Building Just, Safe, and Healthy Communities

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I. INTRODUCTION

Despite significant improvements in environmental protection over the past several decades, millions of Americans continue to live, work, play, and go to school in unsafe and unhealthy physical environments.[1] Over the years, the dominant environmental protection paradigm has managed, regulated, and distributed risks. The current environmental protection apparatus (1) institutionalizes unequal enforcement, (2) trades human health for profit, (3) places the burden of proof on the "victims" and not the polluting industry, (4) legitimates human exposure to harmful chemicals, pesticides, and

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1. *See* Robert D. Bullard, *In Our Backyards*, EPA J., Mar.-Apr. 1993, at 11; Paul Mohai & Bunyan Bryant, *Race, Poverty, and the Environment*, EPA J., Mar.-Apr. 1992, at 6, 6-8; D.R. Wernette & L.A. Nieves, *Breathing Polluted Air*, EPA J., Mar.-Apr. 1992, at 16, 16-17; Patrick C. West, *Health Concerns for Fish-Eating Tribes?*, EPA J., Mar.-Apr. 1992, at 15, 15-16.

hazardous substances, (5) promotes "risky" technologies such as incinerators, (6) exploits the vulnerability of economically and politically disenfranchised communities, (7) subsidizes ecological destruction, (8) creates an industry around risk assessment, (9) delays cleanup actions, and (10) fails to develop pollution prevention as the overarching and dominant strategy.[2]

During its near thirty-year history, the United States Environmental Protection Agency (EPA) has not always recognized that many of our government and industry practices, whether intended or unintended, have an adverse impact on poor people and people of color. The EPA was never given the mission of addressing environmental policies and practices that result in unfair, unjust, and inequitable outcomes. The EPA and other agencies are not likely to ask the questions that go to the heart of environmental injustice: What groups are most affected? Why are they affected? Who did it? What can be done to remedy the problem? How can the problem be prevented? Vulnerable communities, populations, and individuals often fall between the regulatory cracks. Growing grassroots community resistance has emerged in response to practices, policies, and conditions that residents have judged to be unjust, unfair, and illegal. Discrimination is a fact of life in America. Racial discrimination is illegal.

The EPA is mandated to enforce the nation's environmental laws and regulations equally across the board.[3] It is also required to protect all Americans: not just individuals or groups who can afford lawyers, lobbyists, and experts.[4] Environmental protection is a right, not a privilege reserved for a few who can "vote with their feet" and escape or fend off environmental stressors in order to address environmental inequities. Unlike the EPA, communities of color did not discover environmental inequities until 1990.[5] African-Americans and other people of color have known about and have been living with inequitable environmental quality for decades: most without the protection of the EPA or state and local governmental agencies.[6] The EPA only took action on environmental justice concerns in 1990 after

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2. *See* Robert D. Bullard, *Introduction* to UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE AND COMMUNITIES OF COLOR, at xvi (Robert D. Bullard ed., 1994).

3. *See* Exec. Order No. 12,898, 59 Fed. Reg. 7629, 7629-31 (1994).

4. *See id.*

5. *See* William K. Reilly, *Environmental Equity: EPA's Position*, EPA J., Mar.-Apr. 1992, at 18, 19.

6. *See* Robert D. Bullard & Beverley H. Wright, *The Politics of Pollution: Implications for the Black Community*, 47 PHYLON Q. 71, 73-78 (1986).

some prodding from people of color, grassroots environmental justice activists, educators, and academics.[7]

In response to growing public concern and mounting scientific evidence, President Clinton, on February 11, 1994, signed Executive Order 12,898, "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations."[8] Executive Order 12,898 reinforces Title VI of the Civil Rights Act of 1964, which prohibits discriminatory practices in programs receiving federal funds.[9] It also focuses the spotlight back on the National Environmental Policy Act (NEPA), a law passed in 1969 that set policy goals for the protection, maintenance, and enhancement of the environment.[10]

II. ASSESSING AND ADDRESSING ENVIRONMENTAL JUSTICE IMPACTS

To comply with Executive Order 12,898, government agencies must consider environmental justice concerns in their analyses through identifying and addressing disproportionately high and adverse human health and environmental effects on minority populations and low-income populations.[11] The EPA, in its 1996 *Draft Guidance for Addressing Environmental Justice under the National Environmental Policy Act*,[12] listed some sources of potential effects on human health and the environment:

- Number/concentration of point and non-point release sources, including both permitted and non-permitted.
- Presence of listed or highly ranked toxic pollutants with high exposure potential (e.g., presence of toxic pollutants included within EPA's 33/50 program).
- Multiple exposure sources and/or paths for the same pollutant.
- Potential for aggravated susceptibility due to existing air pollution (in urban areas), lead poisoning, existence of abandoned toxic sites.
- Other sources of environmental contamination and human health effects.[13]

Impact assessments need to include an environmental justice analysis that uncovers historical factors that may impact public policy implementation. The residuals of past land use, facility siting, and

7. *See* Reilly, *supra* note 5, at 19.
8. *See* Exec. Order 12,898, 59 Fed. Reg. at 7629-31.
9. *See id.*
10. *See id.*; 42 U.S.C. § 4321 (1997).
11. *See* Exec. Order 12,898, 59 Fed. Reg. at 7629-31.
12. *See* OFFICE OF FED. ACTIVITIES, U.S. EPA, NO. 2551A, GUIDANCE FOR INCORPORATING ENVIRONMENTAL JUSTICE CONCERNS IN EPA'S NEPA ANALYSES (1998).
13. *Id.* at 16-17.

environmental decisions continue to pose a threat to many low-income and people of color communities. The EPA has outlined some of the areas where considerations should be given:

- Industrial Concentration: Concentration of industries that may pose health risks and factors that encourage certain industries to locate in certain areas.
- Inconsistency: Non-uniformity in enforcement, site-selection criteria, and clean-up/remediation methodologies across communities.
- Program Gaps: Research gaps and past data collection practices, validity, and adequacy of these data.
- Arbitrary Process: Non-scientific and arbitrary decision making and documentation (e.g., selection of community representatives by potentially-affected industry rather than by community decree).
- Negligence: Past resource allocation practices.
- Cultural Diversity: Past and present cultural diversity of decision-making boards, within agencies, on commissions, etc.
- Obligations: Failure to fully implement or uphold prior agreements, such as treaties with tribes.[14]

In the real world, environmental hazards often do not occur as a single threat under a "one-chemical-at-a-time" scenario.[15] Many industrial facilities are located adjacent to populated areas where land-use practices have allowed for mixed uses.[16] In some instances, zoning practices have created a "clustering" of polluting facilities in distinct geographic areas.[17] In this case, environmental analysts should be able to assess not only the impacts of a proposed facility, but also the impact of the proposed action when added to other past and existing environmental and health hazards. This type of analysis goes to the heart of assessing cumulative impacts.

Executive Order 12,898 instructs federal agencies to conduct an environmental human health analysis, whenever practicable and appropriate, and to identify multiple and cumulative exposure.[18] An environmental justice assessment under NEPA might include the following components:

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14. *Id.* at 24.

15. *See* Marianne Lavelle & Marcia Coyle, *Unequal Protection*, NAT'L L.J., Sept. 21, 1992, at 56.

16. *See* Robert D. Bullard, *Residential Segregation and Urban Quality of Life*, *in* ENVIRONMENTAL JUSTICE: ISSUES, POLICIES AND SOLUTIONS 76-85 (Bunyan Bryant ed., 1995); Robert D. Bullard, *Dismantling Environmental Racism in the USA*, 4 LOCAL ENV'T 5, 5-19 (1999).

17. *See* Richard Lazarus, *Pursuing Environmental Justice: The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787, 792-96.

18. *See* Exec. Order No. 12,898, 59 Fed. Reg. 7629, 7629-31 (1994).

Risk Assessment: Examine risk, consumption patterns, and impact on "vulnerable" populations (i.e., children, elderly, etc.), and minority and low-income off-site population and factor into the assessment.

Risk Communication: Design culturally-sensitive methods to communicate human health risks to minority and low-income populations, and populations that have a language barrier.

Diets and Consumption of Natural Resources: Design methods to assess cultural variations in human health risks from the ingestion of plants and animals near contaminated sites or polluted rivers and streams, and other pathways presenting potential health risks. For example, some people grow gardens, hunt, fish and consume what they grow or catch.

Cultural Resources: Develop strategies and methods to protect sacred sites and cultural lands that need to be protected.

Cleanup Priorities: Set priorities to ensure that environmental risks to adjacent populations are addressed in a timely manner and that community concerns are considered in the cleanup process.

Community Health Data: Epidemiological and health data reflective of the community that may show high incidence of diseases and illnesses (i.e., abnormal cancer rates, infant and childhood mortality, low birth rate, blood-lead levels, childhood asthma, etc.).

Occupational Exposure: Occupational exposures experienced by minority and low-income populations which may exceed those experienced by general population.

Multiple and Cumulative Exposure: Assess human health risks and aggravated susceptibility of minority and low-income populations that may result from multiple sources of pollution, including both permitted and non-permitted facilities.

Several major tools are now available to assist analysts and community residents in identifying multiple sources of pollution. For example, Geographic Information Systems (GIS) combined with the EPA's Toxic Release Inventory (TRI) database can serve as a baseline analysis of multiple sources of pollution. The Landview III GIS software can be used to identify the geographic location and emission levels of various types of polluting facilities. Landview III can be supplemented with several other commercial GIS packages such as Maptitude.

Many of the environmental justice principles delineated in Executive Order 12,898 are also embodied in NEPA's requirement to assess socioeconomic impacts in environmental assessments (EAs) or

environmental impact statements (EISs).[19] In the past, many of the socioeconomic impact assessments (SIAs) have given more weight to the "economic" side of the assessment and less attention to the "socio" side of the equation.[20] An environmental justice analysis of community impacts will need to bring the "socio" part of the SIA on par with the "economic" assessment part.[21]

The NEPA process and environmental justice analyses should be used to prevent the potential for discrimination against minority and low-income populations. Nondiscrimination is a crosscutting concern of Executive Order 12,898 and NEPA.[22] Title VI of the Civil Rights Act of 1964 and related statutes assure that individuals are not excluded from participation in, denied the benefits of, or subjected to discrimination on the basis of race, color, national origin, age, sex, disability, and religion.[23]

III. ASSESSING COMMUNITY IMPACTS

Government analysts should examine how differing impacts relate to each other. Specifically, they should understand *direct* and *indirect* impacts as well as the *cumulative* or counterbalancing impacts of various effects of an action. Indirect impacts are the impacts caused by direct impacts.[24] Indirect impacts often occur later in time or further in distance than direct project impacts.[25] On the other hand, cumulative impacts represent incremental impacts of an action added to other past, present, or reasonably foreseeable future actions.[26] All three types of impacts, especially cumulative impacts, have special significance for people of color and low-income communities who are disproportionately impacted by locally unwanted land uses.[27]

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19. *See* 42 U.S.C. § 4332 (1997); Exec. Order No. 12,898, 59 Fed. Reg. at 7629-31.

20. *See* Robert D. Bullard, *Unequal Environmental Protection: Incorporating Environmental Justice in Decisionmaking*, *in* WORST THINGS FIRST?: THE DEBATE OVER RISK-BASED NATIONAL PRIORITIES 237-66 (Adam M. Finkel & Dominic Golding eds., 1994).

21. For an in-depth discussion on the debate over risk assessment and environmental decisionmaking, see Bullard, *supra* note 20, at 237-66.

22. *See* 42 U.S.C. §§ 4321-4370d; Exec. Order No. 12,898, 59 Fed. Reg. at 7629-31.

23. *See, e.g.*, Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d *et seq.* (1997).

24. *See* OFFICE OF ENFORCEMENT AND PLANNING, U.S. DEP'T OF TRANSP., NO. FHWA-PD-96-036, COMMUNITY IMPACT ASSESSMENT: A QUICK REFERENCE FOR TRANSPORTATION 25-26 (1996) [hereinafter QUICK REFERENCE FOR TRANSPORTATION].

25. *See id.*

26. *See id.*

27. *See* Robert D. Bullard, *Environmental Justice for All*, *in* UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE AND COMMUNITIES OF COLOR, *supra* note 2, at 3-22.

The United States Department of Transportation's *Community Impact Assessment* reference guide outlines some important questions that can guide an environmental justice impact assessment.[28] These questions are also applicable to the NEPA process. Community impacts are often interconnected. Some of the categories used to assess community impacts, discussed below, might include social and psychological, physical, land use, economic conditions, mobility and access, provision of public services, safety, and displacement features.

Social and Psychological Impacts: Will the project cause redistribution of the population or an influx or loss of population? How will the project affect interaction among persons and groups? How will it change social relationships and patterns? Will minority and low-income persons be set apart from others? Will the project cause a change in social values? What is the perceived impact on quality of life?

Physical Impacts: Is a wall or barrier effect created (such as from noise walls or fencing)? Will noise or vibrations increase? Will dust or odor increase? Will there be a shadowing effect on property? Will the community's aesthetic character be changed? Is the design of the project compatible with community goals? Have aesthetics surfaced as a community concern?

Land-Use Impacts: Will there be a loss of farmland? Does it open up new areas for development? Will it induce changes in land use and density? What changes might be expected? Is the project consistent with local land-use plans and zoning?

Economic Impacts: Will the proposed action encourage businesses to move to the area, relocate to other locations within the area, close, or move outside the area? What are the impacts on both the region and individual communities? How is the local economy affected by construction activities? Are there both positive (jobs generated) and negative (increase in truck traffic, gridlock, detours and loss of access) impacts? Will the proposed action alter business visibility to traffic-based businesses? How will visibility and access changes alter business activity? What is the effect on the tax base (changes in property values, changes in business activity)? What is the likely effect on property values caused by relocation or changes in land use?

Mobility and Access Impacts: How does the action affect non-motorist access to businesses, public services, schools, and other facilities? Does the project impede or enhance access between

28. QUICK REFERENCE FOR TRANSPORTATION, *supra* note 24, at 16-17.

residences and community facilities and businesses? Does it shift traffic? How does the project affect access to public transportation? How does the project affect short and long-term vehicular access to businesses, public services, and other facilities? Does it affect parking availability?

Public Services Impacts: Will the proposed action lead to or help alleviate overcrowding of public facilities (i.e., schools and recreation facilities)? Will it lead to or help alleviate underuse? How will it affect the ability to provide adequate services? Will the project result in relocation or displacement of public facilities or community centers (e.g., places of worship)?

Safety Impacts: Will the proposed action increase or decrease the likelihood of accidents for non-motorists? Will the proposed action increase or decrease crime? Will there be changes in emergency response time (e.g., fire, police, and medical emergency)?

Displacement: What are the effects on the neighborhoods from which people move and into which people are relocated? How many residents will be displaced? What type(s) of housing will be affected (multi-units homes, single family, rural residences, others)? Are there residents with special needs (disabled, minority, elderly residents)? How many businesses and farms will be displaced? What types? Do they have unique characteristics such as specialty products or a unique customer base? Are there available sites to accommodate those displaced?

Government agencies—federal, state, and local—have had three decades to implement NEPA and Title VI of the Civil Rights Act of 1964.[29] Clearly, all levels of government need to do a better job of assessing and mitigating community impacts and assuring nondiscrimination in the application and implementation of permitting decisions, enforcement, and investment decisions. Governments must live up to their mandate of protecting all people and the environment.

IV. THE LEGACY OF ENVIRONMENTAL RACISM

The roots of institutional racism are deep and have been difficult to eliminate.[30] Discrimination is a manifestation of institutional racism and causes life to be very different for whites and people of

29. *See* Title VI of the Civil Rights Act of 1964, 42 U.S.C. § 2000d *et seq.* (1997); National Environmental Policy Act of 1969, 42 U.S.C. §§ 4321-4370d (1997).

30. *See* Robert D. Bullard & Joe R. Feagin, *Racism and the City*, *in* URBAN LIFE IN TRANSITION 55, 58-61 (M. Gottdiender & Chris G. Pickvance eds., 1991); JOE R. FEAGIN & CLAIRECE B. FEAGIN, DISCRIMINATION AMERICAN STYLE: INSTITUTIONAL RACISM AND SEXISM 6-15 (1986);

color.[31] Historically, racism has been and continues to be a "conspicuous part of the American sociopolitical system, and as a result, black people in particular, and ethnic and racial minority groups of color, find themselves at a disadvantage in contemporary society."[32]

Environmental racism is real.[33] It is just as real as the racism found in the housing industry, educational institutions, employment arena, and judicial system. Environmental racism combines with public policies and industry practices to provide benefits for whites while shifting costs to people of color.[34] "Environmental racism is reinforced by government, legal, economic, political, and military institutions."[35]

Environmental decisionmaking often mirrors the power arrangements of the white-dominated society and its institutions.[36] Environmental racism disadvantages people of color while providing advantages and privileges for whites.[37] A form of illegal "exaction" forces people of color to pay costs of environmental benefits for the public at large.[38] The question of who *pays* and who *benefits* from the current environmental and industrial policies is central to any analysis of environmental racism and other systems of domination and exploitation.

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31. *See* FEAGIN & FEAGIN, *supra* note 30, at 6-15.

32. J.M. Jones, *The Concept of Racism and Its Changing Reality*, *in* IMPACT OF RACISM ON WHITE AMERICANS 27, 47 (Benjamin P. Bowser & Raymond B. Hunt eds., 1981); *see* CHRISTOPHER B. DOOB, RACISM: AN AMERICAN CAULDRON 1-13 (1993).

33. Environmental racism refers to any policy, practice, or directive that differentially affects or disadvantages (whether intended or unintended) individuals, groups, or communities based on race or color.

34. *See* Alice Kaswan, *Environmental Justice: Bridging the Gap Between Environmental Law and Justice*, 47 AM. U. L. REV. 228, 231-33 (1997).

35. Robert D. Bullard, *The Legacy of American Apartheid and Environmental Racism*, 9 ST. JOHN'S J. LEGAL COMMENT. 445, 451 (1994); *see also* CONFRONTING ENVIRONMENTAL RACISM: VOICES FROM THE GRASSROOTS (Robert D. Bullard ed., 1993); RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE (Bunyan Bryant & Paul Mohai eds., 1992); Regina Austin & Michael Schill, *Black, Brown, Poor and Poisoned: Minority Grassroots Environmentalism and the Quest for Eco-Justice*, 1 KAN. J.L. & PUB. POL'Y 69, 69-71 (1991); Robert D. Bullard, *The Threat of Environmental Racism*, NAT. RESOURCES & ENV'T, Winter 1993, at 23, 23-26; Kelly C. Colquette & Elizabeth A. Henry Robertson, *Environmental Racism: The Causes, Consequences, and Commendations*, 5 TUL. ENVTL. L.J. 153, 153-56 (1991); Rachael D. Godsil, Note, *Remedying Environmental Racism*, 90 MICH. L. REV. 394, 397-408 (1991).

36. *See* Bullard, *The Threat of Environmental Racism*, *supra* note 35, at 23.

37. *See id.*

38. *See id.*

Racism influences the likelihood of exposure to environmental and health hazards and access to health care.[39] Many environmental policies distribute the costs in a regressive pattern while providing disproportionate benefits for whites and individuals who fall at the upper end of the education and income scale.[40] Unequal social, economic, and political power arrangements all make people of color more vulnerable to health and environmental threats than the society at large.[41]

Environmental inequities cannot be reduced solely to a "poverty thing." Differences are found in some populations even when social class is held constant. For example, race has been found to be independent of class in the distribution of air pollution,[42] contaminated fish consumption[43], location of municipal landfills and

39. *See* Bullard & Feagin, *supra* note 30, at 58-61; Robert D. Bullard, *Urban Infrastructure: Social, Environmental, and Health Risks to African-Americans*, *in* THE STATE OF BLACK AMERICA 1992 at 183, 183-96 (Billy Tidwell ed., 1992).

40. *See* Beverly Hendrix Wright, *The Effects of Occupational Injury, Illness, and Disease on the Health Status of Black Americans*, *in* TOXIC STRUGGLES: THE THEORY AND PRACTICE OF ENVIRONMENTAL JUSTICE 152-62 (Richard Hofrichter ed., 1993); Michel Gelobter, *Toward a Model of Environmental Discrimination*, *in* RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE, *supra* note 35, at 64-81; R.B. Stewart, *Paradoxes of Liberty, Integrity, and Fraternity: The Collective Nature of Environmental Quality and Judicial Review of Administration Action*, 7 ENVTL. L. 463, 463-69 (1977).

41. *See* W.J. Kruvant, *People, Energy, and Pollution*, *in* THE AMERICAN ENERGY CONSUMER, 125, 125-67 (D.K. Newman & Dawn Day eds., 1975); ERIC MANN, L.A.'S LETHAL AIR: NEW STRATEGIES FOR POLICY, ORGANIZING, AND ACTION 28-29 (1991); RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE, *supra* note 35; UNITED CHURCH OF CHRIST COMM'N FOR RACIAL JUSTICE, TOXIC WASTES AND RACE IN THE UNITED STATES 1-4 (1987) [hereinafter TOXIC WASTES AND RACE]; Robert D. Bullard, *Solid Waste Sites and the Black Houston Community*, 53 SOC. INQUIRY 273, 273-88 (1983); Dick Russell, *Environmental Racism*, AMICUS J., Spring 1989, 22, 24-26; Wernette & Nieves, *supra* note 1, at 16-17.

42. *See* Myrick A. Freedman, *The Distribution of Environmental Quality*, *in* ENVIRONMENTAL QUALITY ANALYSIS (Allen V. Kneese & Blair T. Bower eds., 1971).

43. *See* Patrick C. West et al., *Minority Anglers and Toxic Fish Consumption: Evidence from a State-Wide Survey in Michigan, in* RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE, *supra* note 35, at 100-13.

incinerators,[44] toxic waste dumps,[45] cleanup of Superfund sites,[46] and lead poisoning in children.[47]

Lead poisoning is a classic example of an environmental health problem that disproportionately impacts African-American children at every class level. Among children five years old and younger, the percentage of African-American children who have excessive levels of lead in their blood far exceeds the percentage of whites at all income levels.[48] In 1988, the federal Agency for Toxic Substances Disease Registry (ATSDR) found that for families earning less than $6,000, 68% of African-American children had lead poisoning, compared with 36% for white children.[49] In families with income exceeding $15,000, more than 38% of African-American children suffer from lead poisoning compared with 12% of whites.[50]

Figures reported in the July 27, 1994 *Journal of the American Medical Association* on the Third National Health and Nutrition Examination Survey (NHANES III) revealed that 1.7 million children (8.9% of children aged 1 to 5) are lead poisoned, defined as having blood lead levels equal to or above 10 ug/dl. [51] The average blood lead level has dropped for all children with the phasing out of leaded gasoline.[52] Today, the average blood lead level for all children in the United States is less than 6 ug/dl.[53] However, these efforts have not had the same positive benefits on all populations. Still, the most vulnerable populations are low-income African-American and

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44. *See* ROBERT D. BULLARD, INVISIBLE HOUSTON: THE BLACK EXPERIENCE IN BOOM AND BUST 70-75 (1987); Robert D. Bullard, *Environmental Racism and Land Use*, LAND USE F., Spring 1993, at 6, 6-11; Bullard, *Solid Waste Sites and the Black Houston Community*, *supra* note 41, at 273-88.

45. *See* Paul Mohai & Bunyan Bryant, *Environmental Racism: Reviewing the Evidence*, *in* RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE, *supra* note 35; Paul Stretesky & Michael J. Hogan, *Environmental Justice: An Analysis of Superfund Sites in Florida*, 45 SOC. PROB. 268, 277-84 (1998); TOXIC WASTES AND RACE, *supra* note 41, at 15-21.

46. *See* Lavelle & Coyle, *supra* note 15, at 56.

47. *See* AGENCY FOR TOXIC SUBSTANCES DISEASE REGISTRY, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVS., THE NATURE AND EXTENT OF LEAD POISONING IN CHILDREN IN THE UNITED STATES: A REPORT TO CONGRESS, I-12 (1988) [hereinafter NATURE AND EXTENT OF LEAD POISONING IN CHILDREN].

48. *See id.* at V-13.

49. *See id.*

50. *See id.*

51. *See* James L. Pirkle et al., *The Decline in Blood Lead Levels in the United States: The National Health and Nutrition Examination Survey (NHANES)*, 272 J. AM. MED. ASS'N 284, 287-91 (1994).

52. *See* Joel Schwartz & Ronnie Levin, *Lead: Example of the Job Ahead*, EPA J., Mar-Apr. 1992, at 42, 42.

53. *See id.* at 43.

Hispanic-American children who live in older urban housing.[54] Lead-based paint (chips and dust) is the most common source of lead exposure for children.[55] Children may also be exposed through soil and dust contamination built up from vehicle exhaust, lead concentration in soils in urban areas, lead dust brought into the home on parents' work clothes, lead used in ceramics and pottery, "folk" medicines, and lead in plumbing.[56]

All communities are not created equal. Some communities are more equal than others. If a community happens to be poor, working class, or inhabited largely by people of color, it has a good chance of receiving less protection than its affluent or mostly white counterpart.[57] The nation's environmental laws, regulations, and policies are not applied uniformly which results in some individuals, neighborhoods, and communities being exposed to elevated health risks. A 1992 study by the *National Law Journal* uncovered glaring inequities in the way the federal EPA enforces its laws. The authors wrote:

> There is a racial divide in the way the U.S. government cleans up toxic waste sites and punishes polluters. White communities see faster action, better results and stiffer penalties than communities where blacks, Hispanics and other minorities live. This unequal protection often occurs whether the community is wealthy or poor.[58]

These findings suggest that unequal protection is placing communities of color at special risk.

The *National Law Journal* study supplements the findings of earlier studies and reinforces what many grassroots leaders have been saying all along: not only are people of color differentially impacted by industrial pollution, they can expect different treatment from the government.

The current environmental model places communities of color at special risk. The plight of migrant farm workers, of which over ninety percent are people of color, typifies this systemic problem that cuts across the EPA, United States Department of Agriculture,

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54. *See* Centers for Disease Control and Prevention, *Update: Blood Lead Levels—United States, 1991-1994*, 46 MORBIDITY & MORTALITY WKLY REP. 141, 141-46 (1997).

55. *See id.* at 145.

56. *See id.*

57. *See generally* UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE AND COMMUNITIES OF COLOR, *supra* note 2 (describing case studies of environmental disparities and inequalities).

58. Lavelle & Coyle, *supra* note 15, at 56.

Department of Labor, and Department of Health and Human Services.[59]

The question of environmental justice is not anchored in a debate about whether or not decision makers should tinker with risk management. The environmental justice framework rests on an ethical analysis of strategies to eliminate unfair, unjust, and inequitable conditions and decisions. The framework seeks to prevent environmental threats before they occur.[60] The environmental justice framework incorporates other social movements that seek to eliminate harmful practices (discrimination harms the victim), in housing, land use, industrial planning, health care, and sanitation services.[61] The impact of redlining, economic disinvestment, infrastructure decline, deteriorating housing, lead poisoning, industrial pollution, poverty, and unemployment are not unrelated problems if one lives in an urban ghetto or barrio, rural hamlet, or reservation.[62]

Overwhelming scientific evidence exists on the ill-effects of lead on the human body.[63] However, very little action has been taken to rid the nation of lead poisoning in housing: a preventable disease.[64] Former Health and Human Services Secretary Louis Sullivan tagged lead poisoning as the "number one environmental threat to the health of children."[65] The Natural Resources Defense Council, NAACP Legal Defense and Educational Fund, ACLU, and Legal Aid Society of Alameda County joined forces in 1991 and won an out-of-court settlement worth $15-20 million for a blood-lead testing program in California.[66] The *Matthews v. Coye* lawsuit involved the State of California not living up to the federally-mandated testing of some

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59. *See* Ivette Perfecto & Baldemar Velasquez, *Farm Workers: Among The Least Protected*, EPA J., Mar.-Apr. 1992, at 13-14.

60. *See* Robert D. Bullard, *Race and Environmental Justice in the United States*, 18 YALE J. INT'L L. 319, 319-27 (1993); Bullard, *The Threat of Environmental Racism*, *supra* note 35, at 23-26.

61. *See* Bullard, *Race and Environmental Justice in the United States*, *supra* note 60, at 334-35.

62. *See id.* at 319-27.

63. *See* NATURE AND EXTENT OF LEAD POISONING IN CHILDREN, *supra* note 47, at II-1 to II-6.

64. *See* Janet Phoenix, *Getting the Lead Out of the Community*, *in* CONFRONTING ENVIRONMENTAL RACISM: VOICES FROM THE GRASSROOTS, *supra* note 35, at 77, 77-92.

65. Louis W. Sullivan, *Remarks at the First Annual Conference on Childhood Lead Poisoning, Washington, D.C. (Oct. 7, 1991)*, *in* PREVENTING CHILDHOOD LEAD POISONING: THE FIRST COMPREHENSIVE NATIONAL CONFERENCE FINAL REPORT, at A-2 (Alliance to End Childhood Lead Poisoning, 1991).

66. *See* Bill Lann Lee, Environmental Litigation on Behalf of Poor, Minority Children, *Matthews v. Coye*: A Case Study (Feb. 9, 1992) (unpublished paper presented at the Annual Meeting of the American Association for the Advancement of Science, Chicago).

557,000 poor children for lead who receive Medicaid.[67] This historic agreement will likely trigger similar actions in other states that have failed to live up to federally-mandated screening.[68]

Lead screening is an important element in this problem. However, screening is *not* the solution. Prevention is the solution. Surely, if termite inspections can be mandated to protect an individual's home investment,[69] a lead-free home can be mandated to protect public health. Ultimately, the lead abatement debate, public health (who is affected) versus property rights (who pays for cleanup), is a value conflict that will not be resolved by the scientific community.

Under the current system, individuals who challenge polluters must "prove" that they have been harmed, discriminated against, or disproportionately impacted.[70] Few impacted communities have the resources to hire lawyers, expert witnesses, and doctors needed to sustain such a challenge.[71] The environmental justice framework would require the parties that are applying for operating permits (landfills, incinerators, smelters, refineries, chemical plants, etc.) to "prove" that their operations are not harmful to human health, will not disproportionately impact racial and ethnic minorities and other protected groups, and are nondiscriminatory.[72] It would also target resources where environmental and health problems are greatest (as determined by some ranking scheme, but not limited to risk assessment).[73] Reliance solely on "objective" science disguises the exploitative way the polluting industries have operated in some communities and condones a passive acceptance of the status quo.[74]

V. CLEAN AIR AS A BASIC RIGHT

Before the federal government stepped in, issues relating to air pollution were handled primarily by states and local governments.[75] Because states and local governments did such a poor job, the federal government established national clean air standards.[76] Congress

67. *See id.*
68. *See id.*
69. *See id.*
70. *See id.*
71. *See id.*
72. *See id.*
73. *See id.*
74. *See* K.S. SHRADER-FRECHETTE, RISK AND RATIONALITY: PHILOSOPHICAL FOUNDATIONS OF POPULIST REFORM 98 (1992).
75. *See* ROBERT PERCIVAL ET AL., ENVIRONMENTAL REGULATION 118-21 (1996).
76. *See* Clean Air Act, 42 U.S.C. §§ 7401-7671 (1997).

enacted the Clean Air Act (CAA) in 1970 and mandated the EPA to carry out this law.[77] Subsequent amendments (1977 and 1990) were made to the CAA that form the current federal program.[78] The CAA was a response to states' unwillingness to protect air quality.[79] Many states used their lax enforcement of environmental laws as lures for business and economic development.[80]

Transportation policies are also implicated in urban air pollution problems. Automobile-choked highways create health-threatening air pollution.[81] Freeways are the lifeline for suburban commuters, while millions of central-city residents are dependent on public transportation as their primary mode of travel.[82] The air quality impacts of transportation are especially significant to people of color who are more likely than whites to live in urban areas with reduced air quality.[83] African-Americans and Latinos are more likely to live in areas with reduced air quality than are whites.[84] For example, National Argonne Laboratory researchers discovered that 437 of the 3,109 counties and independent cities failed to meet at least one of the EPA ambient air quality standards.[85] Specifically, 57% of whites, 65% of African-Americans, and 80% of Hispanics live in 437 counties with substandard air quality.[86] Nationwide, 33% of whites, 50% of African-Americans, and 60% of Hispanics live in the 136 counties in which two or more air pollutants exceed the standards.[87] Similar patterns were found for the twenty-nine counties designated as nonattainment areas for three or more pollutants.[88] In these counties, 12% of whites, 20% of African-Americans, and 31% of Hispanics resided in the worse nonattainment areas.[89]

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77. *See id.*

78. *See id.*

79. *See* Arnold W. Reitze, Jr., *A Century of Air Pollution Control Law: What Worked; What Failed; What Might Work*, 21 ENVTL. L. 1550 (1991).

80. *See id.* at 1549.

81. *See* Sid Davis, *Race and the Politics of Transportation in Atlanta*, *in* JUST TRANSPORTATION: DISMANTLING RACE & CLASS BARRIERS TO MOBILITY 84-96 (Robert D. Bullard & Glenn S. Johnson eds., 1997); Environmental Justice Resource Center, Sprawl Atlanta: Social Equity Dimensions of Uneven Growth and Development (Jan. 1999) (a report prepared for the Turner Foundation, Atlanta: Clark Atlanta University) (manuscript on file with author, executive summary available at <http://www.ejrc.cau.edu> follow the Resources link to Reports).

82. For an in-depth discussion of transportation investments and social equity issues, see JUST TRANSPORTATION: DISMANTLING RACE AND CLASS BARRIERS TO MOBILITY, *supra* note 81.

83. *See* Wernette & Nieves, *supra* note 1, at 16-17.

84. *See id.* at 17.

85. *See id.* at 16.

86. *See id.* at 16-17.

87. *See id.*

88. *See id.* at 17.

89. *See id.*

Asthma is an emerging epidemic in the United States.[90] The annual age-adjusted death rate from asthma increased by 40% between 1982 and 1991, from 1.34 to 1.88 per 100,000 people,[91] with the highest rates being consistently reported among blacks aged 15-24 during the period 1980-1993.[92] Poverty and minority status are important risk factors for asthma mortality.[93]

Children are at special risk from ozone.[94] Children also represent a considerable share of the asthma burden.[95] It is the most common chronic disease of childhood.[96] Asthma affects almost five million children under the age of eighteen.[97] Although the overall annual age-adjusted hospital discharge rate for asthma among children under fifteen years old decreased slightly from 4.0 to 3.6 per 1,000 between 1980 and 1983, the decrease was slower when compared with other childhood diseases, resulting in a 70% increase in the proportion of hospital admissions related to asthma during the 1980s.[98] Inner-city children have the highest rates for asthma prevalence, hospitalization, and mortality.[99] In the United States, asthma is the fourth leading cause of disability among children less than eighteen years old.[100]

The public health community has insufficient information to explain the magnitude of some air pollution-related health problems.[101] However, they do know that persons suffering from asthma are particularly sensitive to the effects of carbon monoxide, sulfur dioxides, particulate matter, ozone, and nitrogen oxides.[102] Ground-level ozone may exacerbate health problems such as asthma, nasal congestion, throat irritation, respiratory tract inflammation, reduced resistance to infection, changes in cell function, loss of lung

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90. *See* Centers for Disease Control, *Asthma—United States, 1982-1992*, 43 MORBIDITY & MORTALITY WKLY. REP. 952, 952 (1995).

91. *See id.*

92. *See* Centers for Disease Control, *Asthma Mortality and Hospitalization among Children and Young Adults—United States, 1980-1993*, 45 MORBIDITY & MORTALITY WKLY. REP. 350, 351 (1996) [hereinafter *Asthma 1980-1993*].

93. *See id.*

94. *See* Anna E. Pribitkin, Comment, *The Need for a Revision of Ozone Standards: Why Has the EPA Failed to Respond?*, 13 TEMP. ENVTL. L. & TECH. J. 103, 110-11 (1994).

95. *See Asthma 1980-1993*, *supra* note 92, at 350.

96. *See id.*

97. *See id.*

98. *See* CENTERS FOR DISEASE CONTROL, NO. PHS 95-1232, HEALTH UNITED STATES 1994, at 181 (1994).

99. *See Asthma 1980-1993*, *supra* note 92, at 952-55.

100. *See* Center for Disease Control, *Disabilities Among Children Aged Less Than or Equal to 17 Years—United States 1991-1992*, 44 MORBIDITY & MORTALITY WKLY. REP. 609, 609-13 (1995).

101. *See* MANN, *supra* note 41, at 62-64.

102. *See id.* at 11-34.

elasticity, chest pains, lung scarring, formation of lesions within the lungs, and premature aging of lung tissues.[103]

African-Americans, for example, have significantly higher prevalence of asthma than the general population.[104] A 1996 report from the federal Centers for Disease Control (CDC) shows hospitalization and death rates from asthma increasing for persons twenty-five years or less.[105] The greatest increases occurred among African-Americans.[106] African-Americans are two to six times more likely than whites to die from asthma.[107] Similarly, the hospitalization rate for African-Americans is 3.4 times the rate for whites.[108]

A 1994 CDC-sponsored study showed that pediatric emergency department visits at Atlanta Grady Memorial Hospital increased by one-third following peak ozone levels.[109] The study also found that the asthma rate among African-American children is 26% higher than the asthma rate among whites.[110] Since children with asthma in Atlanta may not have visited the emergency department for their care, the true prevalence of asthma in the community is likely to be higher.[111]

VI. RACIAL APARTHEID AMERICAN STYLE

Apartheid-type housing, development, and environmental policies limit mobility, reduce neighborhood options, diminish job opportunities, and decrease choices for millions of Americans.[112] The

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103. *See* HALUK OZKAYNK ET AL., BREATHLESS: AIR POLLUTION AND HOSPITAL ADMISSIONS/EMERGENCY ROOM VISITS IN 13 CITIES 5-7 (1996); AMERICAN LUNG ASS'N, OUT OF BREATH: POPULATIONS-AT-RISK TO ALTERNATIVE OZONE LEVELS 1 (1995).

104. *See* Ellen F. Crain et al., *An Estimate of the Prevalence of Asthma and Wheezing Among Inner-City Children*, 94 PEDIATRICS 356, 357-58 (1994); Inga F. Goldstein & Aura L. Weinstein, *Air Pollution and Asthma: Effects of Exposure to Short-Term Sulfur Dioxide Peaks*, 40 ENVTL. RES. 332, 333-34 (1986); Hailen Mak et al., *Prevalence of Asthma and Health Service Utilization of Asthmatic Children in an Inner City*, 7 J. ALLERGY & CLINICAL IMMUNOLOGY 367, 370-72 (1982); Joel Schwartz et al., *Predictors of Asthma and Persistent Wheeze in a National Sample of Children in the United States*, 142 AM. REV. RESPIRATORY DISEASE 555, 558-61 (1990).

105. *See Asthma 1980-1993*, *supra* note 92, at 351-52.

106. *See* Centers for Disease Control, *Asthma: United States*, 41 MORBIDITY & MORTALITY WKLY. REP., 733, 733 (1992).

107. *See id.*

108. *See id.*

109. *See* Mary C. White et al., *Exacerbations of Childhood Asthma and Ozone Pollution in Atlanta*, 65 ENVTL. RES. 56, 62-63 (1994).

110. *See id.*

111. *See id.* at 65-66.

112. *See* Robert D. Bullard, *Anatomy of Environmental Racism and the Environmental Justice Movement*, *in* CONFRONTING ENVIRONMENTAL RACISM: VOICES FROM THE GRASSROOTS, *supra* note 35, at 15; IN SEARCH OF THE NEW SOUTH: THE BLACK URBAN EXPERIENCE IN THE

infrastructure conditions in urban areas are the result of a host of factors including the distribution of wealth, patterns of racial and economic discrimination, redlining, housing and real estate practices, location decisions of industry, and differential enforcement of land use and environmental regulations.[113] Apartheid-type housing and development policies have resulted in limited mobility, reduced neighborhood options, decreased environmental choices, and diminished job opportunities for African-Americans.[114]

Race still plays a significant part in distributing public "benefits" and public "burdens" associated with economic growth.[115] The "roots of discrimination are deep" and have been difficult to eliminate.[116] Housing discrimination contributes to the physical decay of inner-city neighborhoods and denies a substantial segment of the African-American community a basic form of wealth accumulation and investment through home ownership.[117] The number of African-American homeowners would probably be higher in the absence of discrimination by lending institutions.[118] Only about 59% of the nation's middle-class African-Americans own their homes, compared to 74% of whites.[119]

Studies over the past twenty-five years have clearly documented the relationship between redlining and disinvestment decisions and neighborhood decline.[120] From Boston to San Diego, African-Americans still do not have full access to lending by banks and saving institutions as compared to their white counterparts.[121] The Federal Reserve Board consistently reports that African-Americans are

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1970S AND 1980S 1-15 (Robert D. Bullard ed., 1989); Robert D. Bullard, *Waste and Racism: A Stacked Deck*?, F. APPLIED RES. & PUB. POL'Y, Spring 1993, at 29-31.

113. *See* Bullard, *Waste and Racism: A Stacked Deck?*, *supra* note 112, at 30-31.

114. *See* Cynthia Hamilton, *Toward a New Industrial Policy*, *in* ENVIRONMENTAL JUSTICE: ISSUES, POLICIES, AND SOLUTIONS, *supra* note 16, at 113-14.

115. *See* Bullard & Feagin, *supra* note 30, at 55-76.

116. *See id.*

117. *See* Florence Wagman Roisman, *The Lessons of American Apartheid: The Necessity and Means of Promoting Residential Racial Integration*, 81 IOWA L. REV. 479, 481-87 (1995) (reviewing DOUGLAS S. MASSEY & NANCY A. DENTON, AMERICAN APARTHEID: SEGREGATION & THE MAKING OF THE UNDERCLASS (1993)).

118. *See* Joe R. Feagin, *A House is Not a Home: White Racism and U.S. Housing Practices*, *in* RESIDENTIAL APARTHEID: THE AMERICAN LEGACY 17, 34-37 (Robert D. Bullard et al. eds., 1994).

119. *See* Robert D. Bullard & C. Lee, *Introduction: Racism and American Apartheid*, *in* RESIDENTIAL APARTHEID: THE AMERICAN LEGACY, *supra* note 118, at 3.

120. *See* JOE R. FEAGIN & ROBERT PARKER, BUILDING AMERICAN CITIES: THE URBAN REAL ESTATE GAME 1-36 (1990); Robert D. Bullard, *Racism and American Apartheid*, *in* RESIDENTIAL APARTHEID: THE AMERICAN LEGACY, *supra* note 118, at 1, 1-13.

121. *See* Robert A. Rosenblatt & James Bates, *High Minority Denial Rates Found*, L.A. TIMES, Oct. 22, 1991, at A1.

rejected for home loans more than twice as often as Anglos.[122] After studying lending practices at 9,300 United States financial institutions and more than 6.4 million loan applications, a federal study uncovered the rejection rates for conventional home mortgages were 33.9% for African-Americans, 21.4% for Latinos, 22.4% for American Indians, 14.4% for Anglos, and 12.9% for Asians.[123]

Eight out of every ten African-Americans live in neighborhoods where they are in the majority.[124] Residential segregation decreases for most racial and ethnic groups with additional education, income, and occupational status.[125] However, this scenario does not hold true for African-Americans. African-Americans, no matter what their educational or occupational achievement or income level, are exposed to higher crime rates, less effective educational systems, high mortality risks, more dilapidated surroundings, and greater environmental threats because of their race.[126] For example, in the heavily populated South Coast air basin of the Los Angeles area, it is estimated that over 71% of African-Americans and 50% of Latinos reside in areas with the most polluted air, while only 34% of whites live in highly polluted areas.[127]

Because they do not have backyards, it has been difficult for millions of African-Americans in segregated neighborhoods to say "not in my backyard" (NIMBY).[128] Nationally, only about 44% of African-Americans own their homes, compared to over two-thirds of the nation as a whole.[129] Homeowners are the strongest advocates of the NIMBY positions taken against locally unwanted land uses (LULUs) such as the construction of garbage dumps, landfills, incinerators, sewer treatment plants, recycling centers, prisons, drug treatment units, and public housing projects.[130] Generally, white communities have greater access to the political process than their

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122. *See id.*

123. *See id.*

124. *See* DOUGLAS S. MASSEY & NANCY A. DENTON, AMERICAN APARTHEID: SEGREGATION & THE MAKING OF THE UNDERCLASS 74-78 (1993).

125. *See id.*

126. *See* Laura Westra, *Faces of Environmental Racism: Titusville, Alabama and BFI*, *in* FACES OF ENVIRONMENTAL RACISM: CONFRONTING ISSUES OF GLOBAL JUSTICE 113, 113-34 (Laura Westra & Peter S. Wentz eds., 1995).

127. *See* MANN, *supra* note 41, at 31.

128. *See* Jim Motavalli, *Toxic Targets: Polluters that Dump on Communities of Color are Finally Being Brought to Justice*, E: THE ENVTL. MAG., July-Aug. 1998, 29, 29-41.

129. *See* Bullard & Feagin, *supra* note 30, at 55-76.

130. *See* Lazurus, *supra* note 17, at 796-99.

African-American counterparts when it comes to influencing land use and environmental decision-making.[131]

The ability of an individual to escape a health-threatening physical environment is usually related to affluence.[132] However, racial barriers complicate this process for many African-Americans.[133] The imbalance between residential amenities and land uses assigned to central cities and suburbs cannot be explained by class factors alone. Blacks do not have the same opportunities to "vote with their feet" and escape undesirable physical environments as whites.[134]

Institutional racism continues to influence the housing and mobility options available to African-Americans of all income levels and is a major factor that influences the quality of neighborhoods they have available to them. The "web of discrimination" in the housing market is a result of the action and inaction of local and federal government officials, financial institutions, insurance companies, real estate marketing firms, and zoning boards.[135] More stringent enforcement mechanisms and penalties are needed to combat all forms of discrimination.

Uneven development between central cities and suburbs combined with the systematic avoidance of inner-city areas by many businesses have heightened social and economic inequalities. For the past two decades, manufacturing plants have been fleeing central cities and taking their jobs with them.[136] Many have moved offshore to Third World countries where labor is cheap and environmental regulations are lax or nonexistent.[137]

Industry flight from central cities has left behind a deteriorating urban infrastructure, poverty, and pollution.[138] What kind of replacement industry can these communities attract? Economically depressed communities do not have a lot of choices available to them. Some workers have become so desperate that they see even a low-paying hazardous job as better than no job at all. These workers are forced to choose between unemployment and a job that may result in risks to their health, their family's health, and the health of their

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131. *See id.*

132. *See id.*

133. *See* Joe Bandy, *Reterritorializing Borders: Transnational Environmental Justice Movement on the U.S.-Mexico Border*, 5 RACE, GENDER, & CLASS 80, 80-103 (1997).

134. *See* ROBERT D. BULLARD, DUMPING IN DIXIE 7 (1990).

135. *See id.* at 7-10.

136. *See id.* at 12-13.

137. *See id.*

138. *See* Nelson Smith & David Graham, *Environmental Justice and Underlying Societal Problems*, [1997] 27 Envtl. L. Rep. (Envtl. L. Inst.) 10,568, 10,568-69.

community. This practice amounts to "economic blackmail." Economic conditions in many people of color communities make them especially vulnerable to this practice.

Some polluting industries have been eager to exploit this vulnerability. Some have even used the assistance of elected officials in obtaining special tax breaks and government operating permits.[139] Clearly, economic development and environmental policies flow from forces of production and are often dominated and subsidized by state actors.[140] Numerous examples abound where state actors have targeted cities and regions for infrastructure improvements and amenities such as water irrigation systems, ship channels, road and bridge projects, and mass transit systems.[141] On the other hand, state actors have done a miserable job of protecting central city residents from the ravages of industrial pollution and nonresidential activities valued as having a negative impact on quality of life.[142]

Racial and ethnic inequality is perpetuated and reinforced by local governments in conjunction with urban-based corporations. Race continues to be a potent variable in explaining urban land use, streets and highway configuration, commercial and industrial development, and industrial facility siting. Moreover, the question of "who gets what, where, and why" often pits one community against another.[143]

VII. THE POLITICS OF ZONING

Environmental decision-making and land-use planning operate at the juncture of science, economics, politics, and special interests that place communities of color at special risk.[144] Some residential areas and their inhabitants are at a greater risk than the larger society from unregulated growth, ineffective regulation of industrial toxins, and public policy decisions authorizing industrial facilities that favor

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139. *See* Donald L. Bartlett & James B. Steele, *Paying a Price for Polluters*, TIME, Nov. 23, 1998, at 72, 72-76.

140. *See id.*

141. *See id.*

142. *See* Bunyan Bryant, *An Overview: Issues, Policies, and Solutions*, *in* ISSUES AND POTENTIAL POLICIES AND SOLUTIONS FOR ENVIRONMENTAL JUSTICE 8-11 (Bunyan Bryant ed., 1995); RACE AND THE INCIDENCE OF ENVIRONMENTAL HAZARDS: A TIME FOR DISCOURSE, *supra* note 35.

143. Raquel Pinderhughes, *Who Decides What Constitutes a Pollution Problem?*, 5 RACE, GENDER, & CLASS 130, 144 (1997).

144. *See* Bullard, *The Legacy of American Apartheid and Environmental Racism*, *supra* note 35, at 445.

those with political and economic clout.[145] African-American and other communities of color are often victims of land-use decision making that mirrors the power arrangements of the dominant society.[146] Historically, exclusionary zoning, rezoning, and granting of variances have been used by government authority and power to foster and perpetuate discriminatory practices.[147] The "put it across the tracks mentality" has turned many low-income and people of color communities into toxic havens.[148] Both race and class are often intertwined in zoning and land-use decisions involving LULUs.

Zoning is probably the most widely used tool to regulate urban land use in the United States.[149] Zoning laws broadly define land for residential, commercial, or industrial uses, and may impose narrower land-use restrictions (e.g., minimum and maximum lot size, number of dwellings per acre, square feet and height of buildings, etc.).[150] Zoning ordinances, deed restrictions, and other land-use mechanisms have been widely used as NIMBY tools, operating through exclusionary practices.[151] Thus, exclusionary zoning has been used to zone against something rather than for something. With or without zoning, deed restrictions or other devices, various groups are unequally able to protect their social, economic, and environmental interests. More often than not, African-Americans and other people of color get shortchanged in the neighborhood protection game.

In Houston, Texas, a city that does not have zoning, NIMBY was replaced with the policy of PIBBY (place in blacks backyard).[152] The all-white city council and private industry targeted garbage dumps, landfills, and incinerators for Houston's black neighborhoods for more than five decades.[153] From the 1920s through the late 1970s, eight of every ten solid waste sites were located in mostly black Houston neighborhoods; although blacks never made up more than

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145. *See* Bullard, *Environmental Racism and Land Use*, *supra* note 44, at 6-11; Diane Takvorian, *Toxics and Neighborhoods Don't Mix*, LAND USE F., Winter 1993, at 28, 28-30.

146. *See* Bullard, *Environmental Racism and Land Use*, *supra* note 44, at 6-11.

147. *See* Jon C. Dubin, *From Junkyard to Gentrification: Explicating a Right to Protective Zoning in Low-Income Communities of Color*, 77 MINN. L. REV. 739, 740-41 (1993); Michael R. Greenberg, *Proving Environmental Inequity in Siting Locally Unwanted Land Uses*, 4 RISK 235, 250-52 (1993); Ruth Rosen, *Who Gets Polluted: The Movement for Environmental Justice*, 41 DISSENT 223, 224-25 (1994).

148. *See* Rosen, *supra* note 147, at 224-25.

149. *See* Dubin, *supra* note 147, at 740-41.

150. *See id.*

151. *See* Bullard, *Environmental Racism and Land Use*, *supra* note 44, at 6-11.

152. For an in-depth examination of the Houston case study, see BULLARD, INVISIBLE HOUSTON: THE BLACK EXPERIENCE IN BOOM AND BUST, *supra* note 44.

153. *See id.* at 70-75.

one fourth of the city's population during this period.[154] However, many of Houston's black residents lived in historically identifiable black neighborhoods such as Fourth Ward/Freedmen Town, Sunnyside, Carverdale, Acres Homes, Kashmere Gardens, Trinity Gardens, and Cottage Grove.[155] Jim Crow housing established these black neighborhoods before the waste facilities were sited.[156] Discriminatory siting of landfills and incinerators stigmatized the neighborhoods as "dumping grounds" for a host of other unwanted facilities, including salvage yards, recycling operations, and automobile "chop shops."[157]

Why do some communities get dumped on and others do not? Why do some communities get cleaned up while others have to wait? Waste generation is directly correlated with per capita income.[158] Generally, rich people produce more waste per capita than poor people.[159] On the other hand, rich people generally do not have to live near waste disposal facilities because few waste facilities are proposed and actually built in the mostly white suburb.[160] Race still plays a significant part in distributing public "benefits" and public "burdens" associated with economic growth.[161] The United Church of Christ Commission for Racial Justice's landmark *Toxic Wastes and Race* study found race to be the single most important factor (i.e., more important than income, home ownership rate, and property values) in the location of abandoned toxic waste sites.[162] The study also found that (1) three out of five African-Americans live in communities with abandoned toxic waste sites; (2) 60% of African-Americans in urban areas live in communities with one or more abandoned toxic waste sites; (3) three of the five largest commercial hazardous waste landfills are located in predominately African-American or Latino communities and account for 40% of the nation's total estimated landfill capacity; and (4) African-Americans are heavily overrepresented in the population of cities with the largest

154. *See id.*
155. *See id.* at 14-31.
156. *See id.*
157. *See* Robert. D. Bullard, *Environmental Justice: It's More than Waste Facility Siting*, 77 SOC. SCI. Q. 493, 493-99 (1996).
158. *See* BENJAMIN A. GOLDMAN, NOT JUST PROSPERITY: ACHIEVING SUSTAINABILITY WITH ENVIRONMENTAL JUSTICE 8-19 (1993) (document commissioned for the National Wildlife Federation, Corporate Conservation Council, Synergy '94 Conference, Feb. 1994) (on file with author).
159. *See id.*
160. *See id.*
161. *See* Lazarus, *supra* note 17, at 792-96.
162. *See* TOXIC WASTES AND RACE, *supra* note 41, at xiii-xiv.

number of abandoned toxic waste sites, which include Memphis, St. Louis, Houston, Cleveland, Chicago, and Atlanta.[163]

Communities with hazardous waste incinerators generally have large minority populations, low incomes, and low property values. A 1990 Greenpeace report, *Playing with Fire: Hazardous Waste Incineration*, found that (1) the minority portion of the population in communities with existing incinerators is 8-9% percent higher than the national average; (2) communities where incinerators are proposed have minority population 60% higher than the national average; (3) average income in communities with existing incinerators is 15% less than the national average, (4) property values in communities host to incinerators are 38% percent lower than the national average; and (5) in communities where incinerators are proposed, average property values are 35% lower.[164]

Waste facility siting imbalances that were uncovered by the United States General Accounting Office (GAO) in 1983 have not disappeared.[165] The GAO discovered that three out of four of the offsite commercial hazardous waste landfills in EPA Region IV (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee) were located in predominately African-American communities.[166] In 1999, 100% of the offsite commercial hazardous wastes landfills in the region were located in two mostly African-American communities.[167] African-Americans comprise about one-fifth of the population in EPA Region IV.[168]

VIII. DUMPING ON DIXIE

The Deep South has always been thought of as a backward land based on its social, economic, political, and environmental policies.[169] By default, the region became a "sacrifice zone;" a dump for the rest of the nation's toxic waste.[170] A colonial mentality exists in the South where local government and big business take advantage of people

163. *See id.* at 15-21.

164. PAT COSTNER & JOE THORNTON, PLAYING WITH FIRE: HAZARDOUS WASTE INCINERATION 48-49 (1990).

165. *See* U.S. GENERAL ACCOUNTING OFFICE, NO. GAO/RCED-83-168, SITING OF HAZARDOUS WASTE LANDFILLS AND THEIR CORRELATION WITH RACIAL AND ECONOMIC STATUS OF SURROUNDING COMMUNITIES 1 (1983).

166. *See id.*

167. *See* Bullard, *supra* note 157, at 495 (statistics unchanged since 1996).

168. *See id.* app. 1.

169. *See* Donald Schueler, *Southern Exposure*, SIERRA, Nov.-Dec. 1992, at 42, 43.

170. *See id.* at 44-45.

who are politically and economically powerless.[171] Many of these attitudes emerged from the region's marriage to slavery and the plantation system, a brutal system that exploited humans and the land.[172]

The Deep South is stuck with this unique legacy: the legacy of slavery, Jim Crow, and white resistance to equal justice for all. This legacy has also affected race relations and the region's ecology. Southerners, black and white, have less education, lower incomes, higher infant mortality, and lower life expectancy than Americans elsewhere.[173] It should be no surprise then that the environmental quality Southerners enjoy is markedly different from that of other regions of the country.

The South is characterized by "look-the-other-way environmental policies and giveaway tax breaks."[174] It is our nation's Third World where "political bosses encourage outsiders to buy the region's human and natural resources at bargain prices."[175] Lax enforcement of environmental regulations have left the region's air, water, and land the most industry-befouled in the United States.[176]

Millions of Americans live in physical environments that are overburdened with a multitude of environmental problems, including older housing with lead-based paint, congested freeways that criss-cross their neighborhoods, and industries that emit dangerous pollutants into the area.[177] Environmental justice advocates have sought to persuade the various levels of government (federal, state, and local) to adopt a framework that addresses distributive impacts, concentration, enforcement, and compliance concerns.[178]

In 1992, the Institute for Southern Studies' *Green Index* ranked Louisiana 49th out of fifty states in overall environmental quality.[179] The *Green Index* is based on 256 federal and state policy indicators.[180] Toxic waste discharge and industrial pollution are correlated with poorer economic conditions.[181] The state could actually improve its

171. *See id.* at 45.

172. *See* Robert D. Bullard, *Ecological Inequities and the New South: Black Communities under Siege*, J. ETHNIC STUD., Winter 1990, at 101, 108.

173. *See* Schueler, *supra* note 169, at 44-47.

174. *Id.* at 46.

175. *Id.* at 46-47.

176. *See id.*

177. *See* Robert D. Bullard, *Environmental Justice for All: It's the Right Thing to Do*, 9 J. ENVTL. L. & LITIG. 281, 281-308 (1994).

178. *See id.*

179. *See* BOB HALL & MARY LEE KERR, 1991-1992 GREEN INDEX 3 (1992).

180. *See id.* at 1.

181. *See id.* at 2.

general welfare by enacting and enforcing regulations to protect the environment.[182]

Nearly three-fourths of Louisiana's population—more than three million people—get their drinking water from underground aquifers.[183] Dozens of the aquifers are threatened by contamination from polluting industries.[184] The Lower Mississippi River Industrial Corridor has over 136 petrochemical companies that manufacture a range of products including fertilizers, gasoline, paints, and plastics.[185] This corridor has been dubbed "Cancer Alley" by environmentalists and local residents.[186] Ascension Parish typifies what many people refer to as a toxic "sacrifice zone."[187] In the two Ascension Parish towns of Geismer and St. Gabriel, eighteen petrochemical plants are crammed into a 9.5 square-mile area.[188] Petrochemical plants discharge millions of pounds of pollutants annually into the water and air.[189] Louisiana citizens subsidize this corporate welfare with their health and the environment.[190]

IX. CITIZENS AGAINST NUCLEAR TRASH: A VICTORY OVER LOUISIANA ENERGY SERVICES

Louisiana was a major battleground for a uranium enrichment plant and radioactive storage facility. Beginning in 1989, the Nuclear Regulatory Commission (NRC) had under review a proposal from Louisiana Energy Services (LES) to build the nation's first privately-owned uranium enrichment plant.[191] A national search was undertaken by LES to find the "best" site for a plant that would

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182. *See* PAUL H. TEMPLET & STEPHEN FARBER, THE COMPLEMENTARITY BETWEEN ENVIRONMENTAL AND ECONOMIC RISK: AN EMPIRICAL ANALYSIS (1992) (discussing Louisiana's environmental and economic problems).

183. *See* James O'Byrne & Mark Schleifstein, *Drinking Water in Danger*, TIMES-PICAYUNE, Feb. 19, 1991, at A1.

184. *See id.*

185. *See* Beverley H. Wright & Robert D. Bullard, Communities Under Siege: Spatial Distribution of Environmental Threats in the Lower Mississippi River Chemical Corridor 1 (Aug. 1998) (unpublished paper presented at the Annual Meeting of the American Sociological Association) (on file with author).

186. *See* Pat Bryant, *Toxics and Racial Justice*, SOC. POL'Y, Summer 1989, at 48, 48-50.

187. *See id.*

188. *See* Beverly H. Wright et al., *Coping with Poisons in Cancer Alley*, *in* UNEQUAL PROTECTION: ENVIRONMENTAL JUSTICE AND COMMUNITIES OF COLOR, *supra* note 2, at 110, 115-16.

189. *See id.*

190. *See* Bartlett & Steele, *supra* note 139, at 73-77.

191. *See* U.S. NUCLEAR REG. COMM'N, PUB. NO. NUREG-1484, DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE CONSTRUCTION AND OPERATION OF THE CLAIBORNE ENRICHMENT CENTER, HOMER, LOUISIANA 1-4 (1993).

produce seventeen percent of the nation's enriched uranium.[192] LES supposedly used an objective scientific method in designing its site selection process.[193] The southern United States, Louisiana, and Claiborne Parish ended up being the dubious "winners" of the site selection process.[194]

Residents from Homer and the nearby communities of Forest Grove and Center Springs, two communities closest to the proposed site, challenged the site selection process and outcome.[195] They organized themselves into a group called Citizens Against Nuclear Trash (CANT).[196] CANT charged LES and the NRC staff with practicing environmental racism.[197] CANT hired the Sierra Club Legal Defense Fund (the organization later changed its name to Earth Justice Legal Defense Fund) and sued LES.[198]

The lawsuit dragged on for more than eight years.[199] On May 1, 1997, a three-judge panel of the NRC Atomic Safety and Licensing Board issued a final initial decision on the case.[200] The administrative law judges concluded that "racial bias played a role in the selection process" and denied the permit.[201] The agency ruling came some two years after President Clinton signed Executive Order 12,898. The judges also chastised the NRC staff for not addressing the provision called for under Executive Order 12,898.[202] LES appealed the ruling.[203] The NRC decision was upheld on agency appeal on April 4, 1998.[204]

A clear racial pattern emerged during the so-called national search, and multi-stage screening and selection process for the plant. For example, African-Americans comprise about 13% of the U.S. population, 20% of the southern states' population, 31% of Louisiana's population, 35% of Louisiana's northern parishes, and 46% of Claiborne Parish.[205]

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192. *See id.* at 2-38.
193. *See id.*
194. *See id.* at 2-50.
195. *See* Louisiana Energy Servs., 45 N.R.C. 367, 370-77 (1997) (final initial decision).
196. *See id.*
197. *See id.* at 371.
198. *See id.* at 367.
199. *See id.*
200. *See id.*
201. *See id.* at 396, 412.
202. *See id.* at 396-97.
203. *See* Louisiana Energy Servs., 47 N.R.C. 77, 82-83 (1998) (memorandum and final order).
204. *See id.* at 106-07.
205. *See infra* Appendix 1.

This progressive trend, involving the narrowing of the site selection process to areas of increasingly high poverty and African-American representation, was also evident from an evaluation of the actual sites that were considered in the "Intermediate" and "Fine" screening stages of the site selection process. The aggregate average percentage of black population for a one mile radius around all of the seventy-eight sites examined (in sixteen parishes) was 28.35%.[206] When LES completed its initial site cuts, and reduced the list to seventy-seven sites within nine parishes, the aggregate percentage of black population rose to 36.78%.[207] When LES then further limited its focus to six sites in Claiborne Parish, the aggregate average percentage black population rose again, to 64.74%.[208] The final site selected, the "LeSage" site, had a 97.10% black population within a one-mile radius.[209]

The proposed plant was to be located on Parish Road 39 between two African-American communities—just one-quarter mile from Center Springs (founded in 1910) and one and one-quarter mile from Forest Grove (founded in the 1860s just after slavery was abolished).[210] The proposed site was in a Louisiana parish that has a per capita earnings of only $5,800 per year (just 45% of the national average), compared with a national average of almost $12,800 and where over fifty-eight percent of the African-American population lives below poverty.[211] The two African-American communities were rendered "invisible" since they were not even mentioned in the Nuclear Regulatory Commission draft environmental impact statement.[212]

Only after intense public comment did the NRC staff attempt to address environmental justice and disproportionate impact implications as required under the National Environmental Policy Act and as called for under Environmental Justice Executive Order 12,898. For example, NEPA requires that the government consider the environmental impacts and weigh the costs and benefits of the proposed action.[213] These impacts include health and environmental

206. *See Louisiana Energy Servs.*, 45 N.R.C. at 392.
207. *See id.*
208. *See id.*
209. *See id.*
210. *See id.* at 370-71.
211. *See id.* at 371.
212. *See id.* at 398.
213. *See id.* at 397-411.

effects, the risk of accidental but foreseeable adverse health and environmental effects, and socioeconomic impacts.[214]

The NRC staff devoted less than a page to addressing the environmental justice concerns of the proposed uranium enrichment plant in its Final Environmental Impact Statement (FEIS).[215] Overall, the FEIS and the Environmental Report (ER) were inadequate in the following respects: (1) they inaccurately assessed the costs and benefits of the proposed plant, (2) they failed to consider the inequitable distribution of costs and benefits of the proposed plant to white and African-American population, (3) they failed to consider the fact that the siting of the plant in a community of color follows a national pattern in which institutionally biased decision making leads to the siting of hazardous facilities in communities of color, and results in the inequitable distribution of costs and benefits to those communities.[216]

Among the distributive costs not analyzed in relationship to Forest Grove and Center Springs included the disproportionate burden of health and safety, property values, fire and accidents, noise, traffic, radioactive dust in the air and water, and dislocation by a road closure that connects the two communities.[217] Overall, the CANT legal victory demonstrates that it is possible for low-income residents—blacks and whites—working together to use the courts to organize, mobilize, and mount a successful campaign to keep a polluting plant out of their community.

X. CONCLUSION

The environmental protection apparatus is *broken* and needs to be *fixed*. The environmental justice movement has set out clear goals of eliminating unequal enforcement of environmental, civil rights, and public health laws. Environmental justice leaders have made a difference in the lives of people and the physical environment. They have assisted public decision makers in identifying "at risk" populations, toxic "hot spots," research gaps, and action models to correct existing imbalances and prevent future threats. Impacted communities are not waiting for the government or industry to get their acts together.

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214. *See id.*
215. *See id.* at 391.
216. *See id.* at 411-12.
217. *See id.* at 397-411.

Communities have begun to organize their own networks and assist in their inclusion into the mainstream of public decision making. They have also developed communication channels among environmental justice leaders, grassroots groups, professional associations (i.e., legal, public health, education, etc.), scientific groups, and public policy makers to assist them in identifying "at risk" populations, toxic "hot spots," research gaps, and work to correct imbalances.

Hazardous wastes and "dirty" industries have followed the "path of least resistance." Poor people and poor communities are given a false choice of "no jobs and no development" or "risky low-paying jobs and pollution." Industries and governments (including the military) have often exploited the economic vulnerability of poor communities, poor states, poor regions, and poor nations for their "risky" operations. The environmental justice movement challenges toxic colonialism, environmental racism, and the international toxics trade at home and abroad.

APPENDIX 1

Percent African-American Population by Geographic Location[218]
National Search for Privately-Owned Uranium Enrichment Plant

Geographic Location	Percent African-American (1990)
United States	13
Southern States	20
State of Louisiana	31
Louisiana's Northern Parishes	35
Claiborne Parish	46

218. *See* U.S. Census Bureau, *1990 U.S. Census Data, PL 94-171* (visited May 10, 1999) <http://www.census.gov>.

APPENDIX 2

Population by Race Living within One-Mile Radius
of LES Candidate Sites during Winnowing Process[219]

Candidates Sites	Total Population	Black Population	Percent Black
Initial 78 Sites	18,722	5,321	28.35
Intermediate 37 Sites	8,380	3,082	36.78
Fine Screening 6 Sites	1,160	752	64.74
Final Selection 1 Site	138	134	97.10

219. *See id.*