Let's Talk Dirty: Revealing the United States Sanitation Crisis and Its Disproportionate Effect on Poor and Minority Communities

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LET’S TALK DIRTY: REVEALING THE UNITED STATES SANITATION CRISIS AND ITS DISPROPORTIONATE EFFECT ON POOR AND MINORITY COMMUNITIES

I. A DIRTY SECRET: AN INTRODUCTION TO THE SANITATION CRISIS IN THE UNITED STATES

The Black Belt region of the southern United States, which spans from Alabama to Mississippi, received its name because of its non-absorbent, dark, and clay-like soil. This soil, while ideal for growing cotton, is impenetrable and does not absorb water properly. Consequently, sewage and wastewater accumulate and create a hygienic nightmare for the region’s residents. In Alabama, for example, residents living outside of municipal sewer lines must install individual on-site sanitation systems such as septic tanks. On-site septic tanks are not conducive to the weather and soil conditions in the region, and they often malfunction. Climate change, in the form of intense rainfall, causes flooding, which pools wastewater across land surfaces and often into homes, causing entire towns to smell like sewage.

The Black Belt region, historically known for its pre-Civil War cotton plantations, bears remnants of its slave roots with persisting racial disparities. Most residents of the Black Belt region are African-American, and they face enhanced rates of poverty, unemploy-
ment, poor health, and infant mortality compared to white residents of the region. Lowndes County, Alabama, for instance, has a population of roughly ten thousand residents, of which seven thousand are Black. Many of the Black citizens are descendants of the slaves who once labored in this region. Today, white landowners own the best real estate in the area, whereas Black residents live in the less desirable parts of Lowndes County near “sewage lagoon[s].” Housing disparities stem from both wealth and race, and these inequalities bear harmful environmental and health consequences for poor, rural, and minority communities.

Lowndes County, Alabama is not a unique outlier. Over two million people across the United States lack access to sanitation ser-
services and clean water. The United States, even as one of the wealthiest countries in the world, does not provide universal access to clean water and sanitation. The Human Rights Council of the United Nations defines sanitation as “a system for the collection, transport, treatment and disposal or reuse of human excreta and associated hygiene.” In 2010, the United Nations recognized sanitation as a basic human right. Despite this public and international recognition, millions of Americans have little or no access to proper sanitation.

The gap in access to basic sanitation disproportionately affects poor, rural, and minority communities and perpetuates a cycle of poverty and racial inequality. The burden of obtaining costly sanitation and wastewater systems falls on those who are already marginalized and lack governmental support. Environmental racism is an all-too prevalent phenomenon in the United States. This type of racism forces African-Americans and other minorities into separate communities and creates far-reaching disparities in housing, education, health care, and many other aspects of life.

Environmental racism, a term Benjamin Chavis coined in 1982, refers to environmental policies and practices that systemically discriminate against people of color. Often termed the “New Jim

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14. Id. at 12 (analyzing data on access to clean water and sanitation in United States).

15. See Flushed and Forgotten, supra note 12, at 18 (noting misconception that United States provides universal access to basic sanitation).


17. See G.A. Res. 64/292, ¶ 1 (Aug. 3, 2010) (recognizing access to sanitation as basic human right).

18. See Flushed and Forgotten, supra note 12, at 18 (explaining adverse health effects from lack of access to sanitation).

19. See id. at 35 (analyzing racial disparities in sanitation access).

20. See id. at 6–7 (asserting burden of sanitation falls on marginalized communities).


22. See id. at 49–50 (discussing racism generally).

Crow, environmental racism results in impaired environmental quality and exposure to environmental harms such as pollution and disease in minority communities.24

This Comment seeks to bring attention to the role environmental racism plays in exacerbating the sanitation crisis in the United States for marginalized and minority groups.25 To illustrate the severity of the crisis poor and minority communities all across the United States face, this Comment uses Lowndes County, Alabama as a case study.26 Part II outlines the legal framework for sanitation law in the United States by pointing out gaps in regulation and funding of wastewater infrastructure.27 Parts III and IV conduct a case study of Lowndes County, Alabama to highlight environmental racism and its link to accessing adequate sanitation services.28 Part IV also discusses a recent Department of Justice investigation launched in Lowndes County to probe discriminatory sanitation policies in Alabama.29 Finally, Part V explores the disproportionate impact of the United States sanitation crisis on vulnerable populations and suggests potential solutions.30

II. LEGAL FRAMEWORK FOR SANITATION HAS ‘WASTED’ AWAY

There is no comprehensive legal framework in place to regulate sanitation and wastewater management in the United States.31 As a result, communities that the sanitation crisis has impacted lack the ability to hold federal bodies accountable, which allows the crisis to persist.32 Despite the importance of sanitation, few federal

24. See McCall, supra note 21, at 50 (describing adverse consequences of environmental racism for minority communities).
25. For a discussion of environmental racism, see supra notes 21–24.
26. See generally Flushed and Forgotten, supra note 12, at 18 (tracking sanitation crisis in Lowndes County, Alabama).
27. For a discussion on the importance of sanitation and existing regulations, see infra notes 31–65 and accompanying text.
28. For an in-depth case study on the sanitation crisis in Lowndes County, see infra notes 82–98, 116-63 and accompanying text.
29. For a discussion of the Department of Justice investigation against Alabama state and local health departments, see infra notes 155–63 and accompanying text.
30. For a discussion of the future of the sanitation crisis, see infra notes 164–98 and accompanying text.
31. See Flushed and Forgotten, supra note 12, at 14 (describing spotty sanitation laws in United States). Two federal laws, the Safe Drinking Water Act (SDWA) and the Clean Water Act (CWA), provide “minimum standards” for areas across the nation to follow in regulating water quality; otherwise, the current legal framework to regulate sanitation is relatively haphazard. Id. (noting current laws in existence regulating water quality).
32. See id. (exploring effects of lack of federal sanitation regulation).
laws directly regulate it.\textsuperscript{33} Sanitation is a nationwide concern, yet its governance remains decentralized.\textsuperscript{34} Federal laws merely set minimum sanitation standards focused on preventing environmental damage and pollution, but those laws complicate the crisis by failing to consider what constitutes adequate, accessible, or affordable sanitation.\textsuperscript{35}

A. In Deep Water: Improvement of Sanitation Becomes More Important Than Ever

The lack of adequate wastewater infrastructure in certain parts of the United States lies at the center of the sanitation crisis.\textsuperscript{36} Wastewater infrastructure and access to basic sanitation are critical to public health and the environment.\textsuperscript{37} Wastewater infrastructure refers to a network of sewer pipes that collect and carry wastewater from households or other buildings to treatment systems.\textsuperscript{38} Wastewater management can occur on-site, with treatment occurring in individual homes, or through centralized systems, meaning a municipality handles wastewater management through a municipal treatment system.\textsuperscript{39}

Residents of areas without centralized systems rely upon on-site septic systems in their individual homes.\textsuperscript{40} On-site wastewater systems are burdensome and expensive, costing up to tens of thousands of dollars.\textsuperscript{41} Poor and rural communities most in need

\textsuperscript{33.} See id. (explaining two main federal laws addressing sanitation).
\textsuperscript{34.} See id. at 12 (observing lack of federal standards despite complexity of sanitation). Generally, state and local law drive the sanitation legal framework across the country. See id. (noting importance of state and local law regarding regulation of sanitation).
\textsuperscript{35.} See id. (describing lack of uniformity in sanitation regulation).
\textsuperscript{36.} See DigDeep & U.S. Water Alliance Report, supra note 1, at 24 (describing lack of proper infrastructure as one of several historical causes of sanitation crisis); see generically UN World Water Development Report, UNESCO (2020), https://unesdoc.unesco.org/ark:/48223/pf0000372985.locale=EN (noting underfunding of water infrastructure globally despite importance).
\textsuperscript{37.} See Flushed and Forgotten, supra note 12, at 17-18 (emphasizing importance of sanitation services for public health).
\textsuperscript{39.} See id. at 153 (explaining variations of sanitation management systems).
\textsuperscript{40.} See id. (noting method of wastewater management for individual households).
\textsuperscript{41.} See id. at 153-54 (pointing out financial difficulty for individuals responsible for on-site sanitation); see also DigDeep & U.S. Water Alliance Report, supra note 1, at 50 (finding septic system can cost up to thirty-thousand dollars).
of these costly sanitation systems often cannot afford them. As such, wastewater infrastructure is largely inadequate or nonexistent in many communities across the United States. Without access to basic sanitation services, many Americans live in areas with improper disposal of wastewater, leading to backups of sewage in and around their homes. Contamination from wastewater causes environmental degradation, leading to health hazards such as the emergence of bacterial infections and tropical diseases like hookworm.

B. Watered Down Federal Laws

The federal government addresses sanitation through laws protecting clean water. Two primary federal laws exist that regulate clean water: the Safe Drinking Water Act (SDWA) and the Clean Water Act (CWA). First, the SDWA regulates water quality in public water systems, but only touches upon sanitation. Second, the CWA focuses on discharge of pollutants in waterways. Although it does not directly regulate sanitation, the CWA created a revolving fund for grants and loans to help communities build and maintain water management systems, including wastewater management systems. These grants stem from federal law, but they go directly to states. Beginning in the 1970s, federal grants to improve wastewater systems became widely available, but over the last three decades, Congress has cut funding significantly and shifted toward

42. See Flushed and Forgotten, supra note 12, at 6–7 (concluding burden of sanitation often falls on those unable to afford cost); see also DigDeep & U.S. Water Alliance Report, supra note 1, at 25 (discussing difficulties low-income residents face in installing septic systems).

43. See Flushed and Forgotten, supra note 12, at 6 (observing lack of proper wastewater infrastructure nationwide).

44. See id. (analyzing negative impact of improper wastewater management).

45. See id. at 6, 30 (observing reemergence of diseases many have thought were eradicated across the country); see also Dave Davies, ‘Waste’ Activist Digs Into The Sanitation Crisis Affecting The Rural Poor, NPR (Nov. 23, 2020, 2:16 PM), https://www.npr.org/sections/health-shots/2020/11/23/937945160/waste-activist-digs-into-the-sanitation-crisis-affecting-the-rural-poor (pointing to 2017 study in Alabama revealing parasitic diseases in rural communities).

46. For a discussion of federal sanitation regulation, see infra notes 47–54 and accompanying text.

47. For a discussion of sanitation addressed in the Safe Drinking Water Act and the Clean Water Act, see infra notes 48–50 and accompanying text.


50. See id. at §§ 1381-1389 (describing funding Clean Water Act provides).

51. See id. (creating State Revolving Funds); see also Flushed and Forgotten, supra note 12, at 15 (explaining control and distribution of federal funds).
offering loans through the U.S. Department of Agriculture (USDA) and State Revolving Funds through the Environmental Protection Agency (EPA). Without sufficient federal funding, improvement of sanitation infrastructure falls on state and local governments. Poor and rural communities most often bear the heaviest burden because they generally have difficulty generating sufficient capital to invest in infrastructure.

C. State and Local Laws Muddy the Water

State and local municipal laws primarily govern sanitation. These laws must comply with minimum standards federal law sets forth, but can bolster federal regulations. Notably, state and local laws lack consistency and clarity. For instance, many state laws designed to regulate municipal sanitation systems do not address on-site sanitation extensively. Although the majority of United States wastewater treatment occurs through centralized systems, about twenty percent of American citizens rely upon on-site systems such as septic tanks. Unclear laws split between multiple state agencies create difficulty and confusion for homeowners who rely on on-site sanitation. Residents in unincorporated areas receive even less guidance because these areas tend to lack municipal organization and oversight. For instance, in unincorporated areas, municipal authorities make decisions at the county level, and coun-

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52. See DigDeep & U.S. Water Alliance Report, supra note 1, at 25 (pointing out that Congress prioritized other types of funding instead of grants for wastewater management since 1980s).
53. See id. (noting decline in federal funding by nearly fifty percent since 1970s).
54. See Flushed and Forgotten, supra note 12, at 15 (pointing out uneven access to funding nationwide).
55. See id. at 12 (explaining state, local, and tribal agencies mainly govern sanitation).
56. See id. at 14 (describing intersection between state and federal sanitation laws); see also 33 U.S.C. § 1313 (allowing states to enact more stringent water quality regulations).
57. See Flushed and Forgotten, supra note 12, at 14 (referring to state, local, and tribal laws as "patchwork").
58. See id. (noting shortcomings of state sanitation regulations).
59. See Am. Soc’y of Civ. Eng’rs, supra note 38, at 153 (providing statistical data on sanitation systems across United States).
60. See Flushed and Forgotten, supra note 12, at 14 (pointing out lack of clarity and accountability for sanitation law).
61. See id. at 15 (reporting sanitation difficulties for rural and unincorporated communities).
ties often fail to ensure adequate sanitation for a variety of reasons, including lack of funding or lack of political representation.62

When public centralized systems exist in an area, residents must use that system.63 If centralized systems do not exist, individual homeowners must comply with local ordinances and are subject to permits, inspections, and fees.64 Failing to comply can lead to fines and even misdemeanor charges, which carry civil or even criminal penalties in some jurisdictions.65

D. Infrastructure and Sanitation Funding Go Down the Toilet

Each year, the American Society of Civil Engineers grades national infrastructure in the United States; in 2021, the United States received a grade of D+ for its wastewater infrastructure, indicating there are highly vulnerable and decaying sanitation systems across the United States.66 Existing centralized sanitation systems in cities and municipalities throughout the United States are often faulty due to their age.67 Availability of funding often determines adequacy of infrastructure, and as infrastructure in the United States ages, the need for sanitation funding has become acute.68 The majority of centralized wastewater management systems have lifespans of forty to fifty years while individualized on-site systems last only twenty to thirty years.69 Aging infrastructure indicates a critical need for new and improved systems.70 Sparse and unpredictable federal funding, however, makes investment in improved infrastructure a nearly impossible feat.71 States and individuals must shoul-

62. See id. (explaining reasons unincorporated communities lack access to sanitation).
63. See id. at 14-16 (exploring difference between centralized and on-site wastewater management).
64. Id. at 14-15 (discussing state oversight of sanitation).
65. See Flushed and Forgotten, supra note 12, at 15 (describing criminalization of sanitation); see also Ala. Code § 22-26-6 (2017) (enumerating potential fines Alabama state law imposes on violators).
66. See AM. SOC’Y OF CIV. ENGINEERS, supra note 38, at 151 (giving United States low grade due to poor national infrastructure).
67. See Flushed and Forgotten, supra note 12, at 6 (observing “failing and inadequate” infrastructure in many areas of United States).
68. For a discussion on poor and failing sanitation infrastructure in the United States, see infra notes 66–67, supra notes 69-72 and accompanying text.
69. See AM. SOC’Y OF CIV. ENG’RS, supra note 38, at 155 (explaining correlation between inadequate funding and poor wastewater infrastructure).
70. See generally id. (proposing need for improved wastewater infrastructure).
71. For a discussion of allocation of federal funds for sanitation infrastructure, see infra notes 73-81 and accompanying text.
der the costs, which contributes to the problem of inadequate wastewater structures nationwide.\textsuperscript{72}

Sufficiency of funding and resources often determines whether a system complies with sanitation regulations.\textsuperscript{73} The EPA’s Clean Water State Revolving Fund (State Revolving Fund) provides the largest source of sanitation funding in the United States.\textsuperscript{74} Though the federal government provides funding, states determine how to allocate the funds.\textsuperscript{75} States typically direct funds to municipalities and other public entities, disadvantaging other local and private parties.\textsuperscript{76} This poses a particular challenge for individual households requiring on-site sanitation systems, many of which are located in rural, poor, and minority communities.\textsuperscript{77} Lack of funding for these communities places the burden of financing sanitation on marginalized people.\textsuperscript{78} Though federal funding for individual households exists, burdensome prerequisites and credit approval requirements often make federal funding inaccessible.\textsuperscript{79} Additionally, many individuals do not know how to request access to these funds.\textsuperscript{80} As a result, federal and state sanitation funding remains out of reach for ordinary citizens.\textsuperscript{81}

\textsuperscript{72} For a discussion of states’ use of federal sanitation funds, see infra notes 75–80 and accompanying text.

\textsuperscript{73} For a discussion on allocation of funds for wastewater infrastructure, see infra notes 75–79 and accompanying text.

\textsuperscript{74} See Flushed and Forgotten, supra note 12, at 15 (tracking sources of federal funding for sanitation). Through the State Revolving Fund, the EPA provides funds to states through loan programs for water infrastructure. See Learn about the Clean Water State Revolving Fund (CWSRF), ENV’T PROT. AGENCY, https://www.epa.gov/cwsrf/learn-about-clean-water-state-revolving-fund-cwsrf (last visited Nov. 9, 2022) (describing how State Revolving Fund works). Upon receiving federal loan funds, states can tailor the assistance to the specific environmental needs of their communities. Id. (explaining how states may allocate funds).

\textsuperscript{75} See Flushed and Forgotten, supra note 12, at 15 (noting funding flows through states to local entities).

\textsuperscript{76} See id. (referring to federal funds as “earmarked” for particular public and municipal institutions).

\textsuperscript{77} See id. at 16 (describing funding challenges for individuals).

\textsuperscript{78} See id. (exploring disparities in access to sanitation).

\textsuperscript{79} See id. (observing burdensome requirements to receive federal sanitation funds).

\textsuperscript{80} See Inga T. Winkler & Catherine Coleman Flowers, America’s Dirty Secret: The Human Right to Sanitation in Alabama’s Black Belt, 49 COLUM. HUM. RTS. L. REV. 181, 185 (Fall 2017) (noting how society often pays much attention to water access rather than sanitation, which may contribute to related funding issues); see also Cook Wedgworth & Brown, supra note 8, at 6 (conducting survey that revealed many Lowndes County residents did not know about availability of funding).

\textsuperscript{81} For a discussion of inaccessibility of sanitation funds, see supra notes 73-80 and accompanying text.
III. UNCLEAN HANDS: CRIMINALIZATION OF SANITATION AND DISPARITIES IN LOWNDES COUNTY, ALABAMA REFLECT BROADER PATTERNS OF ENVIRONMENTAL DISCRIMINATION

Lowndes County, Alabama exemplifies the widespread nature of the United States sanitation crisis occurring at local levels. In Alabama, state and local authorities determine and oversee the types of sanitation systems residents can use, but those authorities do not provide funding for these systems. The financial burden of wastewater management, therefore, falls on individual homeowners, who face threats of criminalization if they cannot afford costly systems.

A. Urine Charge: Burden of Waste Management Falls on Marginalized Populations

The Alabama State Board of Health promulgates regulations for on-site sanitation and waste disposal. These regulations include requiring property owners to obtain permits before installing on-site septic tanks, limiting the types of properties allowing septic tanks, and setting technical and design specifications for septic tanks. In Alabama, not having a proper septic system constitutes a criminal misdemeanor.

Because septic tanks are expensive, often costing upwards of thirty thousand dollars, many people resort to less sanitary alternative methods of managing wastewater that violate public health codes. Straight-piping is a common technique people utilize in Lowndes County in which people construct makeshift pipes to re-
move wastewater from their homes directly into their yards.\textsuperscript{89} Straight-piping poses health risks due to the contamination it produces; instead of transporting wastewater to a treatment location, straight-piping merely disposes of the wastewater in homeowners’ yards, leaving raw sewage to accumulate at the end of these pipes.\textsuperscript{90}

Homeowners who cannot afford costly septic tanks often face criminal penalties after turning to illegal methods like straight-piping.\textsuperscript{91} Consequences of violating local sanitation codes can include fines, arrests, or evictions.\textsuperscript{92} In \textit{Peak v. City of Tuscaloosa},\textsuperscript{93} for instance, Benson Peak, a property owner possessing property in the drainage basin of a lake, received fines and a conviction for failing to register a septic tank in accordance with the municipal code.\textsuperscript{94} Peak challenged the municipality’s authority to enact an ordinance to protect its municipal water supply.\textsuperscript{95} The court justified criminal sanctions and upheld the municipality’s authority to adopt ordinances to control sanitation based on the state’s police powers to preserve public health.\textsuperscript{96}

Alabama’s regulatory framework ignores residents’ needs and essentially perpetuates racial inequalities and a cycle of poverty.\textsuperscript{97} The legal ramifications for lack of access to adequate sanitation go

\begin{enumerate}
\item \textsuperscript{89} See DigDeep \& U.S. Water Alliance Report, supra note 1, at 50 (describing illegal method of managing waste on-site).
\item \textsuperscript{90} See Flushed and Forgotten, supra note 12, at 13 (discussing harmful effects of straight-piping).
\item \textsuperscript{91} Consequences of violating local sanitation codes can include fines, arrests, or evictions.
\item \textsuperscript{92} See id. at 15 (explaining range of consequences for noncompliance with sanitation codes).
\item \textsuperscript{93} 73 So. 3d 5, 23-24 (Ala. Crim. App. 2011) (holding city could require homeowner to register septic system).
\item \textsuperscript{94} Id. at 8 (noting penalties individual property owner faced for failing to register septic system).
\item \textsuperscript{95} See id. at 10 (exploring plaintiff’s challenge to municipal sanitation law).
\item \textsuperscript{96} See id. at 11-12 (stating authority to regulate sanitation derives from state police powers); see also Ala. Code § 11–47–130 (1975) (authorizing Alabama cities and towns to adopt necessary regulations to ensure sanitary conditions within “police jurisdiction”); see also Congo v. State, 409 So.2d 475, 477–78 (Ala. Crim. App. 1981) (explaining municipalities have authority to enact ordinance pursuant to police powers).
\item \textsuperscript{97} See Flushed and Forgotten, supra note 12, at 28 (pointing out flaws in Alabama’s legal structure).
\end{enumerate}
beyond Lowndes County, Alabama and reflect broader patterns of environmental inequality throughout the United States. There is a correlation between race and access to sanitation, as environmental studies and legal challenges to discriminatory practices in wastewater and municipal services demonstrate.

B. Causing a Stink: Civil Rights Challenges to Discriminatory Sanitation Policies

Plaintiffs have raised Fourteenth Amendment challenges over the last several decades, claiming abridgment of their civil rights in violation of the Equal Protection Clause of the U.S. Constitution. Beyond Lowndes County, three cases from different district courts across the country represent potential remedies for plaintiffs experiencing environmental racism because of sanitation-related issues. In *Johnson v. City of Arcadia*, the District Court for the Middle District of Florida established a test to determine whether a prima facie case of discrimination exists in the context of access to municipal services. This court required three elements for a plaintiff to prove racial discrimination: “(1) existence of racially identifiable neighborhoods in the municipality; (2) substantial inferiority in the quality or quantity of the municipal services and facilities provided in the neighborhood; and, (3) proof of intent or motive.”

The Eleventh Circuit in *Dowdell v. City of Apopka* also explored the concept of discriminatory intent in barring access to mun-

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98. See Winkler & Coleman Flowers, *supra* note 80, at 183 (acknowledging unique aspects of Lowndes County situation but also far-reaching pattern of inequalities across United States).
99. See id. at 195 (noting study demonstrating manifestation of environmental racism in access to sanitation services).
100. See id. at 195 (describing domestic plaintiffs have brought claims under 42 U.S.C. § 1983); see also 42 U.S.C. § 1983 (providing legal remedy for individuals experiencing deprivation of civil rights, which U.S. Constitution protects, to sue government).
101. For a discussion of three different challenges to discriminatory sanitation practices, see *infra* notes 100-15 and accompanying text.
102. 450 F. Supp. 1363, 1380 (M.D. Fla. 1978) (holding inequality in access to municipal services resulted from systematic racism and amounted to violation of plaintiffs’ constitutional rights).
103. See id. at 1379 (introducing factors to prove intentional discrimination).
104. Id. (outlining test for showing prima facie case of discrimination).
105. 698 F.2d 1181, 1186 (11th Cir. 1983) (upholding district court’s finding of discriminatory intent in city’s provision of municipal services to Black residents).
municipal services, including sanitation services. The Eleventh Circuit upheld the judgment of the District Court for the Middle District of Florida, which considered three important factors: first, the district court considered the magnitude of the disparity in expenditures for municipal services in predominantly Black communities versus white communities. Second, the court analyzed the deliberate patterns of discrimination in legislative and administrative decision-making. Finally, the court examined the continuous and systematic deprivation of the Black community in Apopka. The court held that the city engaged in patterns of systematic discrimination through the city’s ordinances and lack of support for Black communities, and the court ordered the city to prioritize and improve access to infrastructure and services in areas with predominantly African-American populations.

More recently, in Kennedy v. City of Zanesville, the District Court for the Southern District of Ohio found intentional discrimination present in Coal Run, the only predominantly African-American community in Muskingum County, Ohio. The court found the Black residents of this county disproportionately lacked access to clean water and municipal services compared to their white counterparts in other communities because of the residents’ race. Coal Run residents received a $10.8 million settlement, and the community now has better access to clean water. These cases demonstrate the range of legal remedies the Fourteenth Amendment offers to address the sanitation crisis in the United

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106. See id. 1184–85 (discussing magnitude of disparity and evidence of action and inaction as important factors showing discriminatory intent).
108. See id. (describing historical neglect of Black community’s needs).
109. See id. (listing factors tending to demonstrate discriminatory intent).
110. See id. at 1185-86 (detailing remedy afforded to subjects of discrimination).
111. 505 F. Supp. 2d 456, 498 (S.D. Ohio 2007) (holding residents of Zanesville raised genuine issue of material fact as to county’s discriminatory practices).
112. See id. at 464 (explaining racial discrimination in provision of municipal services).
114. See Colfax, supra note 113 (discussing result of Zanesville legal challenge).
States and to advocate for reallocation of municipal services to benefit minority communities.115

IV. LOWNDES COUNTY RESIDENTS TRY TO KEEP THEIR HEADS ABOVE THE WATER

Lowndes County, Alabama illustrates racial and economic disparities blocking access to adequate sanitation.116 This case study of Lowndes County demonstrates the acute need for universal access to sanitation.117 The sanitation crisis in Lowndes County not only perpetuates environmental harm, but also poses serious health risks to the public.118 Recently, various institutions have attempted to address the concerns of Lowndes County residents through a Department of Justice (DOJ) Investigation of the Alabama Department of Health and the Lowndes County Health Department to determine whether intentional racial discrimination exists.119 Beyond this investigation, addressing the sanitation crisis on a national level requires much more action.120

A. Intersection of Race & Poverty

Lowndes County, Alabama is one of the poorest counties in the United States.121 Lowndes County’s population of approximately 10,300 people consists predominantly of rural, low-income, and Black communities.122 Over thirty percent of Lowndes County re-

115. For a discussion of challenges to environmental racism and lack of access to basic municipal resources, see supra notes 89–99 and accompanying text.
116. For a discussion of disproportionate access to basic sanitation in Lowndes County, see infra notes 117-163 and accompanying text.
117. For a case study of the sanitation crisis in the Black Belt region of the United States, see infra notes 118-63 and accompanying text.
118. For a discussion of the public health crisis in Lowndes County, see infra notes 139-54 and accompanying text.
119. For a discussion of the pending Department of Justice investigation into Alabama state and local public health departments, see infra notes 155-163 and accompanying text.
120. For a discussion of potential solutions to address the sanitation crisis on a national scale, see infra notes 164-204 and accompanying text.
121. See Okeowo, supra note 2 (explaining socioeconomic conditions in Lowndes County). Philip Alston, the UN’s Special Rapporteur on extreme poverty and human rights, visited Butler and Lowndes Counties, both within the Black Belt Region, and remarked that Alabama’s Black Belt is experiencing the most severe wastewater crisis out of any developed country Alston has visited. Connor Sheets, UN Poverty Official Touring Alabama’s Black Belt: ‘I Haven’t Seen This’ in the First World, ADVANCE LOCAL (Dec. 8, 2017, 6:12 PM), https://www.al.com/news/2017/12/un_poverty_official_touring_al.html (noting extreme poverty and exposed sewage in Black Belt communities).
sidents living below the poverty line are Black, compared to white residents, who comprise three percent of the impoverished population in the county.123

Intersectionality between race and poverty accounts for disparities in access to sanitation.124 Further, racial segregation creates concentrated poverty among minority groups.125 Residential segregation is especially prevalent in Lowndes County, Alabama, where wealth is commonly tied to land.126 Segregation from Alabama’s history of slavery continues to linger in Lowndes County, particularly because much of the land has not transferred hands to Black landowners.127 White residents in the county possess the most desirable real estate, whereas Black residents tend to live in poorer communities, which contributes to the persistence of poverty across racial lines.128

The dual nature of disparities — both racial and economic — for minority communities contextualizes the barriers these communities face in access to sanitation and demonstrates that environmental racism is indeed at play.129 Lack of financial resources and discriminatory policies bar minority communities from accessing sanitation services.130 Moreover, the impenetrable soil conditions in Lowndes County require a more expensive type of on-site waste management system, costing upwards of approximately $30,000, that can avoid wastewater percolating on the soil’s surface.131 The median income of Lowndes County households is roughly $30,000, with 21.9 percent of the population living in poverty.132 Given the

(outlining most recent census data from past two years); see also Flushed and Forgotten, supra note 12, at 26 (discussing composition of Lowndes County residents).

123. See Flushed and Forgotten, supra note 12, at 26 (analyzing economic composition of Lowndes county residents).

124. For a discussion on intersectionality and its link to accessing proper sanitation, see supra notes 121-23 and accompanying text.


126. See Okeowo, supra note 2 (describing housing segregation in Lowndes County).

127. See id. (discussing connection between race and housing).

128. See id. (noting effect of housing segregation on minorities).

129. For a discussion of racial and economic disparities in access to sanitation, see supra notes 78-99 and accompanying text.

130. See Flushed and Forgotten, supra note 12, at 25-26 (noting economic vulnerability and lack of political representation for minority communities).

131. See Davies, supra note 45 (interviewing Catherine Coleman Flowers advocating for Lowndes County residents); see also DigDeep & U.S. Water Alliance Report, supra note 1, at 50 (noting financial burden of installing on-site sanitation system).

132. See U.S. Census Bureau, supra note 122 (providing demographic and economic statistics for Lowndes County).
median income and poverty rates in the county, the need for a more expensive wastewater system places a greater burden on those low-income households.\textsuperscript{133} Additionally, local laws criminalizing inadequate sanitation place another financial burden on low-income and minority residents, as the average citizen cannot afford both costly sanitation systems and criminal fines.\textsuperscript{134} Alabama regulations perpetuate unfair sanitation practices by allowing only certain types of sanitation systems in individual homes and holding low-income homeowners responsible for household wastewater disposal.\textsuperscript{135} Despite maintaining these limitations and responsibilities, the state does not provide financial resources to help those who cannot afford septic systems.\textsuperscript{136} Low-income individuals who cannot afford these systems then receive criminal penalties and face both fines and a criminal record, possibly causing them to lose their jobs.\textsuperscript{137} These individuals have difficulty escaping the cycle of poverty and associated social stigmas if sanitation remains criminalized, and they do not have the means to provide for themselves.\textsuperscript{138}

B. Stop and Smell the Sewage: Public Health Crisis and Environmental Catastrophe Persist in Lowndes County

Another issue causing low-income and minority residents to experience environmental racism stems from inadequate infrastructure of sewage systems.\textsuperscript{139} Specifically, both septic tanks and overburdened pipes often cause wastewater to back up in homeowners’ yards and even inside their homes.\textsuperscript{140} In an area like Lowndes County, with dense soil unable to absorb water and a high

\begin{itemize}
\item \textsuperscript{133} For a discussion of how the Lowndes County poverty rate poses an issue to acquiring expensive wastewater systems, see \textit{supra} notes 121-33 and accompanying text.
\item \textsuperscript{134} See Winkler & Coleman Flowers, \textit{supra} note 80, at 191 (discussing difficulties in complying with local sanitation laws).
\item \textsuperscript{135} See \textit{id.} (noting wastewater management unfairly burdens marginalized persons).
\item \textsuperscript{136} See \textit{id.} (describing financial burdens of wastewater management).
\item \textsuperscript{137} See \textit{id.} at 192 (identifying long-term effects resulting from criminalization of sanitation).
\item \textsuperscript{138} For a discussion of the sanitation crisis’s role in perpetuating a cycle of poverty and racial inequality, see \textit{supra} notes 129–37 and accompanying text.
\item \textsuperscript{139} For a discussion of wastewater infrastructure issues in the United States, see \textit{supra} notes 66-81 and accompanying text.
\end{itemize}
water table that causes water and waste to rise above the ground, wastewater pools on the surface of the ground.\textsuperscript{141} Exposure to contamination from this raw sewage has led to rampant cases of parasitic diseases in the rural south such as hookworm.\textsuperscript{142} Like many parasites, hookworm enters and travels throughout one’s body once it is in contact with skin, typically when that person’s bare feet touch the parasite; once this has occurred, hookworm can produce harmful effects such as anemia, extreme tiredness, and reduced mental function.\textsuperscript{143} A 2017 study revealed that about one in three residents of Lowndes County tested positive for hookworm infection.\textsuperscript{144} This type of infection is not typically tested for in the United States, primarily because it is very uncommon and more often found in poorer countries.\textsuperscript{145} Despite living in one of the wealthiest countries in the world, many Lowndes County residents experience a standard of living typically seen in underdeveloped countries, particularly because of the high rate of diseases like hookworm.\textsuperscript{146} As previously mentioned, the people living in Lowndes County under these conditions are mostly Black; these high rates of environmentally-driven disease further demonstrate environmental racism is at play in this community.\textsuperscript{147}

Along with the environmental racism issues, grappling with rampant disease further perpetuates a cycle of poverty because poor communities lacking basic sanitation are not financially

\textsuperscript{141} See Davies, supra note 45 (discussing environmental conditions of Lowndes County with activist Catherine Coleman Flowers). The water table is the underground layer between the soil surface and the area where groundwater enters and “saturates spaces between sediments and cracks in rock.” See Water Table, NAT’L GEOGRAPHIC SOC. RES. LIB., https://www.nationalgeographic.org/encyclopedia/water-table/ (last updated May 20, 2022) (giving in-depth definition of water table). Groundwater located under the water table comes from precipitation that penetrates and seeps into surface soil. Id. (describing source of water contributing to water table). Water table levels can vary depending on changes in precipitation and human extraction or discharge of water; having a high water table means that an excessive amount of water exists below the surface of the ground. Id. (exploring various levels of water tables).

\textsuperscript{142} See Pilkington, supra note 140 (describing rise in unusual parasitic diseases).

\textsuperscript{143} See id. (explaining harmful effects of hookworm).

\textsuperscript{144} See id. (describing study from National School of Tropical Medicine at Baylor College of Medicine with Alabama Center for Rural Enterprise (ACRE)). Hookworm is an intestinal parasite thought to be eradicated in the United States many years ago. See id. (defining hookworm infection).

\textsuperscript{145} See Davies, supra note 45 (shedding light on emergence of bacterial infections stemming from inadequate sanitation).

\textsuperscript{146} See id. (exploring harmful effects of hookworm).

\textsuperscript{147} For a discussion on defining environmental racism, see supra notes 21–24 and accompanying text.
equipped to deal with such illnesses.\footnote{148} State and local public health departments have largely ignored and denied the adverse health effects of the sanitation crisis.\footnote{149} Marginalized communities also lack the political representation in state and local government to mobilize effectively.\footnote{150} Health officials, therefore, need to intervene, acknowledge the disparate impact of these infectious diseases on marginalized communities, and, ultimately, take responsibility for this crisis.\footnote{151}

In addition to wreaking havoc on public health and economic stability, the sanitation crisis plagues individuals in poor communities with environmental degradation that the accumulation of waste and sewage on the ground’s surface causes.\footnote{152} Climate change further exacerbates wastewater issues in communities that lack proper sanitation to manage wastewater.\footnote{153} The sanitation infrastructure is unable to adapt to climate change conditions, such as flooding and higher temperatures, which makes the sanitation crisis more pressing than ever.\footnote{154}

C. Department of Justice Investigation Seeks to Clean Up the Mess

As of November of 2021, the DOJ has opened an investigation into the Alabama Department of Health and the Lowndes County Health Department to determine whether state and local governments have discriminated against minority communities.\footnote{155} Partic-
ularly, the DOJ will investigate whether these parties have violated Title VI of the Civil Rights Act of 1964 by discriminating against minority communities in their efforts — or, lack of efforts — in providing access to safe and adequate sanitation systems. Title VI of the Civil Rights Act prohibits discrimination on the basis of race, color, or nationality in programs receiving federal assistance. The DOJ’s investigation aims to closely examine wastewater disposal and residents’ exposure to infectious diseases to determine whether Black residents disproportionately face the health risks associated with inadequate wastewater treatment.

Assistant Attorney General for the DOJ Civil Rights Division, Kristen Clarke, describes sanitation as a “basic human need” and points out state and local health officials’ obligations under both state and federal law to protect public health and the safety of their residents. This environmental initiative is historic, as it is the first time the DOJ has launched an environmentally-focused Title VI investigation into an institution who receives funding from the DOJ. Accordingly, this investigation marks an important shift in the DOJ’s priorities. The DOJ explicitly stated that addressing environmental discrimination is a “top priority” of the Civil Rights Division. The outcome of this investigation and the resulting reforms that the Lowndes County Health Department could potentially implement can serve as an example to the rest of the United States, providing a model remedy for disadvantaged communities to challenge discriminatory sanitation policies and sparking further litigation.

156. See id. (detailing DOJ investigation and potential consequences).
158. See DOJ Press Release, supra note 155 (announcing Title VI investigation).
159. Id. (analyzing goals of DOJ investigation).
161. See id. (discussing DOJ priorities).
162. See DOJ Press Release, supra note 155 (describing goals of investigating discrimination).
163. For a discussion on the DOJ investigation into Alabama health departments for Title VI violations, see supra notes 155-162 and accompanying text.
V. THE FUTURE IS . . . FILTHY? FINDING A SOLUTION TO THE U.S. SANITATION CRISIS

Lowndes County’s sanitation struggles are neither unique nor isolated. Sanitation inadequacy is a nationwide crisis across the United States and, therefore, requires a national solution with the federal government leading the effort to solve the problem. First, officials need adequate data to accurately identify the scope of the disparities in sanitation access. Additionally, beyond mere acknowledgment of sanitation as a basic human right, legal action is necessary. Finally, the sanitation crisis requires environmental action to mitigate the adverse environmental impacts on communities lacking access to sanitation.

A. Soiled Data Needs Improvement

In order to address the sanitation crisis and minimize its racially discriminatory impact, the United States first needs to implement procedures to acquire reliable data on different communities’ access to sanitation. Currently, federal data on sanitation access is inconsistent and unrepresentative of the various populations living in the United States and, thus, does not paint a full picture of the crisis. Although some individual state data is available, the federal government has not collected comprehensive data on national sanitation for years. Up until 1990, the U.S. Census Bureau collected data on household wastewater and sanitation. Since then, however, the Census Bureau has removed questions about access to sanitation. Today, the U.S. Census Bureau collected data on household wastewater and sanitation.

Bibliography:

164. See DigDeep & U.S. Water Alliance Report, supra note 1, at 8 (acknowledging two million people in United States lack access to adequate sanitation).
165. Id. (discussing nationwide scope of sanitation crisis).
166. For a discussion on inadequate data on sanitation in the United States, see infra notes 169-77 and accompanying text.
167. See generally G.A. Res. 64/292, ¶ 1 (Aug. 3, 2010) (acknowledging access to sanitation as basic human right).
168. For a discussion of potential solutions to mitigating adverse environmental impacts of inadequate sanitation, see infra notes 178-204 and accompanying text.
169. For a discussion on the shortcomings of national sanitation data, see infra notes 170-177 and accompanying text.
170. See DigDeep & U.S. Water Alliance Report, supra note 1, at 21 (pointing out shortcomings of sanitation data).
171. See Flushed and Forgotten, supra note 12, at 17 (noting decades-long gap in federal data).
172. See id. (tracking history of census data covering sanitation).
173. See DigDeep & U.S. Water Alliance Report, supra note 1, at 17-18 (drawing attention to inability to track and compare data over time).
LET’S TALK DIRTY

lects data through the American Housing Survey (AHS).\footnote{174. See Flushed and Forgotten, supra note 12, at 17 (discussing AHS as alternative source to census data); see also American Housing Survey Methodology, U.S. CENSUS BUREAU, https://www.census.gov/programs-surveys/ahs/about/methodology.html (last updated Oct. 17, 2022) (describing collection of housing data).} The AHS provides national sanitation data on types of household wastewater systems and even disaggregates findings by race, ethnicity, and socioeconomic factors.\footnote{175. See Flushed and Forgotten, supra note 12, at 17 (describing AHS data collection).} Though nationwide in scope, the small sample sizes the AHS uses in data collection suggest that current data is unreliable.\footnote{176. See id. (noting flaws in AHS data collection).} Other data exists, such as SDWA water compliance reports, but sources like those reports mainly focus on safe drinking water rather than wastewater and sanitation.\footnote{177. See id. at 18 (pointing to other sources of sanitation data); see also 42 U.S.C. § 300f (outlining Safe Drinking Water Act); Safe Drinking Water Act Compliance Monitoring, ENV. PROT. AGENCY, https://www.epa.gov/compliance/safe-drinking-water-act-sdwa-compliance-monitoring (last updated Sept. 13, 2022) (describing EPA’s monitoring compliance with Safe Drinking Water Act by requiring states to submit compliance reports).} B. It’s Time to Get Down and Dirty

Although sanitation is widely acknowledged as a human right, the United States does not provide universal access to basic sanitation services.\footnote{178. For a discussion on nationwide shortcomings in providing access to sanitation, see supra notes 14–15 and accompanying text.} Framing sanitation as a human right is important, but the U.S. sanitation crisis requires more than a non-binding human rights framework: it requires binding legal action at the federal level.\footnote{179. For a discussion on global acknowledgement of sanitation as a human right, see supra note 17 and accompanying text.} Development of sanitation infrastructure needs to include marginalized and underserved populations.\footnote{180. For a discussion of failing sanitation infrastructure in the United States, see supra notes 66–72 and accompanying text.} The federal government should reallocate and directly channel federal funding available through the EPA and the CWA to local and municipal bodies to address communities in need.\footnote{181. For a discussion on current allocation of federal funds for sanitation, see supra notes 75–80 and accompanying text.} Local organizations can also play a role in mobilizing for more sanitation funding and reducing eligibility barriers to receiving sanitation funding.\footnote{182. See e.g., Home, BLACK BELT UNINCORPORATED WASTEWATER PROGRAM, https://www.bbupwp.org/ (last visited Oct. 22, 2022) (explaining Black Belt Unincorporated Wastewater Program (BBUWP) helps low-income families in Lowndes County Alabama obtain funding for installing on-site sanitation systems). Local organizations within Lowndes County, such as the Lowndes County Unincorpo-
In addition to reforming sanitation funding, discriminatory state regulations should not criminalize certain individuals for failing to comply with sanitation rules. Poor and minority communities bear the burden of criminal and financial penalties for inability to afford the wastewater management systems the law requires, which perpetuates a cycle of poverty and racial discrimination. States should not use their police powers to penalize individuals who cannot afford proper wastewater management, as in *Peak v. City of Tuscaloosa*, but instead should invoke these powers to protect the people who lack access to these services. Cities and municipalities should reform sanitation regulations or consider expanding central sewage lines to include larger portions of local populations. Expanding centralized sewage systems will remove

183. For a discussion on criminalization of sanitation in marginalized communities, see *supra* notes 88–96 and accompanying text.

184. For a case study demonstrating the sanitation crisis’s perpetuation of a cycle of poverty, see *supra* notes 121-38 and accompanying text.

185. For an example of criminalization of sanitation in *Peak v. City of Tuscaloosa*, see *supra* notes 93-96 and accompanying text.

186. See Winkler & Coleman Flowers, *supra* note 80, at 218 (suggesting expansion of sewage lines to include marginalized populations).
LET’S TALK DIRTY 107

the burden of individual property owners having to fund and install their own in-home wastewater management systems.\textsuperscript{187}

The DOJ investigation in Lowndes County, Alabama is the first time the DOJ has conducted an environment-focused Title VI investigation into a recipient of department funding.\textsuperscript{188} The DOJ and other comparable institutions can — and should — initiate similar legal action in other communities nationwide to address inadequate sanitation and to hold public bodies accountable.\textsuperscript{189} On an individual level, those who inadequate sanitation affects can file Title VI civil rights suits against local and state health departments to combat discriminatory sanitation policies.\textsuperscript{190} The Equal Protection Clause of the Fourteenth Amendment may also present a viable legal framework for challenging disparities in access to municipal sanitation services.\textsuperscript{191}

C. Using Environmental Governance to Navigate Murky Waters

Inadequate sanitation creates environmental catastrophes when raw sewage builds up and pollutes land and bodies of water, including sources of drinking water.\textsuperscript{192} Proper wastewater management is necessary to protect the environment, public health, and plant and animal species.\textsuperscript{193} Inadequate sanitation also impacts climate change: wastewater is responsible for around three to seven percent of all greenhouse gas emissions around the world.\textsuperscript{194} Investing in wastewater infrastructure to manage sanitation can aid in reducing greenhouse gas emissions, as managing sewage can trans-

\begin{itemize}
\item \textsuperscript{187} For a discussion on individual homeowners’ responsibilities to install on-site septic systems, see \textit{supra} notes 40–42 and accompanying text.
\item \textsuperscript{188} For a discussion of the ongoing DOJ investigation in Lowndes County, see \textit{supra} notes 155–63 and accompanying text.
\item \textsuperscript{189} For a discussion of additional legal challenges to discriminatory sanitation policies, see \textit{supra} notes 103–15 and accompanying text.
\item \textsuperscript{190} For a discussion of individual and community-wide legal challenges to discriminatory sanitation policies, see \textit{supra} notes 103–115 and accompanying text.
\item \textsuperscript{192} See \textit{Flushed and Forgotten}, \textit{supra} note 12, at 8 (discussing environmental harm improper sanitation causes).
\item \textsuperscript{193} For a discussion on the importance of sanitation, see \textit{supra} notes 36–45 and accompanying text.
\end{itemize}
form wastewater from a carbon source to one of clean energy.\textsuperscript{195} Better water governance is necessary to aid in wastewater management.\textsuperscript{196} Existing federal laws focus on clean water and access to drinking water, but they must extend to sanitation.\textsuperscript{197} While states have their own sanitation regulations, a comprehensive legal framework at the federal level would help to monitor sanitation and provide guidance to states.\textsuperscript{198}

Proper sanitation is a basic right, yet it is something that many people take for granted, particularly because it is so essential to everyday functions.\textsuperscript{199} For the millions of Americans who lack access, however, adequate sanitation is considered a luxury.\textsuperscript{200} The gap in access to adequate sanitation manifests across both racial and economic lines.\textsuperscript{201} The sanitation crisis will continue as long as the public avoids discussing it.\textsuperscript{202} Sanitation is certainly not a glamorous topic — it is unpleasant and, consequently, does not receive the public attention needed to address the current crisis.\textsuperscript{203} It is time for Americans to engage in these difficult and unpleasant discussions to mobilize support for federal action and save millions of marginalized Americans from their hygienic nightmare.\textsuperscript{204}

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\textsuperscript{195} See id. (suggesting link between solutions to climate crisis and sanitation crisis).
\textsuperscript{196} For a discussion of existing federal and state sanitation laws, see supra notes 46–65 and accompanying text.
\textsuperscript{197} For a discussion of shortcomings in federal sanitation laws, see supra notes 46–54 and accompanying text.
\textsuperscript{198} For a discussion of shortcomings in federal sanitation laws, see supra notes 46–54 and accompanying text.
\textsuperscript{199} See Flushed and Forgotten, supra note 12, at 6 (emphasizing necessity of sanitation to everyday life).
\textsuperscript{200} Id. at 5-6 (exploring concerns of people lacking access to sanitation services).
\textsuperscript{201} See id. at 12 (describing intersectionality between race and poverty).
\textsuperscript{202} See Winkler & Coleman Flowers, supra note 80, at 183 (noting challenges to general water issues receive more attention than sanitation related issues).
\textsuperscript{203} See id. (pointing out lack of dialogue regarding sanitation).
\textsuperscript{204} For a discussion of additional solutions to address the sanitation crisis, see supra notes 164-203 and accompanying text.

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