INCARCERATION REFORM (2017), <https://static1.squarespace.com/static/5b6de4731aef1de914f43628/t/5b96c6f81ae6cf5e9c5f186d/1536607993842/Lippman%2BCommission%2BReport%2BFINAL%2BSingles.pdf> [https://perma.cc/9WCR-VLTF].

⁸⁸ *Id.* at 2.

⁸⁹ Press Release, N.Y.C. COUNCIL, *Council Votes on Historic Legislation to Close Rikers Island* (Oct. 17, 2019), <https://council.nyc.gov/press/2019/10/17/1818/> [https://perma.cc/MY82-Q7RZ].

⁹⁰ *NYLPI Celebrates as City Council Passes the Renewable Rikers Act*, N.Y. LAW. FOR PUB. INT. (Feb. 12, 2021), <https://www.nylpi.org/nylpi-celebrates-as-city-council-passes-the-renewable-rikers-act/> [https://perma.cc/7G4A-UDF3].

⁹¹ N.Y.C., N.Y., LOCAL LAW 17 (2021).

⁹² N.Y.C., N.Y., LOCAL LAW 31 (2021).

⁹³ *A Plan for Renewable Rikers*, REG’L PLAN. ASS’N 18–22 (2022).

⁹⁴ *Stop-and-Frisk-Data*, ACLU OF N.Y., <https://www.nyclu.org/en/stop-and-frisk-data> [https://perma.cc/2UX5-UZUC].

⁹⁵ N.Y.C., N.Y., LOCAL LAW 16 (2021). For a description of the ways that Local Law 16 builds restorative environmental justice into Renewable Rikers, see Bratspies, *supra* note 68, at 30–33.

⁹⁶ *Feasibility Study for a New Wastewater Resource Recovery Facility on Rikers Island*, N.Y.C. ENV’T PROT. (Mar. 2024), <https://www.nyc.gov/assets/dep/downloads/pdf/about/rikers-island-wrrf-feasibility-study-march-2024.pdf> [https://perma.cc/3EVF-TCE8].

⁹⁷ *Renewable Rikers Feasibility Study Report*, N.Y.C. MAYOR’S OFF. CLIMATE & ENV’T JUST. (Feb. 2024), <https://climate.cityofnewyork.us/wp-content/uploads/2024/06/Rikers-Report.pdf> [https://perma.cc/27BZ-49QQ].

⁹⁸ N.Y.C. ENV’T PROT., *supra* note 96, at 6.

contributions to New York City's climate and energy transition goals.⁹⁹ There is general agreement that these are the highest and best uses of the land.¹⁰⁰

New York City's current Mayor, Eric Adams, has dragged his feet and floated the possibility of keeping the Rikers Island jail open.¹⁰¹ City Council has refused to budge—reminding him that closing Rikers is the law.¹⁰² There is no question that Mayor Adams's intransigence has slowed the transition, making it likely that New York City will miss the 2027 statutory deadline for shutting the Rikers Island jail entirely.¹⁰³ Nevertheless, things are moving forward. This will happen.

The environmental justice and social justice victory embodied by Renewable Rikers is partial and contingent. But it is a victory! By putting racial justice and overburdened communities at the center of building clean infrastructure, Renewable Rikers offers a model for genuine and transformative change that confronts root causes of inequality and builds a better, fairer city. It does so by prioritizing justice and facilitating meaningful community involvement in these infrastructure decisions.

B. Lesson #2 Daylighting Tibbetts Brook

The plan to daylight Tibbetts Brook is a different kind of climate strategy embodying a different kind of environmental justice. It is a nature-based climate solution intended to reduce flooding, improve water quality, and provide green space that will transform a historically overburdened neighborhood.¹⁰⁴

Tibbetts Brook is a small stream that originates north of New York City and flows south. Historically, Tibbetts Brook flowed through Van Cortlandt lands into Spuyten Duyvil Creek and then into the salt marshes alongside the Harlem River. In the eighteenth century, however, major landowner and enslaver Jacobus

⁹⁹ N.Y.C. MAYOR'S OFF. CLIMATE & ENV'T JUST., *supra* note 97, at 5.

¹⁰⁰ *A Path Forward: The Blueprint to Close Rikers*, INDEP. RIKERS COMM'N 7 (March 2025), <https://static1.squarespace.com/static/5b6de4731aef1de914f43628/t/67dd7c6d4e5dca1fa86db6d8/1742568562268/Independent+Rikers+Commission+Blueprint+to+Close+Rikers+Island+March+2025.pdf> [<https://perma.cc/5M8A-2ENQ>].

¹⁰¹ Sally Goldenberg, *Down But Not Out: Eric Adams Enters Reelection Year with a Narrow Path to Victory*, POLITICO (Jan. 6, 2025, 8:55 AM), <https://www.politico.com/news/2025/01/06/eric-adams-enters-reelection-narrow-path-victory-00196546> [<https://perma.cc/N6UY-S9GG>] (emphasizing Adam's intention to put undermining bail reforms and keeping Rikers open at the center of his re-election campaign). After his deal with the Trump administration which conditionally dropped corruption charges against Adams, Adams announced a plan to allow ICE agents on Rikers Island. Craig McCarthy, Jack Morphet & Jorge Fitz-Gibbon, *NYC Mayor Adams Vows to Reopen ICE Office at Rikers Island Following Meeting with Trump Border Czar Tom Homan*, N.Y. POST (Feb. 13, 2025, 4:52 PM) <https://nypost.com/2025/02/13/us-news/eric-adams-vows-to-reopen-ice-office-at-rikers-island/> [<https://perma.cc/NZE5-7T3H>].

¹⁰² Press Release, N.Y.C. COUNCIL, *Joint Statement from Speaker Adrienne Adams and Criminal Justice Chair Sandy Nurse on the Three-Year Deadline to Close Rikers* (Aug. 30, 2024), <https://council.nyc.gov/press/2024/08/30/2686/> [<https://perma.cc/7HL6-KKMW>].

¹⁰³ INDEP. RIKERS COMM'N, *supra* note 100, at 2–5 (2025) (acknowledging that the City will not meet the 2027 deadline but emphasizing that the “decrepit, dysfunctional, and violent” jail must close as soon as possible).

¹⁰⁴ *Tibbetts Brook Daylighting Project*, N.Y.C. DEP'T ENV'T PROT., <https://www.nyc.gov/site/dep/whats-new/tibbetts-brook-daylighting-project.page> [<https://perma.cc/79BY-MXR3>].

Van Cortlandt, dammed Tibbetts Brook to provide reliable power for a gristmill.¹⁰⁵ In the process, he created what used to be known as Van Cortlandt Lake. The lake was recently renamed to Hester and Piero's Mill Pond to honor the enslaved miller, Piero, and his enslaved wife, Hester, who labored there, rather than the Van Cortlandts who enslaved them.¹⁰⁶

Around 1912, Tibbetts Brook was diverted into the Broadway sewer, created for this purpose. Burying the stream was part of a broader scheme to drain the waterway's marshland for development.¹⁰⁷ However, burying the brook did not make it "go away," nor did it reduce the amount of water flowing through the stream.¹⁰⁸ Water from Tibbetts Brook enters the sewer system at a rate of four to five million gallons of water per day (more on rainy days),¹⁰⁹ amounting to 2.2 billion gallons per year.¹¹⁰ This is clean water that has no business in a waste water treatment facility. But once it enters the sewer, the clean Tibbetts Brook waters mix with sewage. The sewer carries the resulting contaminated water to the antiquated Wards Island Wastewater Resource Recovery Facility¹¹¹ (one of the antiquated facilities that Renewable Rikers is intended to replace).

When it rains, the sewer system is overwhelmed, and water from Tibbetts Brook, along with stormwater and sewage instead bypasses the treatment facility and flows directly into the Harlem River. This is one of the largest combined sewer overflow sites in New York City. The overflow not only poses human health dangers but also disrupts the delicate balance of the Harlem River ecosystem, causing erosion and contamination with salt, oil, and roadside debris.¹¹²

¹⁰⁵ Jim Dwyer, *An Underground Brook, Gallons of Sewage and a Century-Old Problem*, N.Y. TIMES (Feb. 16, 2016), <https://www.nytimes.com/2016/02/17/nyregion/an-underground-brook-gallons-of-sewage-and-a-century-old-problem.html> [<https://perma.cc/6YC2-RNHR>].

¹⁰⁶ Press Release, N.Y.C. DEP'T PARKS & RECREATION, *NYC Parks and the Van Cortlandt Park Allegiance Unveil Two Newly Re/Named Park Features in Van Cortlandt Park* (June 21, 2021), <https://www.nycgovparks.org/parks/VanCortlandtPark/pressrelease/21861> [<https://perma.cc/QS6S-572S>].

¹⁰⁷ Winnie Hu & James Thomas, *Why New York is Unearthing a Brook It Buried a Century Ago*, N.Y. TIMES (Dec. 6, 2021), <https://www.nytimes.com/2021/12/06/nyregion/tibbetts-brook-bronx-daylighting.html> [<https://perma.cc/YV9T-SS97>].

¹⁰⁸ Dwyer, *supra* note 105.

¹⁰⁹ Maya Stahl, *DEP, NYC Parks Finalize Deal to 'Daylight' Tibbetts Brook, Extend Putnam Greenway*, BRONX TIMES (Jun. 14, 2024), <https://www.bxtimes.com/daylight-tibbetts-brook/> [<https://perma.cc/2W7Y-RUS6>].

¹¹⁰ Dwyer, *supra* note 105.

¹¹¹ Nathan Kensinger, *One of NYC's Underground Rivers May Soon be Brought Back to Life*, CURBED N.Y. (Dec. 20, 2018, 12:12 PM), <https://ny.curbed.com/2018/12/20/18150198/bronx-new-york-tibbetts-brook-daylighting-photo-essay> [<https://perma.cc/A4WT-NMSK>].

¹¹² *Combined Sewer Overflow (CSO)*, N.Y. STATE DEP'T OF ENV'T CONSERVATION, <https://dec.ny.gov/environmental-protection/water/water-quality/combined-sewer-overflow> [<https://perma.cc/XQ9R-Q2ZK>]; see also EPA's *Interim Significant Noncompliance Policy for Clean Water Act Violations Associated with CSOs, SSOs, CAFOs, and Storm Water Point Sources*, EPA (Oct. 2007), <https://www.epa.gov/sites/default/files/2013-10/documents/sncpolicy-attach1.pdf> [<https://perma.cc/EZ9H-MFVW>] (indicating the growing significance of water quality impairment associated with wet weather sewer overflows).

This situation leaves the city vulnerable to serious flooding. In September 2021, Hurricane Ida dumped more than seven inches of rain on New York City within a span of twenty-four hours, killing thirteen people and creating millions of dollars of damage.¹¹³ At one point, three inches of rain fell within one hour.¹¹⁴ The deluge overwhelmed New York City's combined sewer/stormwater drainage system, resulting in massive flooding.¹¹⁵ It was particularly bad along a stretch of the Major Deegan Expressway in the Bronx, where more than three feet of water inundated the expressway.¹¹⁶ This was largely water from Tibbetts Brook—water that should not have been in the sewer system in the first place.¹¹⁷

This flooding is intimately related to the history of redlining described above. The Major Deegan is one of the many highways that Robert Moses forced into the Bronx. It had devastating impacts on communities including air pollution, noise, danger, devaluing property, and bisecting neighborhoods.¹¹⁸ This road was part of Moses's vision of arterial highways that went *through* neighborhoods, rather than being a part of neighborhoods. These highways were intended for other people elsewhere—to allow them to move rapidly through a neighborhood on their way somewhere else. The neighborhoods that bore the brunt of this road construction were the same neighborhoods that were redlined, and these roads compound all the health and environmental burdens described above.

Hurricane Ida's devastating flooding on the Major Deegan generated momentum for the proposal to daylight Tibbetts Brook.¹¹⁹ The daylighting plan, which is currently in its final planning phase, calls for unburying the stream and reconnecting it to Harlem River through a new naturalized stream bed that will mimic functions of the natural stream that no longer exists.¹²⁰ When completed, this

¹¹³ David Cruz, *How Extreme Flooding of This Bronx Highway Could Have Been Avoided*, GOTHAMIST (Sept. 23, 2021), <https://gothamist.com/news/how-extreme-flooding-bronx-highway-could-have-been-avoided> [<https://perma.cc/P8MK-ZULN>]; *N.Y.C. Community Development Block Grant Disaster Recovery: Hurricane Ida*, N.Y.C., <https://www.nyc.gov/site/cdbgdr/hurricane-ida/hurricane-ida.page> [<https://perma.cc/MUC4-WSMW>].

¹¹⁴ Cruz, *supra* note 113.

¹¹⁵ *Id.*

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Highway Proposed for Van Cortlandt*, N.Y. TIMES, Jun. 12, 1947, at 25 (describing how the planned highway would bisect the community); see Deborah N. Archer, "White Men's Roads Through Black Men's Homes": Advancing Racial Equity Through Highway Reconstruction, 73 VAND. L. REV. 1259 (2020) (describing the devastating impact that highways had on Black communities).

¹¹⁹ THE KINGSBRIDGE HIST. SOC'Y, *Burying Tibbetts Brook—Construction and Chaos in Kingsbridge ca. 1900* (Nov. 26, 2021, 3:15 PM), <https://kingsbridgehistoricalsociety.org/forums/topic/burying-tibbetts-brook-construction-and-chaos-in-kingsbridge-ca-1900/> [<https://perma.cc/7GVF-7SY9>].

¹²⁰ Lori Atherton, "Daylighting" NYC's Tibbetts Brook: MLA Alumna Helps Unearth Stream from 1912 to Combat Stormwater Overflow, STEWARDS MAGAZINE (2023). For up-to-date details on the project, see *Tibbetts Advisory Group Presentations*, N.Y.C. DEP'T ENV'T PROT., <https://www.nyc.gov/site/dep/whats-new/tibbetts-brook-daylighting-project.page> [<https://perma.cc/TEV5-FEAN>] (providing details about the Tibbetts Advisory Committee and meeting notes).

project will eliminate more than 220 million gallons of combined sewer overflow.¹²¹ This will improve water quality and reduce water-born illness from contamination. It will also help manage stormwater runoff and reduce flooding on the Major Deegan Expressway.¹²² Finally, this project provides the opportunity to create a linear park in a community with far too little greenspace, and too much heat and pollution burden.¹²³ Win. Win. Win.¹²⁴

The city now has the rights to all the land needed for the daylighting,¹²⁵ and New York's governor recently committed \$10 million to the project.¹²⁶ Work is expected to start in late 2025.¹²⁷ The project is being done with intense consultation and collaboration with the environmental justice communities along the route.¹²⁸ Additional non-governmental initiatives complement these ongoing consultations to ensure that these Bronx communities speak for themselves. One of the most fascinating ways this is happening is through a series of art projects created under the auspices of City as Living Laboratory—these include art and sound installations, and a community tapestry envisioning the Tibbetts Estuary.¹²⁹

¹²¹ *DEP and NYC Parks Finalize Purchase of Land Needed to 'Daylight' Tibbetts Brook and Extend Putnam Greenway in Bronx*, N.Y.C. DEP'T ENV'T PROT. (Jun. 10, 2024), <https://www.nyc.gov/site/dep/news/24-021/dep-nyc-parks-finalize-purchase-land-needed-daylight-tibbetts-brook-extend-putnam> [https://perma.cc/9YS6-9C57].

¹²² *See id.*

¹²³ Jaclyn Spencer & Rebecca Bratspies, *Daylighting Tibbetts Brook: Green Infrastructure as Both a Climate and Environmental Win*, HAPPYECONEWS (Feb. 16, 2024), <https://happyeconews.com/daylighting-tibbetts-brook/> [https://perma.cc/KP47-J4LN]; *see also* DoanNguyen, *supra* note 57 (describing heat island effects in the South Bronx); Robert Fanuzzi & Ramdat Singh, *Minutes of the Joint Meeting of the Parks and Recreation and Environment & Sanitation Committees of Bronx Community Board 8*, BRONX CMTY. BD. 8 (Dec. 15, 2021), https://www.nyc.gov/assets/bronxcb8/pdf/environment/Minutes_Joint_ES_with_PR_December_2021.pdf [https://perma.cc/7BVL-5RAR].

¹²⁴ For a more critical, intensely personal take on this project, *see* Emily Raboteau, *Daylighting a Brook in the Bronx*, PIONEERWORKS (Oct. 23, 2024), <https://pioneerworks.org/broadcast/daylighting-bronx-emily-raboteau> [https://perma.cc/2JEF-XLCD].

¹²⁵ *See* N.Y.C. DEP'T ENV'T PROT., *supra* note 121.

¹²⁶ Izania Gonzalez, *Major Milestone for Tibbetts Brook Daylighting Project: \$10 Million Green Grant Secured for Historic Environmental Plan*, RIVERDALE PRESS (Nov. 4, 2024), <https://www.riverdalepress.com/stories/major-milestone-for-tibbetts-brook-daylighting-project-10-million-green-grant-secured-for,163506> [https://perma.cc/G3U6-LGMB].

¹²⁷ Atherton, *supra* note 120.

¹²⁸ *See* N.Y.C. DEP'T ENV'T PROT., *supra* note 120.

¹²⁹ *Rescuing Tibbetts Brook*, CITY AS LIVING LAB'Y, <https://www.cityaslivinglab.org/rescuing-tibbetts> [https://perma.cc/GF3R-5EQR]; *The Tibbetts Estuary Tapestry*, CITY AS LIVING LAB'Y, <https://www.cityaslivinglab.org/rescuing-tibbetts/tapestry> [https://perma.cc/TL34-C2TF] (explaining the Tibbetts Estuary Tapestry, a green reimagining of this portion of the Bronx based on extensive community input).

C. Lesson #3: Building Retrofit and Local Law 97

New York City has some of the nation's most innovative climate-related legislation targeting both climate mitigation and climate adaptation. Specifically, in 2019, New York City enacted a suite of local laws collectively known as the Climate Mobilization Act or the City's "Green New Deal."¹³⁰ This ambitious legislative package represents New York City's commitment to transforming business as usual in order to achieve the City's 1.5°C Climate Action Plan.

The heart of the Climate Mobilization Act is Local Law 97, which is first-of-its-kind legislation placing carbon emission limits on New York City's privately owned large buildings, both commercial and residential.¹³¹ Under this law, existing buildings over 25,000 square feet must reduce their carbon footprint forty percent by 2030,¹³² and eighty percent by 2050.¹³³ Climate mitigation in New York City focuses on buildings because buildings account for more than two thirds of New York City's greenhouse gas emissions.¹³⁴ The roughly 50,000 large buildings targeted by Local Law 97 emit the lion's share of those greenhouse gases.¹³⁵ Many of the covered buildings have old, inefficient infrastructure and rely extensively on dirty fossil fuels for their electricity.¹³⁶ Changing the way these buildings are heated, cooled, and powered will make a real difference not only in carbon emissions but in the other associated emissions that negatively impact the health and welfare of city residents and the environment.

Local Law 97 instantly catapulted New York City into the vanguard of climate ambition. While the Climate Mobilization Act will not single-handedly reverse the effects of climate change, it "will be the largest emissions reduction policy in the history of New York City or any city anywhere."¹³⁷

How can New York City do this? Knowledge is power. New York City has detailed information about where its greenhouse gas emissions come from because the city has required large building owners to collect and submit standardized data about energy and water use since 2010.¹³⁸ This data, referred to as benchmarking

¹³⁰ Molly Enking, *New York City's Newly Passed Green New Deal, Explained*, GRIST (Apr. 18, 2019), <https://grist.org/article/new-york-citys-newly-passed-green-new-deal-explained/> [<https://perma.cc/FJ2K-C6RC>].

¹³¹ N.Y.C., N.Y., LOCAL LAW 97 (2019); N.Y.C. MAYOR'S OFF. CLIMATE & ENV'T JUST., *Buildings*, <https://climate.cityofnewyork.us/subtopics/buildings/> [<https://perma.cc/F3TK-VPY3>].

¹³² URBAN GREEN COUNCIL, *NYC Building Emissions Law* (Feb. 2023), https://www.urbangreencouncil.org/wp-content/uploads/2023/02/LL97-Summary_2.8.2023.pdf [<https://perma.cc/C3SH-BHJT>].

¹³³ URBAN GREEN COUNCIL, *What is Local Law 97?* (Dec. 2024), https://www.urbangreencouncil.org/sites/default/files/2020.07.09_urban_green_building_emissions_law_summary_revised_11.17.2020.pdf [<https://perma.cc/6VW4-9UVW>].

¹³⁴ N.Y.C. MAYOR'S OFF. CLIMATE & ENV'T JUST., *supra* note 131.

¹³⁵ *One City Built to Last*, N.Y.C. MAYOR'S OFF. 1, 3 (2016), <https://www.nyc.gov/html/builttolast/assets/downloads/pdf/OneCity.pdf> [<https://perma.cc/SXG9-C28R>]; *see also* URBAN GREEN COUNCIL, *supra* note 133.

¹³⁶ MELANIE LAROSA, COMMUNITIES AND THE CLEAN ENERGY REVOLUTION: PUBLIC HEALTH, ECONOMICS, DESIGN, AND TRANSFORMATION 51–52 (2022).

¹³⁷ Rebecca Bratspies, *Public Problems and Private Landowners: Lessons from New York City's Groundbreaking Climate Mobilization Act*, 15 GEO. WASH. J. ENERGY & ENV'T L. 83, 89 (2024) (quoting Local Law 97's primary architect, City Councilmember Costa Constantinides).

¹³⁸ N.Y.C., N.Y., LOCAL LAW 84 (2009); N.Y.C., N.Y., LOCAL LAW 133 (2016).

data, is publicly released every year for buildings over 25,000 square feet—the same buildings that are covered by Local Law 97.¹³⁹ Indeed, another local law requires all covered buildings to prominently display a placard reporting the building’s energy efficiency grade ranging from A–F.¹⁴⁰

Local Law 97 is already working better and faster than expected.¹⁴¹ As of January 1, 2024, the overwhelming majority of buildings covered by Local Law 97 (more than ninety percent) had brought their carbon emissions into compliance with Local Law 97’s 2024 standards¹⁴²—a level of compliance exceeding even the most optimistic predictions. Buildings are complying more quickly, in part because there is so much low-hanging fruit in terms of energy efficiency for old buildings. Meeting the next deadline in 2030, which has significantly lower emissions targets, will be more difficult. For this reason, the law imposes a significant penalty (\$268 per excess ton of carbon emitted) to ensure that buildings have the incentive to comply.¹⁴³

By 2030, this law is projected to reduce New York City’s carbon emissions by six million tons. For perspective, achieving Local Law 97’s 2030 targets will be a carbon emissions reduction equivalent to all of San Francisco’s emissions,¹⁴⁴ while simultaneously creating 26,700 green jobs.¹⁴⁵ Moreover, by reducing overall energy demands, and promoting the development of green energy to replace fossil-fuel use, Local Law 97 will reduce pollution in the overburdened communities in which the existing fossil fuel energy generating facilities are concentrated.¹⁴⁶ By reducing emissions of the harmful co-pollutants emitted alongside carbon dioxide, Local Law 97 will protect New Yorkers from pollution-related health impacts, preventing up to

¹³⁹ N.Y.C. MAYOR’S OFF. CLIMATE & ENV’T JUST., *NYC Energy & Water Performance Map*, <https://energy.cusp.nyu.edu/#/> [<https://perma.cc/9WLS-R7FS>] (providing an interactive map to make this data more readily available and understandable).

¹⁴⁰ N.Y.C., N.Y., LOCAL LAW 33 (2018); N.Y.C., N.Y., LOCAL LAW 95 (2019).

¹⁴¹ Stephen Lee, *NYC Buildings Complying With Emissions Law Faster Than Expected*, BLOOMBERG L. (Aug. 16, 2023, 4:30 AM), <https://news.bloomberglaw.com/environment-and-energy/nyc-buildings-complying-with-emissions-law-faster-than-expected> [<https://perma.cc/B8NS-E3ME>].

¹⁴² Jennifer A. Kingson, *New York Jump-Starts the “Building Decarbonization” Trend*, AXIOS (Jan. 9, 2024), <https://www.axios.com/2024/01/09/building-decarbonization-local-law-97-new-york-climate-change> [<https://perma.cc/W9MH-C88A>] (reporting that ninety-one percent of covered buildings are in compliance with the 2024 standards).

¹⁴³ N.Y.C. ADMIN. CODE § 28-320.6.

¹⁴⁴ URBAN GREEN COUNCIL, *supra* note 132.

¹⁴⁵ N.Y.C. MAYOR’S OFF. CLIMATE & ENV’T JUST., *Local Law 97: Frequently Asked Questions*, https://be-exchange.org/wp-content/uploads/2024/01/beex_LL97_FAQ_FINAL.pdf [<https://perma.cc/2L5S-EMRC>].

¹⁴⁶ Rebecca Bratspies, *Shutting Down Poletti: Human Rights Lessons from Environmental Victories*, 36 WISC. INT’L L.J. 247, 249–50 (2019) (providing an example of one neighborhood, Astoria, that produces roughly sixty percent of the energy consumed in New York City); see *Dirty Energy, Big Money*, PEAK COALITION (May 2020), https://8f997cf9-39a0-4cd7-b8b8-65190bb2551b.filesusr.com/ugd/fl0969_9fa51ccc6111455bf88f95a92dba57ebd.pdf [<https://perma.cc/5PKF-DW6G>] (providing a detailed examination of this environmental justice issue).

one hundred thirty premature deaths and one hundred fifty hospital visits each year.¹⁴⁷

IV. CONCLUSION

There is no question that the United States is in the throes of multiple crises at once—environmental, climate, and social. The federal government is not only abandoning its commitment to civil rights, environmental justice, and environmental protection but is actively working to undermine existing programs, laws, and policies. If we are going to move forward at all, it will be because cities and states step up to protect their residents. The policy innovations described in this article can be models for other municipalities to try. Indeed, these examples can be used and improved upon—any place with the courage to innovate can become a climate leader. Therefore, I end this Article with a challenge to its readers—wherever you are, wherever you go, think about how your community can be part of the solution to climate change, to environmental injustice, to social injustice. We really can build a better world together, but first we need to believe that change is possible.

¹⁴⁷ N.Y.C. MAYOR'S OFF. CLIMATE & ENV'T JUST., *supra* note 145145.