Disastrous Response to Natural and Man-made Disasters: An Environmental Justice Analysis Twenty-Five Years after Warren County

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I. INTRODUCTION

Historically, people of color communities have borne a disproportionate burden of pollution from landfills, garbage dumps, incinicators, smelters, sewage treatment plants, chemical industries, and a host of other polluting facilities. Many dirty industries have followed the "path of least resistance," allowing low-income and people of color neighborhoods to become the "dumping grounds" for all kinds of health-threatening operations.¹

This paper provides an analysis of real-life examples of how government response to environmental emergencies is endangering the health and safety of vulnerable populations. The paper uses an environmental justice framework to examine the U.S. Environmental Protection Agency (EPA) and the Federal Emergency Management Agency (FEMA) response to toxic contamination and man-made disasters in three communities: Warren County, North Carolina, Dickson, Tennessee, and post-Katrina New Orleans, Louisiana.

For decades, hundreds of communities from New York to Alaska have used a variety of tactics to confront environmental injustice.² It was not until 1990, however, after extensive prod-

ding from grassroots environmental justice activists, educators, and academics, that the EPA began to take action on environmental justice concerns. In 1992, under the George H. Bush Administration, the EPA produced *Environmental Equity: Reducing Risks for All Communities*, a report that finally acknowledged the fact that some populations shoulder greater environmental health risks than others.

A few years later, in 1994, President William Clinton issued Executive Order 12898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This Order attempted to address environmental injustice within existing federal laws and regulations. Additionally, the Order reinforced existing legislation including the Civil Rights Act of 1964, Title VI, which prohibits discriminatory practices in programs receiving federal funds, as well as the National Environmental Policy Act (NEPA), a law that set policy goals for the protection, maintenance and enhancement of the environment.

The Executive Order also called for the federal government to improve methodologies for assessing and mitigating impacts, including health effects from multiple and cumulative exposure and impacts on subsistence fishers and consumers of wild game. Moreover, the Order required the collection of data on low-income and minority populations who may be disproportionately at risk and encouraged participation of the impacted populations in the various phases of assessing impacts—including scoping, data gathering, analysis of alternatives, mitigation, and monitoring.

The EPA and FEMA are two of twelve federal agencies covered under the Executive Order. FEMA was founded in 1979 by consolidating the emergency management functions formerly administered by five different Federal agencies. FEMA was an independent Federal agency reporting to the President and was charged with planning for, mitigating, responding to, and recovering from natural and manmade disasters. The agency was built

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6. NEPA's purpose is to ensure a safe, healthful, productive, and aesthetically and culturally pleasing environment for all Americans. NEPA requires federal agencies to prepare a detailed statement on the environmental effects of proposed federal actions that significantly affect the quality of human health.
around an all-hazards planning assumption that many kinds of emergencies (e.g., earthquakes, floods, industrial accidents, hurricanes, and enemy attacks) could be treated similarly and that building capabilities could function across multiple threat domains.\(^7\)

This all changed after the September 11, 2001 terrorist attack (9-11). In March 2003, FEMA became one of 22 agencies in the 180,000-employee Department of Homeland Security (DHS) pursuant to the Emergency Preparedness and Response Directorate. Even FEMA staff warned top officials that its inclusion into the DHS, an agency dominated by military, security, and law enforcement officials, would weaken its emergency management functions and undermine readiness for other catastrophes—resulting in "potentially dangerous consequences."\(^8\)

Many long-term employees began leaving FEMA in the aftermath of 9-11 when its inclusion into DHS resulted in a raiding of FEMA’s funds, a transferring of staff, and a shift in the agency’s mission from natural disasters to fighting terrorism. As the natural disaster emphasis at FEMA was all but “phased out,” disaster management took a significant step backward.\(^9\) The changed structure of FEMA and the new emphasis on terrorism contributed to serious problems.\(^10\) As early as 2002, Brookings Institution scholars raised questions about the new role of FEMA in DHS, asking whether the “the Reauthorization [was] too broad” and questioning whether “the Department [could] be effectively managed?”\(^11\)

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11. For example, there was “poor coordination amongst federal, state, and local officials in the days immediately before and after” Katrina. Moreover, with the military “stretched” thin by wars in Iraq and Afghanistan, “commanders near New Orleans [were] reluctant to commit some active-duty units at nearby Fort Polk, LA, because they were in the midst of preparing for an Afghan deployment . . . .” Robert Block et al., Behind Poor Katrina Response, A Long Chain of Weak Links, WALL ST. J., Sept. 6, 2005, available at http://online.wsj.com/public/article/SB112597239277632387-xYOQX_P04Q8UyBopbxTsXISE_oA_20051007.html?mod=blogs.
II.
STUDIES IN FAILURE: FEDERAL AND STATE RESPONSES TO ENVIRONMENTAL EMERGENCIES

A. Government Response to the PCB Threat in Warren County

1. “Hunt’s Dump”

The environmental justice movement has come a long way from its humble beginnings in rural and mostly African-American Warren County, North Carolina. In December 2003, after living near toxic waste for more than two decades, a long overdue environmental justice victory finally came to the residents of predominately black Warren County, North Carolina. Since 1982, the county residents lived with the legacy of a 142-acre toxic waste dump. Detoxification work on the dump began in June 2001 and ended in the latter part of December 2003. State and federal sources spent $18 million to detoxify or neutralize contaminated soil stored at the Warren County PCB landfill. The pollution was so extensive that a private contractor hired by the state dug-up and burned 81,500 tons of oil-laced soil—in a kiln that reached more than 800 degrees Fahrenheit—in order to remove the PCBs (polychlorinated biphenyls). The soil was put back in a football-size pit, re-covered to form a mound, graded, and seeded with grass.

Even after detoxification, some Warren County residents still question the completeness of the clean-up, especially since PCBs may have migrated beyond the three-acre landfill site into the 137-acre buffer zone that surrounds the landfill (and includes a nearby creek and outlet basin). PCBs are persistent, bioaccumulative, and toxic pollutants (PBTs). That is, they are highly toxic, long-lasting substances capable of accumulating throughout the food chain and reaching levels harmful to human and ecosystem health. Moreover, PCBs are probable human carcinogens, can cause developmental effects (such as low birth weight), and are capable of disrupting hormone function.

15. AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY (ATSDR), U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES, TOXICOLOGICAL PROFILE FOR POLYCHLORINATED BIPHENYLS (PCBs) 259 (2000).
In 2003, the sign at the entrance to the Warren County PCB landfill still read, “PCB Landfill – No Trespassing.” This toxic-waste dump, initially forced on the tiny Afton community in 1982 when more than 84% of the community was black, helped trigger the national environmental justice movement. While the “midnight dumpers” originally responsible for the PCB contamination in Warren County were prosecuted with limited success\textsuperscript{16}, the innocent Afton community received the onerous 21-year sentence of living in a toxic-waste prison.\textsuperscript{17}

The PCB landfill has become one of the most recognized landmarks in the county, and Warren County has become a national symbol of the environmental justice movement. By 1993, the facility began failing – with thirteen feet of water trapped in the landfill.\textsuperscript{18} For nearly a decade thereafter community leaders pressed the state to decontaminate the leaky site. As Warren County residents sought guarantees that the state government was not creating a future “superfund” site that would threaten nearby residents, the state persistently argued that the site was safe – leaving residents little choice but to trust the state’s assessment. Clearly, as evidenced by the 18 million dollar cleanup ultimately performed in 2003, the state’s assurances were empty. Unfortunately, recent history and countless case studies suggest prevalent government deception and discriminatory treatment when addressing public health threats to people of color. This differential government response to the health threats facing African-Americans perpetuates a form of “medical apartheid” that does little to instill trust.\textsuperscript{19}

16. Legal action was taken against Robert Burns and his two sons, who operated a waste-hauling company. At night, the company’s tanker trucks drove along rural North Carolina roads, illegally dumping PCB-contaminated liquid, obtained from the Raleigh-based Robert Ward Transformer Company, onto the soil along a 240-mile stretch of road. While the senior Burns spent five years in jail, the sentences of his two sons were suspended; Robert Ward was held financially liable for the cleanup.

17. EILEEN McGURTY, TRANSFORMING ENVIRONMENTALISM: WARREN COUNTY, PCBs, AND THE ORIGINS OF ENVIRONMENTAL JUSTICE 1, 167 (Rutgers Univ. Press 2007).


2. Why Warren County?

Selecting a landfill site is not rocket science. The Warren County PCB landfill site was not the most scientifically suitable, because the water table at the landfill is very shallow (only 5-10 feet below the surface). Also, the residents of the community used local wells for all of their drinking water needs. Even the head of the EPA's hazardous waste implementation branch, William Sanjour, questioned the siting decision. In the end, the decision was more political science than toxicology or hydrology.

Warren County is located in Eastern North Carolina. The 29 counties located "Down East" are noticeably different from the rest of North Carolina. According to 2000 census, whites comprised 62 percent of the population in Eastern North Carolina and 72 percent statewide. Blacks are concentrated in the northeastern and the central parts of the region. Warren County is one of six counties in the region where blacks comprised a majority of the population in 2000: Bertie County (62.3%), Hertford (59.6%), Northampton (59.4%), Edgecombe (57.5%), Warren (54.5%), and Halifax (52.6%). Statewide, blacks comprise only 24.2% of the population.

Eastern North Carolina is also significantly poorer than the rest of the state. In 1999, per capita income in North Carolina was $26,463, but in the eastern region it was only $18,550. Per capita income for Warren County residents was only $6,984 in 1982, as compared to $9,283 for the state. The county ranked 92nd out of 100 counties in median family income in 1980. The economic gap between Warren County and the rest of the state actually widened in the last decade: per capita income ranked 98th in 1998.
Warren County, in sum, exhibits the "quadruple whammy"—in that it is mostly black, poor, rural, and politically powerless. The county had a population of only 16,232 in 1980, and continues to be economically worse off than the state as a whole on all major social indicators. Over 19.4% of Warren County residents, compared with 12.3% of state residents, lived below the poverty level in 1999. By 2004, the poverty rate was 21.8% for Warren County and 13.8% for the state.\footnote{25}

Additionally, illnesses pose a special problem for Warren County residents, as there is no hospital in the county. The nearest hospitals are located in neighboring Vance County (fifteen miles away) and across the state line in South Hill, Virginia (33 miles away). Not having a hospital becomes even more problematic for low-income and elderly Warren County residents—as they are less likely to have reliable transportation.\footnote{26}

Although economic development often follows along major highways, it has bypassed much of Warren County. For example, Interstates 85 and 95 run along either side of (not through) Warrenton—the county seat. Nevertheless, Warren County has failed to attract new business. The 1999 North Carolina Economic Development Scan gave Warren County a score of 2 (scores range from 1 to 100 with 1 being the lowest and 100 being the highest) in terms of its new business rate.\footnote{27}

3. The Warren County Siting Decision: A Symptom of a Larger Disease

The year 2007 marked the twentieth anniversary of the landmark Toxic Wastes and Race report published by the United Church of Christ (UCC) Commission for Racial Justice—a report inspired by the Warren County protests. To commemorate this milestone, the UCC commissioned a team of environmental justice scholars to complete a new study, Toxic Wastes and Race


The findings are telling. In 2007, people of color made up the majority (56%) of those living in neighborhoods within two miles of the nation’s commercial hazardous waste facilities, nearly doubling the percentage in areas beyond two miles (30%). People of color make up a much larger majority (69%) in neighborhoods with clustered waste facilities.

Waste facility siting disparities are not limited to any one region of the country; rather, they are widespread. For example, nine out of ten EPA regions have racial disparities in the location of hazardous waste sites. Indeed, 40 of 44 states (90%) with hazardous waste facilities have disproportionately high percentages of people of color in host neighborhoods – on average, about two times greater than the percentages in non-host areas (44% vs. 23%). Host neighborhoods in an overwhelming majority of the 44 states with hazardous waste sites have disproportionately high percentages of Hispanics (35 states), African Americans (38 states), and Asians/Pacific Islanders (27 states). At the local level, host neighborhoods of the 105 (of 149) metropolitan areas with hazardous waste sites (70%) have disproportionately high percentages of people of color, and 46 of these metro areas (31%) have people of color majorities.

Clearly, environmental injustice in communities of color is as much or more prevalent today than two decades ago. Racial and socioeconomic disparities in the location of hazardous waste facilities are geographically widespread throughout the country. People of color are concentrated in neighborhoods and communities with the greatest number of these facilities. Indeed, in 2007 communities of color were more concentrated in areas with commercial hazardous sites than in 1987. Even when statistical analyses take socioeconomic and other non-racial factors into account, race continues to be a significant independent predictor of commercial hazardous waste facility locations.

Residents of such ‘fence-line’ communities comprise a special needs population that deserve special attention. Environmental racism has rendered millions of American citizens “invisible” to government regulations and to enforcement. Numerous

studies, dating back to the 1970s, reveal that people of color have borne greater health and environmental risk burdens than society at large. People of color are subjected to elevated health risks associated with proximity to municipal landfills and incinerators, toxic waste dumps, toxic schools, toxic housing, and toxic air releases.

B. The "Dumping Grounds" in a Tennessee Town

There are literally dozens of locations across the nation where environmental racism has left ugly scars. Dickson, Tennessee, a town of 12,244 located about 35 miles west of Nashville, is the "poster child" for environmental racism. Dickson County was 4.6% black in 2006, and its mostly African American Eno Road community has been used as a dumping ground for garbage and toxic wastes for more than four decades. The Eno Road community was first used as the site of the Dickson "city dump," and has subsequently been used for City and County Class I sanitary landfills, Class III and IV construction and demolition landfills, balefills, and processing centers (see Table 1).

The Dickson County Landfill is comprised of 74 acres just off Eno Road, about a mile and a half southwest of Dickson. The County Landfill initially started as a 41.6-acre expansion to the original City of Dickson Landfill, of which 28.6 acres was used for waste disposal. The expansion occurred after the county purchased the original City of Dickson Landfill, as well as 45 addi-


TABLE 1
History of Landfill Permitting in Dickson, Tennessee
Eno Road Community

<table>
<thead>
<tr>
<th>Site Name</th>
<th>Year Permitted</th>
<th>Type Permit¹</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dickson “City Dump”</td>
<td>N/A (1956)²</td>
<td>No Permit</td>
</tr>
<tr>
<td>Dickson “City Dump”</td>
<td>N/A (1968)</td>
<td>No Permit</td>
</tr>
<tr>
<td>Dickson City Landfill</td>
<td>1972</td>
<td>Class I</td>
</tr>
<tr>
<td>Dickson County Landfill</td>
<td>1977</td>
<td>Class I</td>
</tr>
<tr>
<td>Dickson County Landfill</td>
<td>1988</td>
<td>Class I</td>
</tr>
<tr>
<td>Dickson County Balefill</td>
<td>1988</td>
<td>Processing</td>
</tr>
<tr>
<td>Dickson County Balefill</td>
<td>1990</td>
<td>Processing</td>
</tr>
<tr>
<td>Dickson County Demolition</td>
<td>1992</td>
<td>Class III/Class IV</td>
</tr>
</tbody>
</table>

¹ The solid waste facility permits were granted for 100 Virgil Bellar Road, Dickson, Tennessee, located in the heart of the Eno Road community.
² The City of Dickson purchased the land for the Eno Road site in 1946. Government records indicate that the land was associated with the Dickson “city dump” tract as early as 1956. The site was an open dump in 1968 and in 1972 was first permitted by the State of Tennessee as a sanitary landfill.

... the site was an open dump in 1968 and in 1972 was first permitted by the State of Tennessee as a sanitary landfill.

... the plant manufactured automotive tire valves and gauges. The process included metal plating, etching, rubber molding and application, polishing, degreasing and painting, according to documents prepared by the Tennessee Department of Environment and Conservation (TDEC) Division of Water Supply. Obviously, an industrial operation of that magnitude generated large amounts of hazardous waste requiring disposal.

According to government records, in 1968 (the year Dr. King was assassinated in Memphis) Scovill-Schrader – along with several other local industries – buried drums of industrial waste solvents at an “open dump” landfill site.³⁸ In 1972, the unlined landfill was granted a permit by the Tennessee Department of Health and Environment (TDEH). The town of Dickson operated the landfill up until 1977, when it was taken over and operated by Dickson County.³⁹ More than 1,400 people obtain their...

³⁹. Id. at 15.
drinking water from private wells or springs within a four-mile radius of the landfill.\textsuperscript{40} In 1991, a Halliburton report acknowledged the fact that the one such well was in close proximity to the landfill; the report stated that, "[t]he closest private well [Harry Holt well] is located approximately 500 feet east of the landfill."\textsuperscript{41}

The tiny Eno Road community also received contaminated waste materials that were cleaned up from the white areas of Dickson County. For example, Ebbtide Corporation (manufacturer of Winner Boats) removed material from an on-site dump and transferred it to the Dickson County Landfill for disposal.\textsuperscript{42} The company disposed of drummed wastes, which were known to have contained acetone and paint waste, at the landfill every week for three to four years. The Scovill-Shrader plant, previously mentioned, dumped a degreaser used to clean automotive parts at the site.\textsuperscript{43} Additionally, in 1988, the Dickson County Landfill accepted 275 to 300 cubic yards of solid waste from the CSX White Bluff derailment cleanup.\textsuperscript{44} A 1991 EPA Site Inspection Report noted that the soil at the Dickson landfill contained benzene, toluene, ethylbenzene, xylenes, and petroleum hydrocarbons from underground storage tank cleanups trucked to the landfill.\textsuperscript{45}

The Dickson County Landfill has received numerous unsatisfactory operational notices. The landfill received five notices of violations (NOV) from July 18, 1988 to April 12, 1999, these included: inadequate daily cover, violation of Groundwater Protection Standards, cadmium detected in ground water and springs at concentrations exceeding the Maximum Concentration Level (MCL)\textsuperscript{46}, and a violation of inadequate depth cover and pooling of water on the landfill cover.\textsuperscript{47} The Landfill's noncompliance is summarized in the 2004 Dickson County Landfill Reassessment Report (Region 4):

\begin{itemize}
  \item [40.] HALIBURTON NUS ENVTL. CORP., U.S. ENVTL. PROTECTION AGENCY, FINAL REPORT: SITE INSPECTION DICKSON COUNTY LANDFILL, DICKSON, DICKSON COUNTY, TENNESSEE at ES-1 (Oct. 10, 1991).
  \item [41.] Id. at 9.
  \item [42.] Id. at 3.
  \item [43.] Id. at 6.
  \item [44.] Letter from Mark McWhorter, Div. of Solid Waste, Tenn. Dep't of Health and Env't, to Ken Richardson, CSX (Sept. 20, 1998) (on file with author).
  \item [45.] U.S. EPA, FINAL REPORT, supra note 40, at 6.
  \item [46.] An MCL is the maximum concentration of a chemical that is allowed in public drinking water systems.
  \item [47.] TETRA TECH EM INC., supra note 38, at 19.
\end{itemize}
The county has a long history of noncompliance related to groundwater and leachate violations since at least 1983. These violations have resulted in fines, Commissioner's Orders, and NOVs. [ . . . ] These violations were related to such issues as major and minor leachate seeps and flows, failure to provide intermediate cover, failure to provide erosion control, exceedance of groundwater standards for cadmium and TCE, discharge of leachate from the property without a permit, failure to maintain a stormwater pollution prevention plan, and implementation of required corrective actions.48

Despite repeated violations at the Dickson County Landfill, the TDEC continued to grant permits for the site on Eno Road. In fact, TDEC permitted at least four landfills for the Eno Road site since 1988. In February 2007, Dickson County operated a recycling center, garbage transfer station, and a construction and demolition (C&D) landfill at the Eno Road site. As a result, over twenty heavy-duty diesel trucks enter the sites each day, leaving behind noxious fumes, dangerous particulates, household garbage, recyclables, and demolition debris from Middle Tennessee. The garbage transfer station alone handles approximately 35,000 tons annually.

1. Why Eno Road?

Dickson County covers approximately 490 square miles—an equivalent of 313,600 acres.49 However, the only cluster of solid waste facilities in the county is located 54-feet from a 150-acre farm owned by an African American family in the small mostly black Eno Road community. It is no accident or statistical fluke that all of the permitted landfills in Dickson County are concentrated in this black community.50 Blacks make up less than 5% of the county's population and occupy less than 1% of the county's land mass.

When New York Times columnist Bob Herbert queried Dickson County attorney Eric Thornton for an October 2006 article entitled "Poisoned on Eno Road" about why it was peculiar that the Eno Road community had been chosen to absorb so much of the county's garbage and hazardous waste, Thornton stated "it

48. Id. at 51.

49. Dickson County QuickFacts from the U.S. Census Bureau, supra note 35.

has to be at some location."\textsuperscript{51} While this may be true, the $64 million question remains unanswered—why must the "Some-where USA" generally end up being in black and other people of color communities?

2. Treatment of the African American Holt Family

After slavery, dozens of black families acquired hundreds of acres of land, though not part of the empty "40 acres and a mule" government promise, and lived a quiet and peaceful existence in Dickson's historically black Eno Road community. That is, until their wells were poisoned by a county landfill.\textsuperscript{52} In particular, one African American family with deep roots in the Eno Road community, the Harry Holt family, has been especially harmed by the toxic assaults of the City and County Landfill and the subsequent government inaction.

Indeed, the Holt family's "American Dream" of land ownership became more of a "toxic nightmare." For more than a decade, this black family has experienced the terror of not knowing what health problems may lay in store for their children and grandchildren. Government records show that trichloroethylene (TCE), a suspected carcinogen, was found in the Harry Holt and Lavenia Holt wells as early as 1988, the same year the Tennessee Department of Health and Environment (TDHE) issued a permit to Dickson County for operation of the facility as a sanitary landfill.

The State of Tennessee approved the Dickson County Landfill permit on December 2, 1988, even though government test results of the Harry Holt and Lavenia Holt wells, completed on November 18, 1988, showed TCE contamination. The TDHE sent letters to Harry Holt and Lavenia Holt on December 8, 1988 informing the family that the test results revealed contamination of their wells. One letter stated: "Your water is of good quality for the parameters tested. It is felt that the low levels of methylene or trichloroethene may be due to either lab or sampling error."\textsuperscript{53} It seems a bit odd that the State of Tennessee would continue permitting landfills in the mostly black Eno Road community while government tests repeatedly revealed TCE contam-

\textsuperscript{53} Letter from Mark McWhorter, Div. of Solid Waste, Tenn. Dep't of Health and Env't, to Harry Holt & Lavenia Holt (Dec. 8, 1988) (on file with author).
ination – both in onsite testing and in private, offsite wells, many of which were only a stone’s throw from the facility.

On January 28, 1990 government tests found 26 parts per billion (ppb) TCE in the Harry Holt well, five times above the established MCL of 5 ppb set by the US EPA. Subsequent government tests continued to show high levels of TCE in the Harry Holt well: on August 17, 1990, tests found 3.9 ppb TCE and, on August 23, 1991, tests showed 3.7 ppb TCE.

As noted, the MCL is the maximum concentration of a chemical that is allowed in public drinking water systems. Currently there are fewer than 100 chemicals for which an MCL has been established. However, these represent chemicals that are thought to pose the most serious risk. Some of the health effects associated with ingestion of TCE include liver disease, hypertension, speech impediment, hearing impairment, stroke, anemia and other blood disorders, diabetes, kidney disease, urinary tract disorders, and skin rashes.

On January 28, 1991, the EPA performed a potential hazardous waste site inspection of the landfill. The Chronology of Events – Dickson County Landfill Appendix B (Dickson County Landfill Reassessment Report) notes that:

[E]levated levels of several pesticides were detected within the landfill. [...] Questionable material was placed in the city dump prior to 1973. The private well was contaminated with TCE, and two municipal wells are within 4,000 feet. [...] Soils within the landfill were contaminated with high levels of pesticides, metals and unidentified organics. Mr. Holt owns a home approximately 500 feet east of the landfill; however, the old dump is not used. The area is not fenced, and pedestrian traffic is possible. A landfill directly adjacent to the old city dump to the west is presently being used. Most waste was in drums and the old city dump is not lined.

Notably, the Harry Holt homestead is actually 54 feet (not 500 feet) from the landfill property line.


55. TETRA TECH EM INC., supra note 38, at app. B at B-3 to B-4 (Chronology of Events).
On December 3, 1991, the federal EPA sent the Harry Holt family a letter informing him of the three tests performed on his well and — curiously — deemed the well safe. The letter stated: "Use of your well water should not result in any adverse health effects." The letter further stated:

It should be mentioned that trichloroethylene (TCE) was detected at 26 ug/l in the first sample. Because this detection exceeded EPA's Maximum Contaminant Level (MCL) of 5 ug/l, the well water was resampled. TCE was detected at 3.7 ug/l in the second sample; however, it was noted this sample contained air bubbles. EPA took then took a third sample with results nearly identical to the second (3.9 ug/l). Trichloroethylene (TCE) originates from the disposal of dry cleaning material and the manufacture of items such as pesticides, paints and paint thinners, waxes and varnishes, and metal degreasers.57

A December 17, 1991 letter from the TDEC expressed some concern about the level of TCE contamination found in the Holts' well. TDHE officials agreed that Mr. Holt's well should continue to be sampled. This sampling, however, was not done. The letter stated: "Our program is concerned that the sampling twice with one considerably above MCL and one slightly below MCL in a karst area such as Dickson is in no way an assurance that Mr. Holt's well water will stay below MCLs. There is a considerable seasonal variation for contaminants in karst environments and 3.9 ppb TCE is only slightly under the MCL of 5 ppb."58

Although these Tennessee state officials expressed concern about the tests, they stood idly by and allowed the Holt family to continue to drink contaminated well water. A January 6, 1992 letter from the TDHE continued to express concern about the level of contamination found in the Holt well. That letter stated:

Mr. Holt's well was sampled as a result of the Pre-remedial Site Investigation and Ranking package on the Dickson County landfill for NPL consideration. Mr. Carr told me the field investigation was complete and that he was not in a position to sample Mr. Holt's well again even though it had sporadically shown TCE con-

57. Id.
tamination above MCLs. He agreed that Mr. Holt's well should continue to be sampled. There may be some chance of the site going NPL [National Priority List], but that will be at least 1-2 years away. Mr. Carr suggested I contact Nathan Sykes at (404) 347-2913 to determine why it was not felt that further monitoring or an alternate water supply was necessary.59

A month later, on February 12, 1992, state officials continued to discuss the TCE contamination in the Holt family wells and the Dickson County Landfill. The language of that letter follows:

A search of our Division's files has been made concerning the allegation that a domestic well, located on the Harry and Lavenia Holt property, may have been adversely impacted by the Dickson County Landfill. No substantial evidence was found in our files to support this allegation.

Attached is a 1988 memo from our Division showing that groundwater samples from the Holt well were obtained and analyzed at that time. Those sample results showed that trichloroethylene (TCE) and methylene chloride were found to be at the upper regulatory limit of the acceptable drinking water standards set by EPA. It was concluded by this Division that these detection levels may have been due to either laboratory or sample error. There is no record that any additional samples were obtained at a later date by either our Division or by the EPA.60

In a March 13, 1992 letter, TDHE sided with the EPA, finding that the Holt family well water was "safe." That letter stated:

Since EPA has already completed a site investigation, has identified the pollutants involved, and has, in part, determined the extent of the leaching, I would suggest that they, EPA, continue with their chosen course of action, rather than create the added confusion of various agencies making their own agendas. I would suggest that if Mr. Holt is concerned about possible health risks in using his well water between now and June (when EPA's priority decision is made), that he should rely on bottled or city water for cooking and drinking purposes until he is convinced that his well water is safe.61

In the final analysis, the state handed the ball off to the federal government and effectively issued the Holt family a "death sen-

59. Letter from Tom Moss, DWS, Ground Water Management Section, Tennessee Department of Health and Environment to Dickson County File, DWS (Jan. 6, 1992) (on file with author).
60. Memorandum written by Debbie Sanders, Division of Solid Waste Management, Nashville Filed Office, Tennessee Department of Health and Environment (Feb. 12, 1992).
tence." Government records also show that the Harry Holt well was not retested nor monitored as recommended by state officials. According to the 2004 EPA Dickson County Landfill Reassessment Report, no government tests were performed on the Harry Holt family well between August 23, 1991 and October 9, 2000—a full nine years. No scientific explanation has been given for this gap in government testing, even though the TDHE and the federal EPA were periodically performing tests on private wells within a one-mile radius of the leaky Dickson County Landfill.

The Harry Holt well, one of the closest wells to the landfill and one of the earliest private wells to show TCE contamination, was routinely left out of government testing and monitoring protocol for wells within a one-mile radius of the Dickson County Landfill. In February 1997, TCE was detected at 1.3 ppb in water from a production well (DK-21) operated by the City of Dickson and located northeast of the landfill. The MCL is 5 parts per billion. The Harry Holt homestead is a mere 54 feet from the landfill property line and lies between the landfill and the DK-21 public water supply.

An April 7, 1997 TDEC confirmation sample at DK-21 showed TCE at 14 ppb and Cis-1, 2 dichloroethene at 1.3 ppb. According to the TDEC Division of Water Supply, on April 18, 1997, the City of Dickson stopped using the DK-21 well as a supplement to the municipal water source after a call from the state requiring an aeration, or water filtration, system; the City subsequently began using the Piney River well exclusively for its municipal water.

62. See TETRA TECH EM INC., supra note 38, at 28.
63. The Agency for Toxic Substances and Disease Registry, within the Department of Health and Human Services, notes that "breathing high levels of 1,2-dichloroethene can make you feel nauseous, drowsy, and tired" and that "breathing very high levels can kill you." Moreover, "[w]hen animals breathed high levels of trans-1,2-dichloroethene for short or longer periods of time, their livers and lungs were damaged and the effects were more severe with longer exposure times. Animals that breathed very high levels of trans-1,2-dichloroethene had damaged hearts." The Agency for Toxic Substances and Disease Registry, ToxFAQs, http://www.atsdr.cdc.gov/tfacts87.html#bookmark05 (last visited May 18, 2008).
64. See TETRA TECH EM INC., supra note 38, at app. B, B-15 to B-16 (Chronology of Events).
A dye-tracer study was conducted to help evaluate whether the landfill was a possible source of the contamination. The study used 24 dye-injection and detection sites, including wetlands, springs, duck ponds, and wells owned by the City of Dickson — as well as monitoring wells and domestic wells. The 24 sites were located on all sides of the landfill. One of the dye-tracer test sites was the Humane Society of Dickson County — a facility located at 410 Eno Road that houses more than 300 animals per month.

The Harry Holt homestead is located at 390 Eno Road, a few hundred feet from the animal shelter. However, the Harry Holt, Roy Holt and Lavenia Holt family wells were not part of the 1997-1998 government study — even though they are all within several hundred feet from the landfill. Dickson County and EPA officials were more concerned with the welfare of ducks in a pond and dogs waiting to be euthanized than with protecting the Holt family from toxic TCE contamination.

The Harry Holt well was not retested until October 9, 2000 when it registered a whopping 120 ppb TCE and a second test on October 25, 2000 registered 145 ppb — 24 times and 29 times, respectively, higher than the MCL of 5 ppb set by the federal EPA. It was only after the extremely high TCE levels in 2000 that a Dickson County Landfill official visited the Holt family home informing them that their wells were unsafe. No written reports or letters were sent to the Holt family explaining the October 9, 2000 test results.

The Holt family was placed on Dickson City water on October 20, 2000 — twelve years after the first government tests found TCE in their well in 1988. In a September 23, 2003 “Community Meeting Questions and Answers,” TDEC officials discussed the TCE contamination in the Holt family wells. The State officials also discussed the one municipal water well (DK-21) that had detectable levels of TCE contamination and was taken out of service and permanently closed in 1998. The Harry Holt homestead, as stated, is located between the Dickson County Landfill property and DK-21 site. It stands to reason that if the landfill

66. TETRA TECH EM INC., supra note 38, at 28.
67. TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION, COMMUNITY MEETING QUESTIONS AND ANSWERS, (on file with author).
leakage contaminated the DK-21 well in 1998, the Harry Holt well was contaminated prior to that. Ultimately, on December 2, 2003, the Harry Holt family filed a lawsuit against the City of Dickson, County of Dickson, and Scovill Inc. (the company that owned the former Scovill-Shrader Automotive manufacturing plant).

Before the county landfill was sited, the Holt family wells were clean, safe, and free. Not only has the Dickson County Landfill contaminated the Holt family’s wells and endangered their health, it has imposed the added expense of requiring the Holts to pay the county for clean water. Though the county had been paying the Holts’ water bill since 2000, when TCE contamination was “discovered” after a nine-year testing delay), the Dickson County Commission stopped paying the family’s water bill after the Holt family filed suit.68

Dickson County is profiting from the suffering that has been inflicted on the Holt family. The landfill has not been a “good neighbor.” Moreover, county officials refuse to right the wrong committed against the Holt family and – more broadly – the Eno Road African American community. Thus, the County has compounded the injustice – which dates back almost forty years.69

The Holts received different treatment than did white families; the evidence of this discrimination is as recent as November 6, 2006, when – in a specially called meeting – Dickson County Commissioners voted unanimously to settle lawsuits with several white families that were alleging groundwater contamination from the leaky County Landfill.70 The city and county have now settled with all of the white families, but have refused to deal fairly with the Holt family. On November 28, 2007, one day before the “Take Back Black Health Toxics Tour” in Dickson, a front-page story ran in the Dickson Herald reporting that the Dickson County Commission had agreed to accept a $400,000 offer on its $4 million claim against a former local company that dumped toxic waste at the landfill several years ago.71

3. Treatment of White Families in Dickson County

Government testing and monitoring of the Holt family's wells differed markedly from the treatment of white families whose springs and wells were contaminated. Treatment differed in terms of testing, notification, remediation, and provision of alternative water supply, both in the short-term (providing bottled water) and long-term (connecting to city water system). The racial disparity in government testing is clearly presented in Table 2 (Summary of TCE and DCE Results, Springs and Private Water Supplies, Dickson County, Tennessee) of the *Dickson County Landfill Reassessment Report.*

On March 5, 1994, TCE was detected in Sullivan Spring – a water supply located approximately one-third of a mile from the landfill and used by two white families. On September 1, 1994 tests were conducted on the spring to confirm it was indeed contaminated. On September 8, 1994, the TDEC sent one of the families a “Notification of Contaminants in Drinking Water” letter. The letter stated:

As I discussed with you on September 6, 1994, the spring used to supply drinking water to your residence has shown levels of Trichloroethylenedicis-1, 2-dichloroethene, and dichloroethene above the allowable levels. It is recommended that you discontinue use of this water as your drinking water supply. As I have been informed Mr. Lunn of the Dickson County Solid Waste Program contacted you on September 2, 1994 to notify you of the impact to your spring.  

Dickson County officials even dug the white family a well to be used as an alternate water supply. Next, the family was placed on the city tap water system after the new well was found to be contaminated. A total of nine tests were performed on the white family’s spring between June 25, 1994 and September 20, 2000. Three tests were performed in 1994, after the initial March 5, 1994 test showed contamination. The spring was again tested in 1995, 1996 (two separate tests), 1997, 1999, and in 2000. Government tests were continued on the white family’s spring even after its family members were placed on the city water system.

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72. *TETRA TECH EM INC., supra* note 38, at 28.
74. *TETRA TECH EM INC., supra* note 38, at 28.
**TABLE 2**
Summary of TCE and DCE Results, Springs and Private Water Supplies, Dickson County, Tennessee

<table>
<thead>
<tr>
<th>Residence/Water Supply</th>
<th>Date</th>
<th>TCE (*g/L)</th>
<th>DCE (*g/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L. Gorley/ private well</td>
<td>October 25, 2000</td>
<td>0.6</td>
<td>BDL</td>
</tr>
<tr>
<td>L. Gorley/ private well</td>
<td>October 31, 2000</td>
<td>0.5J</td>
<td>BDL</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>October 12, 2000</td>
<td>3.5</td>
<td>BDL</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>January 28, 1990</td>
<td>26.0</td>
<td>BDL</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>August 17, 1990</td>
<td>3.9</td>
<td>BDL</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>August 23, 1991</td>
<td>3.7</td>
<td>BDL</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>October 9, 2000</td>
<td>120.0</td>
<td>6.6</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>October 25, 2000</td>
<td>145.0</td>
<td>8.6</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>January 2001</td>
<td>64.0</td>
<td>2.9</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>October 2001</td>
<td>120.0</td>
<td>6.6</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>October 9, 2000</td>
<td>120.0</td>
<td>6.6</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>October 25, 2000</td>
<td>145.0</td>
<td>8.6</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>January 2001</td>
<td>64.0</td>
<td>2.9</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>October 2001</td>
<td>160.0</td>
<td>2.0</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>May 2002</td>
<td>34.0</td>
<td>1.0</td>
</tr>
<tr>
<td>H. Holt/private well</td>
<td>April 2003</td>
<td>16.0</td>
<td>1.1</td>
</tr>
<tr>
<td>L. Holt/private well</td>
<td>October 25, 2000</td>
<td>1.2J</td>
<td>BDL</td>
</tr>
<tr>
<td>L. Holt/private well</td>
<td>October 2001</td>
<td>BDL</td>
<td>BDL</td>
</tr>
<tr>
<td>L. Holt/private well</td>
<td>May 2002</td>
<td>BDL</td>
<td>BDL</td>
</tr>
<tr>
<td>L. Holt/private well</td>
<td>October 2002</td>
<td>BDL</td>
<td>BDL</td>
</tr>
<tr>
<td>L. Holt/private well</td>
<td>April 2003</td>
<td>BDL</td>
<td>BDL</td>
</tr>
<tr>
<td>R. Holt/private well</td>
<td>November 2000</td>
<td>5.0</td>
<td>BDL</td>
</tr>
<tr>
<td>R. Holt/private well</td>
<td>January 2001</td>
<td>8.0</td>
<td>BDL</td>
</tr>
<tr>
<td>R. Holt/private well</td>
<td>October 2001</td>
<td>3.0</td>
<td>2.2</td>
</tr>
<tr>
<td>R. Holt/private well</td>
<td>May 2002</td>
<td>2.0</td>
<td>BDL</td>
</tr>
<tr>
<td>R. Holt/private well</td>
<td>October 2002</td>
<td>2.0</td>
<td>BDL</td>
</tr>
<tr>
<td>R. Holt/private well</td>
<td>April 2003</td>
<td>9.0</td>
<td>134</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>March 5, 1994</td>
<td>18.0</td>
<td>5.0</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>June 25, 1994</td>
<td>83.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>September 1, 1994</td>
<td>59.0</td>
<td>9.8</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>September 28, 1994</td>
<td>84.0</td>
<td>17.0</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>May 22, 1995</td>
<td>31.0</td>
<td>6.8</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>August 19, 1996</td>
<td>&lt;5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>December 3, 1996</td>
<td>&lt;5</td>
<td>&lt;5</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>May 14, 1997</td>
<td>230.0</td>
<td>31.0</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>August 26, 1999</td>
<td>160.0</td>
<td>39.0</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>September 20, 2000</td>
<td>16.0</td>
<td>25.0</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>May 2002</td>
<td>23.0</td>
<td>1.0</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>November 2002</td>
<td>110.0</td>
<td>26.0</td>
</tr>
<tr>
<td>Sullivan Spring</td>
<td>April 2003</td>
<td>130.0</td>
<td>34.0</td>
</tr>
</tbody>
</table>

According to an August 31, 1993 letter from the state titled "Landowner Notification of TCE Contaminated Wells, Scovill-Schrader Site, Dickson, Tennessee[,]" 29 residential wells within a one-mile radius of the Scovill-Schrader Automotive Division Site in Dickson were sampled for volatile organic compounds (VOCs) on May 11-14, 1993 in accordance with Task 5 of Phase II RCRA Facility Investigation. TCE was detected in the wells of nine white residents. The Scovill-Schrader site is located in the city of Dickson near a white neighborhood.

The 1993 notification letter contained a detailed table that summarizes the steps taken to immediately notify the affected white residents, as well activities associated with providing temporary water supplies and permanent city water. The letter stated:

All of the residents with TCE detected in their wells were immediately contacted and all were provided bottled water for drinking and cooking within 48 hours. All other residents sampled within the one-mile radius were contacted and informed that the water samples taken indicated no problems with their water. In addition, all wells within the one-mile radius were re-sampled to verify the original water well sampling results. Residential wells within a one- to two-mile radius of the site were sampled during the month of July. Residents within the one- to two-mile radius will be contacted within the next week to inform them of the results of the last sampling event. It should be noted that all wells within the one- to two-mile radius were non-detectable for VOCs. A listing of the wells sampled within the one- to two-mile radius and date contacted to inform residents of the results will be under separate cover. As a precautionary measure, a water well sampling event is scheduled for the week of August 16, 1993 to re-sample selected wells near the wells found to contain TCE.

Clearly, the care and precaution that the government officials initiated to protect the health of the white families was not extended to the black Holt family. White families near the Scovill-Schrader site were provided with a swift response to their toxic contamination emergencies, while the black family near the leaky landfill was waiting. White families near the site were notified within 48 hours, provided with bottled water, and placed on the city water system. In stark contrast, the black family (Holts) whose property line was just 54 feet from the landfill was allowed

76. Id. at 1-2.
to drink TCE-contaminated well water for twelve years after the chemical was first discovered by the state in 1988.

4. Proximity of the Dickson County Landfill to Elected Officials' Homes

Dickson city and county officials have the power to correct a terrible injustice. However, the elected officials have chosen instead to use tax dollars to fight the family its landfill poisoned. It appears that "NIMBY" (Not in My Backyard) is being practiced by these officials.

Harry Holt's property line is just 54 feet from the landfill property line. His well is 313 feet from the landfill property line. How far is the landfill from city and county officials' homes? Only one Dickson City council member's home is within a one-mile radius of the landfill. Five of the eight city council members' homes are more than two miles from the landfill. The Dickson Mayor lives 3.85 miles from the landfill (see Figure 1 and Table 3).

Dickson County elected officials live even farther away from the leaky landfill than their Dickson City counterparts. Two county commissioners' homes are within two miles of the landfill; three commissioners live three to four miles from the landfill; and seven of the twelve county commissioners' homes are six or more miles from the landfill. The remaining two commissioners live more than fifteen miles from the landfill (see Figure 2 and Table 4).

Even when in possession of the relevant facts (and test results), government officials failed to respond in a timely manner to protect black families threatened by contamination of their drinking water. Furthermore, white and black families were treated differently. This differential treatment subjected the African American Holt family to prolonged exposure to contaminated drinking water and the associated health risks. Although various levels of government acted promptly to protect the rights and health of white families, it failed to protect the rights and health of black families.

The Harry Holt family's 2003 lawsuit was still pending in court when Harry Holt died of cancer on January 9, 2007. Mr. Holt was 66 years old and had lived in the Eno Road community all of his life. Generations of Holts survived the horrors of post-slavery racism and "Jim Crow" segregation, but may not survive the toxic assault and contamination from the Dickson County Land-
The Holt family is represented by the NAACP Legal Defense and Education Fund.

C. Environmental Threats in post-Katrina New Orleans

Hurricane Katrina laid waste to New Orleans, an American city built below sea level and whose coastal wetlands, which served as a natural buffer against storm surge, had been de-


### TABLE 3
Distance from Dickson City Officials Homes to the Dickson County Landfill

<table>
<thead>
<tr>
<th>City Official</th>
<th>Home Address</th>
<th>Ward Number</th>
<th>Distance to Landfill (Miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. R. Arnold</td>
<td>119 Edgewood Pl. Dickson, TN</td>
<td>2</td>
<td>0.33</td>
</tr>
<tr>
<td>2. J.R. Monsue</td>
<td>702 West 3rd St. Dickson, TN</td>
<td>3</td>
<td>1.85</td>
</tr>
<tr>
<td>3. M. Corlew</td>
<td>105 Marley Dr. Dickson, TN</td>
<td>3</td>
<td>1.95</td>
</tr>
<tr>
<td>4. R. Blue</td>
<td>115 Miller St. Dickson, TN</td>
<td>4</td>
<td>2.22</td>
</tr>
<tr>
<td>5. R.S. England</td>
<td>711 Henslee Dr. Dickson, TN</td>
<td>2</td>
<td>2.30</td>
</tr>
<tr>
<td>6. B. Rial</td>
<td>106 Forest Hills Circle Dickson, TN</td>
<td>1</td>
<td>3.65</td>
</tr>
<tr>
<td>7. M. Legg</td>
<td>105 Steven Nicks Dr. Dickson, TN</td>
<td>1</td>
<td>4.04</td>
</tr>
<tr>
<td>8. J. Jennings</td>
<td>122 Shady Brook Circle Dickson, TN</td>
<td>4</td>
<td>4.10</td>
</tr>
<tr>
<td>9. D. Weiss, Jr.</td>
<td>100 Belford Mayor Dickson, TN</td>
<td>Mayor</td>
<td>3.85</td>
</tr>
</tbody>
</table>


Katrina has been described as one of the most devastating, costly, and deadly disasters in U.S. history. . . and it is a disaster that is still ongoing.80 A September 2005 Business Week commentary described the handling of the untold tons of "lethal goop" as the "mother of all toxic cleanups."81 However, the billion-dollar question now facing New Orleans is which neighborhoods will get cleaned up, which ones will


be left contaminated, and which ones will be targeted as new sites to dump storm debris and waste from flooded homes.

1. Cleaning Up Toxic Neighborhoods

Flooding in the New Orleans metropolitan area largely resulted from breached levees and flood walls. A May 2006 report from the Russell Sage Foundation, *In the Wake of the Storm: Environment, Disaster, and Race after Katrina*, found that low-income, people of color, elderly, and disabled individuals (and families) often experience a “second disaster” after the initial

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### Table 4
Distance from Dickson County Officials Homes to the Dickson County Landfill

<table>
<thead>
<tr>
<th>City Official</th>
<th>Home Address</th>
<th>District Number</th>
<th>Distance to Landfill (Miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. D. Corlew</td>
<td>1006 West 1st Street</td>
<td>8</td>
<td>1.79</td>
</tr>
<tr>
<td></td>
<td>Dickson, TN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. D. England</td>
<td>615 W. College St.</td>
<td>9</td>
<td>1.95</td>
</tr>
<tr>
<td></td>
<td>Dickson, TN</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. B. Reed</td>
<td>108 Lone Oak Dr. Dickson, TN</td>
<td>10</td>
<td>3.55</td>
</tr>
<tr>
<td>4. V. Gray</td>
<td>665 Murrell Rd. Dickson, TN</td>
<td>7</td>
<td>3.70</td>
</tr>
<tr>
<td>5. D. Tidwell</td>
<td>209 Robinson Dr. Dickson, TN</td>
<td>11</td>
<td>4.00</td>
</tr>
<tr>
<td>6. J. Loggins</td>
<td>345 Loggins Rd. Burns, TN</td>
<td>12</td>
<td>6.00</td>
</tr>
<tr>
<td>7. R. Wetterau</td>
<td>325 McElhiney Rd. Dickson, TN</td>
<td>2</td>
<td>6.17</td>
</tr>
<tr>
<td>8. S. Batey</td>
<td>1128 Old Stage Rd. Dickson, TN</td>
<td>1</td>
<td>6.42</td>
</tr>
<tr>
<td>9. B. Spencer</td>
<td>885 Tidwell Rd. Burns, TN</td>
<td>6</td>
<td>11.50</td>
</tr>
<tr>
<td>11. G. Suggs</td>
<td>2645 Wood Valley Rd. Cumberland Furnace, TN</td>
<td>3</td>
<td>15.40</td>
</tr>
<tr>
<td>12. J.B. Smith</td>
<td>1765 Maple Valley Rd. Charlotte, TN</td>
<td>4</td>
<td>16.50</td>
</tr>
<tr>
<td>13. L. Frazier</td>
<td>825 North Mount Sinai Rd. Dickson, TN</td>
<td>Mayor</td>
<td>3.00</td>
</tr>
</tbody>
</table>


storm. Quite often the scale of a disaster’s impact, as in the case of Hurricane Katrina, has more to do with the political economy of the country, region, and state than with the hurricane’s category strength.84


Frequently, measures to prevent or contain the effects of disaster vulnerability are not equally provided to all.\textsuperscript{85} Typically, flood-control investments provide location-specific benefits, with the greatest benefits going to populations who live or own assets in the protected area. Thus, by virtue of where people live, work, or own property, they may be excluded from the benefits of government-funded flood-control investments.\textsuperscript{86}

2. Katrina’s Wake: Mountains of Trash, Contaminated Soil, and the Community Response

Hurricane Katrina left debris across a 90,000-square-foot disaster area in Louisiana, Mississippi, and Alabama – as compared to a 16-acre tract in New York on September 11, 2001.\textsuperscript{87} According to the Congressional Research Service, debris from Katrina could well top 100 million cubic yards, compared to the 8.8 million cubic yards of disaster debris generated after the 9/11 terrorist attacks on New York City. Ten months after the storm, FEMA had spent $3.6 billion to remove 98.6 million cubic yards of debris from Katrina.\textsuperscript{88} This is enough trash to pile two miles high across five football fields. Still, an estimated twenty million cubic yards littered New Orleans and Mississippi waterways – with about 96%, or 17.8 million cubic yards, of that remaining wreckage in Orleans, St. Bernard, St. Tammany, Washington, and Plaquemine parishes. Louisiana parishes hauled away 25 times more debris than was collected after the 9/11 terrorist attack in 2001.\textsuperscript{89}

In addition to wood debris, EPA and Louisiana Department of Environmental Quality (LDEQ) officials estimate that 140,000 to 160,000 homes in Louisiana may need to be demolished and disposed.\textsuperscript{90} More than 110,000 of New Orleans’ 180,000 homes

\textsuperscript{85} Bullard, supra note 83.
\textsuperscript{87} Linda Luther, \textit{Disaster Debris Removal after Hurricane Katrina: Status and Associated Issues}, \textit{Congressional Research Service Report to Congress} 1, June 16, 2006.
were flooded, and half of those sat for days or weeks in more than six feet of water. Government officials estimate that as many as 30,000 to 50,000 homes citywide may need to be demolished. An additional 350,000 automobiles were drained of oil and gasoline and then recycled; 60,000 boats were destroyed; and 300,000 underground fuel tanks and 42,000 tons of hazardous waste were cleaned up and properly disposed at licensed facilities.

In March 2006, seven months after the storm slammed ashore, the Deep South Center for Environmental Justice at Dillard University (DSCEJ) and the United Steel Workers (USW), organized the "A Safe Way Back Home" initiative. This proactive pilot project, focusing on neighborhood clean-up, was the first of its kind in New Orleans. The clean-up project, located in the 8100 block of Aberdeen Road in New Orleans East, removed six inches of tainted soil from the front and back yards of homes, and replaced the soil with new sod while disposing of the contaminated dirt in a safe manner.

Residents choosing to remove the top soil from their yards, which contains sediments left by the flooding, find themselves in a "Catch-22." While the LDEQ and EPA insist that the soil is not contaminated, local landfill operators refuse to dispose of the soil because they expect that it is contaminated. This dilemma remained unresolved a year and a half after the devastating flood.

Although government officials insist that the dirt in residents' yards is safe, Church Hill Downs Inc., the owners of the New Orleans' Fair Grounds, felt that the soil was not safe for its thoroughbred horses. The owners hauled off soil tainted by Hurricane Katrina's floodwaters and rebuilt a grandstand roof ripped off by the storm's wind; the Fair Grounds reopened on Thanksgiving Day 2006. Certainly, if tainted topsoil is not safe for horses, it is not safe for people — especially children who play and dig in the dirt.

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The "A Safe Way Back Home" project will serve as a catalyst for a series of activities that are attempting to reclaim the New Orleans East community following the devastation caused by hurricane Katrina. Though it is the government's responsibility to provide the resources required to address areas of environmental concern, and to ensure that the workforce is protected, residents are not waiting for the government to ride in on a white horse and rescue them.95

The DSCEJ/USW coalition received dozens of requests and inquiries from New Orleans East homeowners' associations to help clean up their neighborhoods. Yet, state and federal officials labeled the voluntary clean-up efforts as "scaremongering."96 A week after the voluntary cleanup project began, an LDEQ staffer ate a spoonful of dirt scraped from the Aberdeen Road pilot project. The dirt-eating publicity stunt was clearly an attempt to disparage the proactive neighborhood clean-up initiative; LDEQ officials later apologized.

EPA and LDEQ officials said that they tested soil samples from the neighborhood in December and that there was no immediate cause for concern. According to Tom Harris, a state toxicologist and administrator of LDEQ's environmental technology division, the government originally sampled 800 locations in New Orleans and found cause for concern in only 46 samples. Generally, Harris concludes, the soil in New Orleans is consistent with "what we saw before Katrina." He called the "A Safe Way Back Home" program "completely unnecessary."97

Despite barriers and red tape, Katrina evacuees are moving back into damaged homes or setting up travel trailers in their yards. But, returning residents still have to question whether their neighborhoods are safe. Residents have reason to be suspicious of the conclusions of government agencies. In December 2005, the LDEQ announced that there were no unacceptable long-term health risks directly attributable to environmental contamination resulting from the storm. Two months later, in February, tests by the Natural Resources Defense Council (NRDC)

96. See Ann S. Simmons, New Orleans Activists Starting from the Ground Up, Los Angeles Times, Mar. 24, 2006.
yielded different conclusions. NRDC's analyses of soil and air quality after Hurricane Katrina revealed dangerously high levels of diesel fuel, lead, and other contaminants in Gentilly, Bywater, Orleans Parish, and other New Orleans neighborhoods.

Moreover, government agencies have sent residents mixed signals. Although many government scientists insist the soil is safe, an April 2006 multi-agency task force press release distributed by the EPA raised some questions. Though the release claimed that the levels of lead and other contaminants in New Orleans soil were "similar" to soil contaminant levels in other cities, it also cautioned residents to "keep children from playing in bare dirt" and to "[c]over bare dirt with grass, bushes or 4-6 inches of lead-free wood chips, mulch, soil or sand."

Instead of cleaning up the mess that existed before and after the storm, government officials are allowing dirty neighborhoods to stay dirty forever. In August 2006, nearly a year after Katrina struck, the federal EPA gave New Orleans and surrounding communities a clean bill of health, while pledging to monitor a handful of toxic hot spots. EPA and LDEQ officials concluded that Katrina did not cause any appreciable contamination above that already present. Although EPA tests confirmed widespread lead in the soil, a pre-storm problem in 40% of New Orleans, EPA dismissed residents' calls to address this problem as outside the agency's mission.

Two and a half years after Katrina, one third of New Orleans' residents still have not made it back home. The road home for many Katrina survivors has been a bumpy one, largely due to slow government action in distributing the billions in federal aid allotted to residents for rebuilding. The Louisiana Road Home Program for Homeowners is distributing $10.5 billion in federal funds plus $1 billion in state funds to approximately 160,000 Louisiana homeowners whose homes were devastated in 2005 by


Hurricanes Katrina or Rita (and the subsequent flooding). Eighteen months after the Louisiana Road Home Program began, it had closed 90,000 grants—but some grantees are still waiting for disputed award money and another 70,000 have received nothing.\textsuperscript{102} ICF International, the program's lead contractor, has been widely criticized for its slow pace in getting money into the hands of displaced home owners.

3. Toxic FEMA Trailers

Immediately after Katrina, FEMA purchased about 102,000 travel trailers for $2.6 billion—roughly $15,000 each.\textsuperscript{103} Surprisingly, there were reports of residents becoming ill in these trailers due to the release of potentially dangerous levels of formaldehyde. In fact, formaldehyde, the industrial chemical that was used to manufacture the travel trailers, is commonly found in glues, plastics, building materials, composite wood, plywood panels, and particle board.\textsuperscript{104} Formaldehyde can cause respiratory problems and has been classified as a carcinogen by the International Agency for Research on Cancer and as a probable carcinogen by the U.S. Environmental Protection Agency.

In Mississippi, FEMA received 46 complaints of individuals who indicated that they had symptoms of formaldehyde exposure which included: eye, nose, and throat irritation, nausea, skin rashes, sinus infections, depression, mucus membranes, asthma attacks, headaches, insomnia, intestinal problems, memory-impairment, and breathing difficulties.\textsuperscript{105} The Sierra Club found unsafe levels of formaldehyde in 30 of 32 travel trailers it tested in 2006.\textsuperscript{106}

Even though FEMA received numerous complaints about toxic trailers, the agency tested only one occupied trailer to de-

\textsuperscript{105} Spake, supra note 103.
termine the levels of formaldehyde in it. The test confirmed that the levels of formaldehyde were extraordinarily high and presented an immediate health risk to the displaced occupants. The monitored levels were 75 times higher than what the National Institute of Occupational Safety and Health recommend for adult exposure in industrial workplaces. Unfortunately, FEMA did not test any other occupied trailers and then released a public statement discounting any risk associated with formaldehyde exposure.

FEMA deliberately neglected to investigate reports of high levels of formaldehyde in trailers so as to bolster FEMA's litigation position—just in case individuals affected by their negligence decided to sue them. More than 500 hurricane survivors and evacuees in Louisiana are pursuing legal action against the trailer manufacturers for being exposed to the toxic chemical formaldehyde.

In July 2007, FEMA stopped buying and selling disaster relief trailers because of the formaldehyde contamination. In August 2007, FEMA began moving families out of the toxic trailers and attempted to find new rental housing. Testing of FEMA travel trailers for formaldehyde and other hazards began in September 2007. The Center for Disease Control and Prevention was assigned as the lead agency in developing parameters for testing the travel trailers.

More than 10,800 toxic trailers were sold to the public by the General Service Administration from July 2006 to July 2007 after Katrina survivors and communities refused them. The trailers, which—on average—cost $18,600 each, were sold to anyone for 40 cents on the dollar. After suspending sale of the trailers, FEMA offered to buy back the toxic trailers purchased by the public and Katrina evacuees. In January 2008, more than 40,000 FEMA trailers were still being used as emergency shelters along

108. Babington, supra note 104.
110. Id.
the Gulf Coast, with the vast majority of the trailers located in Louisiana.\textsuperscript{112} In February 2008, Center for Disease Control (CDC) tests recorded fumes from 519 FEMA trailers and mobile homes in Louisiana and Mississippi; the fumes were, on average, about five times what people are exposed to in most modern homes. In some trailers, the levels were nearly 40 times customary exposure levels, raising fears that residents could develop respiratory problems. CDC officials recommended that FEMA move people out quickly, with priority given to families with children, elderly people, or anyone with asthma or other chronic conditions.\textsuperscript{113}

### III.

#### CONCLUSION

The environmental justice movement emerged in response to environmental disparities, public health threats, unequal protection, differential enforcement, and disparate treatment received by the poor and people of color. This relatively young movement set out clear goals of eliminating unequal enforcement of the nation's environmental, civil rights, and public health laws. It also targeted differential exposure of vulnerable populations to harmful chemicals, pesticides, and other toxins in the home, school, neighborhood, and workplace. Furthermore, it challenged faulty assumptions in calculating, assessing, and managing risks; discriminatory zoning and land-use practices; and exclusionary policies and practices that limit low-income persons and people of color from participation in environmental decision-making. Many of these problems could be eliminated if current environmental, health, housing, land use, and civil rights laws were vigorously enforced in a nondiscriminatory way.

Millions of Americans learned the hard way that waiting for the government to respond to environmental threats endangers their health and the welfare of their communities. This is especially true for African Americans and other people of color. Race closely tracks the geographic distribution of environmental health threats posed by natural and made-made disasters. With or without land-use zoning, deed restrictions, and other legal devices, people of color are not equally able to protect their own

\textsuperscript{112} Kaufman, \textit{supra} note 106.

environmental interests. More often than not, these communities are dumped-on and short-changed in the neighborhood protection game – both before and after disasters strike.

After waiting more than two decades, the state of North Carolina and the federal EPA finally cleaned up the controversial Warren County PCB landfill. That landfill, and the subsequent protests, gave birth to the national environmental justice movement. Though Warren County residents pleaded for a more permanent solution, rather than a “quick-fix” that would eventually allow PCBs to leak into groundwater and wells, their voices fell on deaf ears – and state and federal officials chose to continue landfilling.

Although government officials first learned that the 142-acre toxic waste dump was leaking in 1993, the site was not detoxified until December 2003 – a full decade later. The dump became the most recognized landmark in Warren County and generated a horrible stigma. County residents received few, if any, economic benefits from hosting the landfill. On the contrary, during the landfill’s history, from 1982-2003, Warren County residents descended deeper into poverty – broadening the economic gap between county residents and the rest of North Carolina.

Government officials were also slow to respond to the health emergency in Dickson, Tennessee, the modern-day “poster child” for environmental racism and toxic dumping. The African-American Harry Holt family is paying the ultimate price with their health. All levels of government failed the Holt family. Even after having the hard facts about contamination levels in the Holts' wells, government failed to respond in a timely manner to protect black families. Environmental racism resulted in differential treatment of the Holt family, as compared to white Dickson County families, and contributed to their prolonged exposure to contaminated drinking water – subjecting them to wholly unnecessary health risks. Because of overt and intentional discrimination by the city of Dickson, County of Dickson, State of Tennessee, and the federal EPA, the Holt family’s homestead was devalued and their wealth diminished.

There is no such thing as a “natural” disaster. What many people call “natural” disasters are, in fact, acts of social injustice perpetuated by government and business that affect the poor, people of color, disabled, elderly, homeless, transit dependent and non-drivers – groups least able to withstand such disasters.
In August 2005, the world witnessed the “worst environmental disaster” in U.S. history unfold. The levee breach and subsequent flooding of eighty percent of New Orleans created a toxic nightmare. Receding floodwaters left toxic sediments layered onto pre-Katrina toxic “hot spots” in a number of inner-city New Orleans neighborhoods.

The state and federal government response to toxic contamination in New Orleans is nothing short of “double speak.” There was no massive “Mother of All Toxic Clean Ups” in post-Katrina New Orleans neighborhoods. A year after the storm, the EPA gave the city a clean bill of health. Yet, it also cautioned households about allowing children to play outside in the dirt. Once again, local residents were left “on their own” – running the risk of getting left behind in their quest for a safe, clean, and healthy environment. Clearly, prevention and precaution should be the driving force behind the environmental cleanup in post-Katrina New Orleans. Either we pay now or we pay later. It will cost the nation more, in terms of dollars and ill health, if we choose the latter.
